

Appendix B

Response to Public Comments on
the SDEIS and Response to Public
Concerns on the 2020 DEIS

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Volume I Response to Comments on the SDEIS

Laws and Regulations

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Elizabeth Barnes	6652	27	4-224 Why are the IDPES Cyanidation Permit limits and requirements not incorporated into the analysis and final impact statements? The argument that fish habitat will be increased is a negligent statement given the exclusion of this data.	REG	Idaho Cyanide Permits are prepared individually for each application and permit conditions and limits are based on the site-specific characteristics of the proposed operations, their operating and closure procedures, and the natural conditions at the project site. At the time this SDEIS was prepared the permit limits and requirements had not yet been established by IDEQ. This was clearly stated in the last sentence of the IPDES Permits and Cyanidation Permit subsection on page 4-224.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	12	<p>III. THE SDEIS IS BASED ON THE WRONG REGULATORY STRUCTURE</p> <p>The Forest Service is under the mistaken belief that its review and approval of Perpetua’s proposed uses of federal land are authorized by the 1872 Mining Law and governed solely by the agency’s hardrock mining regulations at 36 CFR Part 228 Subpart A. SDEIS at 1-8. According to the Forest Service, this is because there are unpatented mining or millsite claims on the lands to be covered by project facilities. The SDEIS also states that the existing Forest Plan must be amended to accommodate the company’s plans, based on Perpetua’s presumed “rights” under the Mining Law.</p> <p>According to the Forest Service, its authority is limited by the company’s purported and asserted “rights” under the 1872 Mining Law. 1872 Mining Law (as Amended) -The statutory right to search for, develop, and extract mineral deposits on federal lands open to mineral entry was established by the Mining Law and later legislation. These rights include the right to initially locate a mining claim and the right to reasonable access to the claim for further exploration, mining, or necessary ancillary activities, consistent with the Mining and Mineral Policy Act of 1970 (30 United States Code [USC] 21a) and other applicable laws.</p> <p>SDEIS at 3-3. See also SDEIS at Section 1.6.1.(SDEIS at 1-8)(“The Forest Service’s purpose is to consider approval of Perpetua’s proposed use of the surface of NFS lands in connection with operations authorized by the U.S. mining law as first described in the Plan submitted September 2016, then refined in 2019 (Brown and Caldwell 2019a), and further modified in 2021 as the 2021 MMP (Perpetua 2021a))(emphasis added). This tracks the initial DEIS’ statement that the agency’s review of the project was based on the company’s “statutory right” to conduct its operations under the Mining Law.</p> <p>3.2.2.1 1872 Mining Law The statutory right to search for, develop, and extract mineral deposits on public-domain lands open to mineral entry was established by the General Mining Act of 1872 (1872 Mining Law) and later legislation. These rights include the right to initially locate a mining claim and the right to reasonable access to the claim for further exploration, mining, or necessary ancillary activities, consistent with the Mining and Mineral Policy Act of 1970 (30 United States Code 21a) and other applicable laws. As described elsewhere in this EIS, regulations at 36 Code of Federal Regulations (CFR) 228, subpart A apply to U.S. Forest Service (Forest Service) regulation of surface use of National Forest System lands for locatable mineral operations. DEIS at 3.2-1.</p> <p>The mere fact that the company submitted a mining plan does not mean that all, or any, aspects of the project that remain in federal ownership are regulated only under Part 228 or that approving the plan is the Forest Service’s only choice. Indeed, because the record lacks the requisite evidence that the company has statutory rights under federal mining laws, including the 1872 Mining Law, to the lands that remain in federal ownership, review and regulation of the project is not under Part 228, but rather the agency’s special use and multiple use authorities (36 CFR Part 251/261), including right-of-ways (ROW) under the Federal Land Policy and Management Act (FLPMA).</p> <p>The Forest Service’s overly-restricted interpretation of its authority was squarely and recently rejected by the Ninth Circuit Court of Appeals, which has jurisdiction over Idaho. On May 12, 2022, the court issued its decision in Center for Biological Diversity v. U.S. Fish and Wildlife Service, in which the</p>	REG	<p>The Forest Service is not assuming the validity of the mining claims included in the SGP. The status of the mining claims for the area of the SGP is described in Section 4 and Appendix II of the 2021 Feasibility Study Technical Report which was prepared in compliance with the National Instrument 43-101 of the Canadian Securities Administrators Standards (NI 43-101) for reporting mineral properties (M3, 2021). The purpose of NI 43-101 is to ensure that misleading or erroneous information on mineral properties is not published or represented to potential investors on the stock exchanges overseen by the Canadian Securities Authority. A 43-101 feasibility study is a comprehensive technical and economic description of a mineral project prepared by experts who must have the prerequisite qualifications (“Qualified Persons”).</p> <p>Section 4 of the Feasibility Study describes the mineral title of the SGP property in some detail. It references a legal opinion prepared by a well-known law firm with expertise in these matters, Parson, Behle & Latimer. The report also states, “no significant flaws or title issues have been identified in multiple formal title reviews of the claims performed by qualified, independent, title examiners”.</p> <p>This report describes the mineralization at the SGP property and the location of the mineral resources to be mined on patented and unpatented mining claims within the property. The report also states that, as of the effective date of the report, December 2020, the property taxes were paid in full for the patented mining claims. Maintenance of the unpatented mining claims requires that the BLM be provided with the serial numbers and evidence of maintenance fees of the claims on or before September 1 of each year. The report states that this was completed for the most recent filing year prior to release of the report on August 3, 2020, and that an Affidavit of Satisfaction was subsequently recorded with Valley County on August 20, 2020. This information can be considered reliable evidence that the subject claims are properly authorized by the 1872 Mining Law.</p> <p>The Feasibility Report was cited in the SDEIS and is part of the Project Record. The property ownership information of the report has been reviewed by the Forest Service and determined to be reliable.</p> <p>Based on the reliable property ownership description in the Feasibility Study Technical Report, the Forest Service believes the SGP is properly regulated under the 36 CFR Part 228 regulations.</p>

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			<p>court affirmed the district court decision that vacated and remanded the Forest Service’s approval of a large copper mine (the Rosemont Mine) due to the agency’s erroneous interpretation and application of the 1872 Mining Law, federal public land law, and NEPA.</p> <p>The court squarely rejected the same federal government position taken by the Forest Service in the SDEIS – that mining claimants are entitled to use and occupy mining or millsite claims absent any evidence that the claims are valid under the Mining Law, and that the Part 228A regulations are the only proper regulatory vehicle for operations proposed on such lands/claims. The court ruled that the government’s statutory interpretation was contrary to the plain language and controlling case law under the Mining Law, Organic Act, NEPA, Surface Resources Act of 1955 (30 U.S.C. Section 612), and other laws. The Rosemont decision rejected the government’s position that it has no authority to apply its broader public land regulations to mining operations proposed on lands that fail to meet the Mining Law’s statutory prerequisites for rights against the United States.</p> <p>The agency’s review of the Stibnite Gold Project is based on the erroneous legal view that the entire project is authorized by the 1872 Mining Law and can only be regulated by the Part 228 Subpart A regulations simply because it involves uses of federal land related to mining. Here, although it is difficult to ascertain the exact number and nature of the claims from the SDEIS, the Forest Service believes that it is precluded from choosing the no-action alternative, as well as being significantly restricted in its review authority over the Project.</p> <p>In regard to Stibnite, the agency recently stated that the “228A regulatory framework was applied pending additional guidance from counsel. No validity assessment of unpatented claims was incorporated per Forest Service practice.” USFS – Stibnite Gold Project SDEIS Comment Response Table – 20 October 2022, at 1.</p> <p>Yet the Ninth Circuit ruled that this Forest Service position erroneously interprets the 1872 Mining Law as well as other public land and mining laws. The court held that unless sufficient evidence exists in the agency record that the claims proposed for use and occupancy met the requirements of the Mining Law and were therefore valid—that is, each mining claim must contain the requisite “valuable minerals,” and each millsite claim must meet the strict requirements of Section 42 of the Mining Law, including the requirement that the lands are nonmineral and do not exceed the allowable number of valid millsites, which are limited to a strict 5 acres of millsites (the maximum size for each millsite claim) for each full size mining claim (20 acres)—the Mining Law did not govern the agency’s review of the proposed use/occupancy of those lands. Simply put, unless each claim is shown to be valid and meets all factual and legal requirements, the Forest Service cannot simply assume rights under the Mining Law that limit the federal land agency’s full and broad authority to protect public land and resources.</p> <p>The Ninth Circuit also held that the agency’s failure to inquire into whether the claims covering the ancillary uses (such as waste dump and tailings) were valid under the Mining Law was essentially the same as assuming the claimant had a right to use and occupy these lands – and that such an assumption illegally created statutory rights where none exist.</p> <p>In the FEIS, the Service either assumed that Rosemont’s mining claims on that land were valid or (what amounted to the same thing) did not inquire into the validity of the claims. Based on its assumption that the mining claims were valid, the Service concluded that Rosemont’s permanent occupation of the claims with its waste rock was permitted under the Mining Law.</p> <p>“The Government’s argument is not only foreclosed by the text of Section 22. It is also foreclosed by a century of precedent.”</p> <p>At Rosemont, the issue was the validity of the mining claims. At Stibnite, while the company recently refiled millsite claims on much of the project’s lands, the court’s requirement is the same – the agency cannot assume that the company has rights to use/occupy these lands without verifying that each claim meets the validity requirements in the Mining Law (whether for lode or millsite claims). As noted, the agency’s failure to inquire as to whether the claims are valid fundamentally flaws the entire SDEIS and agency review.</p>		

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			<p>The Forest Service’s review of the Stibnite proposal is very similar to and based on the same legal positions as its illegal review of the Rosemont Mine. The Arizona court detailed how the agency never inquired into whether the mining claims away from the mine pit met the Mining Law’s prerequisite for use/occupancy rights (discovery of valuable minerals), yet the agency “accepted, without question, that those unpatented mining claims were valid” and “assumed that Rosemont had the right to use those 2,447 acres to support its mining operation (i.e., by dumping 1.9 billion tons of waste on that land).” “This was a crucial error as it tainted the Forest Service’s evaluation of the Rosemont Mine from the start.” The court held that such use/occupancy, without verification that such rights under the Mining Law actually exist on those lands/claims, was not authorized by the Mining Law, and thus was not governed by the agency’s mining regulations.</p> <p>The situation is the same here, as there is nothing in the record that provides “a factual basis to support [the claimant’s] assertion of rights.” Under basic principles of administrative law: “Any decision made without first establishing the factual basis upon which the Forest Service could form an opinion on surface rights would entirely ignore an important aspect of the problem.”</p> <p>Based on the Forest Service’s erroneous view of “rights” under the Mining Law, the SDEIS asserts that only Forest Service mining regulations at 36 C.F.R. Part 228A (which have no public interest requirement and no required compliance with the agency’s multiple use mandate) apply to every aspect of the project. The Forest Service mining regulations at 36 C.F.R. Part 228A only apply to “operations authorized by the mining laws.” 36 C.F.R. § 228.1. The Arizona federal court held that only upon the satisfaction of the Mining Law’s prerequisite requirements for statutory rights against the United States are “operations authorized by the mining laws.”</p> <p>[I]t does not follow that the Forest Service must use these Part 228 regulations merely because an action falls within the regulation’s definition of operations. The Forest Service’s reliance on its definition of operations ignores the purpose of its own regulations. Part 228 regulates “use of the surface of National Forest System lands in connection with operations authorized by the United States mining laws (30 U.S.C. 21-54 [Mining Law of 1872]).” 36 C.F.R. § 228.1. Therefore, authorization under the Mining Law of 1872 acts as a precursor to any regulation through Part 228.</p> <p>As the court held: “the regulations state that mining activities on Forest Service land are permitted only as specifically authorized by the Mining Law of 1872. As Rosemont has no rights under the Mining Law as to the land at issue, it follows that the regulations certainly do not create independent rights that do not exist under the Mining Law.”</p> <p>Here, at Stibnite, since the Forest Service has refused to inquire as to whether all of the mining and millsite claims are valid, the record does not show that the proposed facilities, uses, and associated operations are “authorized by the Mining Law of 1872.” As such, use of the Part 228A regulations, instead of the Part 251/261 special use regulations, is illegal.</p> <p>Regarding whether only the Part 228A regulations applied in such a case, the Ninth Circuit slightly modified the District Court’s remand instructions to the Forest Service, holding that the Forest Service could not rely on “rights” under the Mining Law or the Surface Resources Act:</p> <p>The Service relied on Part 228A regulations in its FEIS and ROD, but it did so based on Section 612 of the Multiple Use Act and on its assumption that Rosemont’s mining claims are valid under the Mining Act. The Government has now abandoned any argument based on Section 612. Further, for reasons explained above, the Service incorrectly assumed that Rosemont’s mining claims are valid under the Mining Law. That is, neither of the statutes upon which the Service relied to support its application of Part 228A regulations to Rosemont’s MPO provides such support. Thus, the Service’s approval of Rosemont’s MPO is unsupported by the basis upon which the Service relied.</p> <p>Due to the agency’s fundamental assumption of rights under the Mining Law, the court instructed the agency as to the proper scope of its authority – given that the agency never determined whether the claims were valid. We do not know whether, if the Service had understood that Section 612 gave no rights beyond those conferred by the Mining Law and that Rosemont’s mining claims are invalid under</p>		

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			<p>the Mining Law, it would have found some other statutory basis to support the application of Part 228A regulations. Nor do we know whether, if it were to rely on some other statutory basis, the Service would construe Part 228A regulations to authorize Rosemont's permanent occupancy of invalid mining claims with its waste rock.</p> <p>In applying Part 228A regulations and relying on their own construction of those regulations to authorize Rosemont's proposed occupancy, the Government, Rosemont, and our dissenting colleague are putting the cart before the horse.</p> <p>The District Court (affirmed by the Ninth Circuit) also rejected the legal position taken by Forest Service here, where it asserts that it cannot choose the No-Action Alternative for the project. In the Rosemont Mine decision, after discussing the agency's erroneous assumption of "rights" under the Mining Law (detailed above), the court discussed how this erroneous legal position also violated the agency's duties under NEPA:</p> <p>Based on the administrative record, the Forest Service improperly applied its Part 228 regulations to actions not authorized under the Mining Law of 1872. This mistake infected the FEIS and led to the Forest Service misinforming the public and failing to consider reasonable alternatives within the scope of its duties under the Organic Act.</p> <p>For example, in response to a public comment requesting the Forest Service "give true consideration to selection of the No Action Alternative", the Forest Service responded: "The Forest Service may reject an unreasonable Mine Plan of Operation but cannot categorically prohibit mining or deny reasonable and legal mineral operations under the mining laws." Id. at G-10 [Final Rosemont EIS]. In response to a comment requesting the Forest Service "consider other locations for copper mining", the Forest Service responded: "The Forest Service lacks the authority to deny Rosemont Copper's proposal if it can be legally permitted." Id. at G-12. And in response to a comment that the Forest Service "should scale down the size of the project or limit it to private lands only", the Forest Service repeated: "The Forest Service may reject an unreasonable Mine Plan of Operation but cannot categorically prohibit mining or deny reasonable and legal mineral operations under the mining laws." Id. These examples did not occur in isolation. Rather, they illustrate how heavily the Forest Service relied upon this rationale in its decision-making process.</p> <p>Under the Part 251 regulations, the Forest Service could limit the mine to any of the above options if it found they ran afoul of the public interest. The Forest Service failed to take the requisite hard look at these alternatives by informing the public that it could not truly consider any alternative that rejected the MPO or substantially modified it as to make the mine economically unfeasible. See Nat. Res. Def. Council, 421 F.3d at 813-14. A "thorough discussion of the significant aspects of the probable environmental consequences" will include the regulatory framework in which the Forest Service analyzes those consequences. See California v. Block, 690 F.2d 753, 761 (9th Cir. 1982). No amount of alternatives or depth of discussion could "foster[] informed decision-making and informed public participation" when the Forest Service bases its choice of alternatives on an erroneous view of the law. See Westlands Water Dist. v. U.S. Dep't of Interior, 376 F.3d 853, 868 (9th Cir. 2004).</p> <p>As the court stated, the agency's erroneous interpretation of federal mining law resulted in a violation of the Organic Act and NEPA. "[A] grant to use the surface when the administrative record shows such a right does not exist would contravene the Forest Service's duty to protect the forest from depredations and offer an opinion that runs contrary to the evidence." "In the absence of any statutory right on the part of Rosemont, the Forest Service could deny Rosemont's off-claim activities as part of the Forest Service's Organic Act obligations."</p> <p>The court further rejected the agency's view that alternatives that greatly reduced environmental impacts to public land could be dismissed because they were too expensive for the company. "As discussed throughout this Order, the administrative record before the Forest Service reflects that Rosemont did not have valid surface rights for thousands of acres of its unpatented mining claims. Thus, rather than summarily rejecting this claim as 'technically and financially infeasible,' further consideration and</p>		

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			<p>evaluation of this alternative was warranted as it greatly reduced the impacts to the Coronado National Forest.”</p> <p>Thus, at Stibnite, the Forest Service must fully comply with all federal laws and is not constrained by the limits in Part 228. Nor is the agency limited in its duties to protect public resources by Perpetua’s assertions of financial need or costs.</p> <p>Here, as at Rosemont, unless all the operations are proposed on verified valid claims, the operations are not “authorized by the mining laws” and the Forest Service must regulate the project under its Part 251/261 special use regulations, as well as FLPMA’s ROW provisions (discussed herein), and not under the Part 228 regulations. The agency’s authority under the Part 251 regulations are very different from, and much more environmentally protective, than the Part 228 regulations. For example, the agency must deny the project if “[t]he proposed use would not be in the public interest.” 36 C.F.R. § 251.54(e)(5)(ii).</p> <p>In contrast [to the Part 228A regulations], the Forest Service’s Part 251 regulations apply to “all uses of National Forest System lands, improvements, and resources.” 36 C.F.R. § 251.50. Any use not regulated under the Part 228, or several other groups of Forest Service regulations, falls into the Part 251 special use regulations. See id. These regulations provide a dual screening process in which the Forest Service may deny any activity that does not meet several standards or otherwise comport with the public interest. See id. § 251.54(e). The Part 251 regulations provide significant authority and discretion to prohibit activity on Forest Service lands, whereas the Part 228 regulations merely balance competing interests.</p> <p>The Part 251 regulations apply to occupancy and use of National Forest System lands. 36 C.F.R. §§ 251.54–251.64. The applicant must file a special use proposal with the District Ranger or Forest Supervisor having jurisdiction over the affected land. Id. § 251.54(b). The Forest Service conducts an initial screening to determine whether the proposed use meets the “minimum requirements applicable to all special uses.” Id. § 251.54(e)(1). If the proposal passes this initial screening, the Forest Service conducts a second-level screening which requires, among other things, a showing that the proposed use is in the public interest. Id. § 251.54(e)(5)(i)–(v). If the proposed use satisfies the Forest Service’s screening criteria, the Forest Service may grant a special use permit, but must include terms and conditions to “[m]inimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment,” among other requirements. Id. § 251.56(a)(1)(i)(B). The Forest Service must also “[o]therwise protect the public interest.” Id. § 251.56(a)(1)(ii)(G). In addition, under the related Part 261 regulations, the Forest Service is required to prohibit the destruction of cultural resources on public lands. See 36 C.F.R. §§ 261.9(g)-(h), 261.10(a), (b).</p> <p>(a) General. (1) Each special use authorization must contain:</p> <p>(i) Terms and conditions which will:</p> <p>(A) Carry out the purposes of applicable statutes and rules and regulations issued thereunder;</p> <p>(B) Minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment;</p> <p>(C) Require compliance with applicable air and water quality standards established by or pursuant to applicable Federal or State law; and</p> <p>(D) Require compliance with State standards for public health and safety, environmental protection, and siting, construction, operation, and maintenance if those standards are more stringent than applicable Federal standards.</p> <p>(ii) Such terms and conditions as the authorized officer deems necessary to:</p> <p>(A) Protect Federal property and economic interests;</p> <p>(B) Manage efficiently the lands subject to the use and adjacent thereto;</p> <p>(C) Protect other lawful users of the lands adjacent to or occupied by such use;</p> <p>(D) Protect lives and property;</p> <p>(E) Protect the interests of individuals living in the general area of the use who rely on the fish, wildlife, and other biotic resources of the area for subsistence purposes;</p> <p>(F) Require siting to cause the least damage to the environment, taking into consideration feasibility and</p>		

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			<p>other relevant factors; and (G) Otherwise protect the public interest. Id. § 251.56.</p> <p>These regulations also require the payment of fair market value for the use of the public’s land: “(a) ...special use authorizations shall require the payment in advance of an annual rental fee as determined by the authorized officer. (1) The fee shall be based on the fair market value of the rights and privileges authorized, as determined by appraisal or other sound business management principles.” Id. § 251.57.</p> <p>Because the Forest Service makes the same errors here as it did at Rosemont, the agency must reject the revised Plan of Operations submitted by Perpetua as inadequate and incomplete. The Forest Service must regulate the project under the correct legal regime. Further, the Forest Service has not shown that the project would meet all the requirements in Parts 251/261 to protect the public interest and the natural and cultural resources at/around the site. As such, the Forest Service must deny the proposed uses of public land.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	13	<p>A. A new Surface Use Determination is necessary to assess whether Perpetua Resources even has the right to use and occupy unpatented mining claims associated with the Stibnite Gold Project.</p> <p>In February 2020, a Surface Use Determination (SUD) was conducted for the Stibnite Gold Project (SGP) to: inform the authorized officer as to whether the proposed operational elements of the 2016 Stibnite Gold Project Plan of Operations proposed by Midas Gold, Inc. within Idaho Roadless areas are reasonably incident to mining and support the logical and sequential development of their mineral resource. SUD, p.1. A SUD should be conducted “[i]f questions arise about the logical sequence of a proposed or existing activity, or whether the activity is reasonably incident” to mining operations authorized by the United States mining laws. See FSM 2817.03a; see also 36 C.F.R. § 228.1. Moreover, as stated elsewhere in this letter, the Forest Service may not assume that unpatented mining claims are valid before regulating mining activities solely under the 36 C.F.R. Part 228A mining regulations. <i>Ctr. for Biological Diversity v. United States Fish & Wildlife Serv.</i>, 33 F.4th 1202, 1221 (9th Cir. 2022). Although Perpetua Resources Corp., through its subsidiary Idaho Gold Resources, LLC, holds nearly 1500 unpatented lode and millsite claims within the “operations boundary” and along the proposed Burntlog Route, there is nothing in the record that indicates any of these claims—especially those where use and occupancy will occur because of proposed mining activities—meet the statutory requirements of the United States mining laws. Because this and several other questions either have arisen or remain since the 2020 SUD, the Forest Service should conduct a new SUD to determine whether proposed activities are “reasonably incident mining uses.” Id. at 1222 (wondering whether permanent occupancy of invalid mining claims is a reasonably incident use). Furthermore, the SUD should be made available prior to any future NEPA milestones. B. Unpatented millsite claims in the vicinity of the TSF. When the Forest Service conducted the SUD in 2020, Perpetua Resources held a block of unpatented lode claims in the upper Meadow Creek drainage. These claims would have been buried beneath mine tailings as well as the TSF buttress dam. Compare SUD, at 37, Figure 7, with SUD, at 33, Figure 2. Additionally, a subsidiary of Perpetua Resources Corp. holds a block of 16 patented millsite claims (80-acres) where the Spent Ore Disposal Area/Bradley tailings are located. On September 1, 2022, Perpetua Resources abandoned a group of approximately 50 unpatented lode claims located to the west and south of these patented millsite claims (in the upper Meadow Creek drainage). That same day, Perpetua Resources filed 187 unpatented millsite claims in the same area as the just described abandoned unpatented lode claims. Commenters have provided the following map to illustrate where these new millsite claims are located in relation to historic and proposed mining claims and features. See Figure 1 and 2 below. Under the United States mining laws, millsite claims associated with a “vein or lode” must be located on “nonmineral land not contiguous to the vein or lode” and may not exceed five acres in size. 30 U.S.C. § 42(a). Additionally, the number of millsites a claimant can locate may be dependent upon the number of “associated” mining claims that meet the patenting requirements to ensure a one-to-one ratio between the two types of claims. Accordingly, if there are 188 unpatented mill site claims that were located and filed with BLM on September 1, 2022, there should also be 188 unpatented lode claims that meet the requirements necessary for patent, i.e., the claims must be valid because a discovery has occurred within the boundaries of the claim. See 30 U.S.C. §§ 26 and 29; see also <i>United States v. Cameron</i>, 252 U.S.</p>	REG	<p>The evidence being used by the Forest Service regarding the validity of the patented and unpatented mining claims is contained in Section 4 and Appendix II of the NI 43-101 Feasibility Study Technical Report (M3, 2021) which is part of the Project Record. This is discussed further in the prior response to Comment 17634-12. Based on this information, Forest Service has concluded that the SGP is pursuant to, and authorized by, the 1872 Mining Law. The Forest Service will also review the legitimacy of any mining claims filed since the Feasibility Study was released but believes the history and record of managing mining claims by Perpetua indicates that it is reasonably foreseeable that new mining claims would be established and maintained according to the requirements of the 1872 Mining Law.</p> <p>The Forest Service does not agree with the comment that removing and reprocessing or reusing the SODA material and Bradley tailings indicates the presence of mineralized land in conflict with controlling the land via millsite claims. In fact, these materials are clearly mining wastes produced by prior, legacy mining operations that currently present environmental impacts on federal land. Removing and relocating these wastes to the proposed TSF would clear these sources of environmental impacts from the underlying unmineralized land.</p> <p>The Forest Service intends to oversee the use of proposed borrow pits intended for construction of the Burntlog Route in compliance with 36 CFR 228.62(d). The details of said borrow pits would be provided to the Forest Service in the future. The overall disturbance area and environmental effects of these borrow sites is included in the SDEIS.</p>

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			<p>450, 460 (1920) (“All must conform to the law under which [mining claim patents] are initiated; otherwise they work an unlawful private appropriation in derogation of the rights of the public.”). Because it appears that the mineral resources proposed to be mined for the SGP are located almost entirely on private lands, it is unclear whether there are 188 valid unpatented mining claims associated with the mineral resource. See Brown & Caldwell, Final Development Rock Management Plan 1-4 (May 2022) (depicting location of mineral resources at the proposed SGP mine site). Indeed, the SDEIS provides no documentation regarding specific mining claim locations and validity thereof nor has the Forest Service responded to requests for such documentation of specific claim locations and validity thereof. It also appears that at least 15 of the new millsite claims are located on top of an area that is proposed to be “re-mined” under the 2021 MMP. See Figure 1 and 2 below. See also Brown & Caldwell, Final Development Rock Management 4-5 (May 2022) (describing “plans to re-mine and reprocess the Bradley tailings deposited in the Meadow Creek Valley located within the planned footprint of the proposed TSF.... Other legacy materials that constitute tailings from pre-Bradley milling operations are likely present and commingled with the Bradley era materials in the area beneath the SODA as well as in adjacent areas”); Id. at 5-2 (map depicting core holes west of the SODA and Bradley tailings on National Forest lands). Because the plan to “re-mine” this area indicates the presence of mineralized land beneath the 15 (and perhaps more) millsite claims, the mill sites do not qualify as “nonmineral land” under the United States mining laws. Millsites identified as potentially being over-filed on land that is not “nonmineral” are: TSF-A-157; TSF-A-144; TSF-A-126; TSF-A-125; TSF-A-124; TSF-A-123; TSF-D-1; TSF-D-2; TSF-D-3; TSF-D-4; TSF-C-1; TSF-C-2; TSF-C-3; TSF-C-4; TSF-B-2. This list is not exhaustive. Depending on the extent of “re-mining” that occurs in this area, other millsite claims may overlay mineralized land. In any event, the Forest Service must determine whether the millsites are valid. These comments also incorporate by reference the map depicting locations of the newly filed unpatented mill site claims in relation to other mine site features—which is similar to maps in Figures 1 and 2 below—that is included on page 12 of the comments from the Nez Perce Tribe. Furthermore, the Forest Service’s “story map” for the original 2020 DEIS indicates that the area where Perpetua has filed the new millsite claims includes the Bradley Tailings, which are proposed to be “re-mined. In sum, the Forest Service must verify the validity of each unpatented lode and millsite claim within the operations boundary as well as along the proposed Burntlog Route where operations authorized by the United States mining laws are proposed to occur — whether or not the proposed operations’ use and occupancy of those claims is temporary or permanent.</p> <p>C. Unpatented lode claims located along the proposed Burntlog Route. Perpetua Resources Corp.’s subsidiaries have located unpatented lode mining claims along portions of the Burntlog Route between Trapper Creek and the larger claim block comprising the SGP project area. See Midas Gold PRO, Appendix C-4 (2016). With respect to these claims, if they will be used or occupied, whether temporarily or permanently, for activities reasonably incident to mining, they must be valid. Absent evidence supporting validity, their use and occupancy may not be permitted solely under 36 C.F.R. Part 228A. See <i>Ctr. for Biological Diversity v. United States Fish & Wildlife Serv.</i>, 33 F.4th 1202 (9th Cir. 2022). Here, validity is a critical determination because only “mining activities conducted pursuant to the General Mining Law of 1872” remain unaffected by the Idaho Roadless Rule. See 36 C.F.R. § 294.25(b). In other words, if mining activities are not conducted pursuant to the General Mining Law of 1872, the Idaho Roadless Rule restrictions fully apply. Use of lands not covered by valid claims under the Mining Law, are not “authorized by the mining laws.” See <i>Ctr. for Biological Diversity v. United States Fish & Wildlife Serv.</i>, 33 F.4th 1202 (9th Cir. 2022). Thus, in this case, for the Burntlog Route, the agency can only consider approval under the right-of-way (ROW) provisions of Title V of FLPMA (43 U.S.C. §§ 1761-1771) and its implementing regulations. As noted herein and in previous comments, due to the significant adverse impacts to environmental and cultural resources, and Treaty Rights, the project, including the Burntlog Route, does not qualify as an acceptable ROW. In addition, the Idaho Roadless Area themes along the Burntlog Route are designated Backcountry/ Restoration and Special Areas of Historic or Tribal Significance. Under the Rule, “the Forest Service will not authorize sale or use common variety mineral materials in Special Areas.” 36 C.F.R. § 294.25(c)(2). Thus, borrow pits to support construction and maintenance of the proposed Burntlog Route must not be sited in these areas whatsoever. Similarly, the Forest Service “may authorize the use and sale of common variety mineral</p>		

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			<p>materials... only if the use of these mineral materials is incidental to an activity otherwise permissible in backcountry/restoration” areas. 36 C.F.R. § 294.25(d)(2). As such, the Rule limits road construction and reconstruction in these areas only to a narrow set of circumstances, which includes, among other things, roads “needed pursuant to... outstanding rights, or other legal duty of the United States. See 36 C.F.R. § 294.23(b)(1). None of these circumstances apply to the SGP if Perpetua’s mining operations are not pursuant to, i.e., “authorized by,” the General Mining Law of 1872. The Rule also allows “[t]emporary road construction or road reconstruction to reduce hazardous fuel conditions” within community protection zones or outside of community protection zones provided certain conditions exist. 36 C.F.R. §§ 294.23(b)(2) and (3); see also Jayne v. Sherman, 707 F.3d 944, 997 (9th Cir. 2013). Again, none of these conditions are satisfied unless the SGP is a mining activity pursuant to the General Mining Law of 1872. Notably, the SDEIS treats the road profile as a “permanent” total soil resource commitment because the roadbed would never move. SDEIS, at 4-82. Additionally, permanent features such as soil nails and cut and fill material would remain on the landscape indefinitely. Thus, regulating this type of permanent use and occupancy of unpatented mining claims along the Burntlog Route solely under 36 C.F.R. Part 228A requires that the claims on which the use and occupancy occur be valid. Even if a permit that authorizes mining activities is issued under another regulatory framework—such as 36 C.F.R. Part 251/61—the Burntlog Route would not be “needed” because other options exist to access the SGP. Indeed, a miner’s preferred means of access to mining claims has never been a right, i.e., “needed,” under the United States mining laws. See Clouser v. Espy, 42 F.3d 1522 (9th Cir. 1994). D. Proposed borrow pits along the Burntlog Route may not be permitted as “free use.” The 2020 Surface Use Determination claims that borrow sites along the Burntlog Route would be established “as needed,” and permitted under 36 C.F.R. § 228.62(d) and 16 U.S.C. § 477. SUD, at 12 n.8. Although free-use permits may be issued for mineral materials to miners, if the miner “owns or controls an adequate supply of mineral material in the area of demand,” the permit cannot be issued. 36 C.F.R. § 228.62(d). In addition, the volume of mineral materials removed by a corporation or individual cannot exceed “5,000 cubic yards (or weight equivalent) during any period of 12 consecutive months.” 36 C.F.R. § 228.62(d)(2). Accordingly, the Forest Service cannot issue free use permits if materials necessary for the construction and maintenance of the proposed Burntlog Route exceed this amount. Rather, the Forest Service must authorize such use under a different regulatory framework that is consistent with the United States mining laws governing disposal of common variety minerals. See 36 C.F.R. § 228.59(e)(1); see also 16 U.S.C. § 477 (Forest Service “may permit” use of sand and gravel by miners subject to regulations prescribed by the Secretary). The SDEIS must include a determination of the volume (or weight equivalent) of common varieties minerals that would be excavated annually from each proposed borrow pit along the proposed Burntlog Route, and must determine and disclose whether Perpetua’s proposed borrow pits qualify for “free use” permits. E. Validity of unpatented lode claims within the project boundary must be determined. Other landscape features associated with SGP mining activities, such as the fish tunnel, waste rock piles, portions of the tailing storage facility, and other landscape features, may permanently occupy unpatented lode mining claims. The Forest Service must determine whether each proposed mining operation that would occur on each unpatented lode claim held by Perpetua Resources is authorized by the United States mining laws. If the Forest Service determines these mining operations are not authorized by the United States mining law, it must regulate the project under the correct regulatory regime, which may require altering the scale, intensity, and/or scope of the SGP—even if that means a substantial reduction in the amount of mining waste that can be stored on national forest lands.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	14	<p>IV. THE PROJECT FAILS TO COMPLY WITH REQUIREMENTS FOR SPECIAL USES ON FEDERAL LANDS AND RIGHTS OF WAY UNDER FLPMA TITLE V</p> <p>Like with the other facilities proposed on the federal lands, the Forest Service is under the mistaken belief that the access/support corridors and uses thereof are subject only to the Part 228A regulations. The DEIS stated that: “transportation and utility uses associated with mineral development activities are authorized under 36 CFR 228A as part of an operator’s plan of operations and do not require a separate special use permit.” DEIS at 3.15-7. As noted above and herein, that is wrong. For the corridors, the DEIS failed to meet the strict public interest, environmental protection, and financial requirements of the Federal Land Policy and Management Act (FLPMA).</p>	REG	<p>As described in Section 2.4.4.7 of the SDEIS the electric utility line service for the SGP would be rebuilt or constructed by Idaho Power Company. Much of this work would occur on corridors already controlled by IPCo and some new or rerouted transmission lines would be located on right of ways or easements obtained by IPCo separately from Perpetua. As part of the SGP, the environmental effects of this utility work have been included in the SDEIS, but the land acquisition aspects of this work would be done by IPCo.</p> <p>The Burntlog Route access road is solely proposed to provide a year-round surface access route to the SGP which is a mining operation authorized under the 1872 Mining Law and regulated under the 36 CFR 228 Subpart A rules. The definition of mining "<i>operations</i>" in 36</p>

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			<p>The SDEIS modified this slightly, but does not specify which regulatory provisions actually apply – leaving the public in the dark: The action alternatives would require new ROWs or easements to accommodate the construction of new and upgraded access roads and transmission lines. These impacts would be located on private, state, and NFS lands; new transmission line ROW would not cross any Bureau of Reclamation lands for either action alternative. New ROWs on NFS lands are considered a direct effect to land use and may be authorized under Forest Service special uses regulations at 36 CFR 251 or under 36 CFR 228A depending on the type of use, location, and other factors. For purposes of this environmental analysis, the agency is assuming the proposed uses would be able to be authorized under existing regulatory authorities. However, the agency will need to evaluate the eventual applications for rights of way to make a final determination.</p> <p>Yet, as noted above, unless the proposed transmission lines, access roads, and other crossings of federal land are authorized by the Mining Law on valid claims, these uses are regulated under FLPMA, not under any assumed “rights” under the Mining Law.</p> <p>Under FLPMA Title V, Section 504 (which applies to both the Forest Service and BLM), the Forest Service may grant a ROW only if it “(4) will do no unnecessary damage to the environment.” 43 U.S.C. § 1764(a). Rights of way “shall be granted, issued or renewed . . . consistent with... any other applicable laws.” Id. § 1764(c). A right-of-way that “may have significant impact on the environment” requires submission of a plan of construction, operation, and rehabilitation of the right-of-way. Id. § 1764(d). A Title V SUP/ROW “shall contain terms and conditions which will... (ii) minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment.” Id. § 1765(a).</p> <p>In addition, the ROW can only be issued if activities resulting from the ROW:</p> <p>(i) protect Federal property and economic interests; (ii) manage efficiently the lands which are subject to the right-of-way or adjacent thereto and protect the other lawful users of the lands adjacent to or traversed by such right-of-way; (iii) protect lives and property; (iv) protect the interests of individuals living in the general area traversed by the right-of-way who rely on the fish, wildlife, and other biotic resources of the area for subsistence purposes; (v) require location of the right-of-way along a route that will cause least damage to the environment, taking into consideration feasibility and other relevant factors; and (vi) otherwise protect the public interest in the lands traversed by the right-of-way or adjacent thereto. Id. § 1765(b).</p> <p>At least three important potential substantive requirements flow from the FLPMA’s ROW provisions. First, the Forest Service has a mandatory duty under Section 505(a) to impose conditions that “will minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment.” Id. § 1765(a). The terms of this section do not limit “damage” specifically to the land within the ROW corridor. Rather, the repeated use of the expansive term “the environment” indicates that the overall effects of the ROW on cultural/historical, wildlife, environmental, scenic and aesthetic values must be evaluated and these resources protected. In addition, the obligation to impose terms and conditions that “protect Federal property and economic interests” in Section 505(b) requires that the Forest Service must impose conditions that protect not only the land crossed by the right-of-way, but all federal land affected by the approval of the ROW. This includes the federal waters and water rights that will be eliminated or significantly reduced by the project.</p> <p>The requirements in Section 505(b) mandate a Forest Service determination as to what conditions are “necessary” to protect federal property and economic interests, as well as “otherwise protect[ing] the public interest in the lands traversed by the right-of-way or adjacent thereto.” (emphasis added). This means that the agency can only approve the ROW if it “protects the public interest in lands” not only upon which the road would traverse, but also lands and resources adjacent to and associated with the ROW. As noted herein, the Forest Service would be unable to make a legitimate finding that industrial use of the lands served by the ROW, given the massive adverse impacts from the Mine, would “protect the public interest.”</p> <p>Third, is the requirement that the right-of-way grants “do no unnecessary damage to the environment” and be “consistent with . . . any other applicable laws.” Id. §§ 1764(a)-(c). This means that a grant of a</p>		<p>CFR 228.3(a) includes "<i>mining or processing of mineral resources and all uses reasonably incident thereto, including roads and other means of access on lands subject to the regulations of this part, regardless of whether said operations take place on or off mining claims.</i>" The Forest Service believes the proposed Burntlog Route would be correctly regulated under the 228 Subpart A regulations and not the 36 CFR 251 rules.</p>

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			<p>ROW supporting other activities must satisfy all applicable treaties and laws, regulations and policies, including FLPMA, the Endangered Species Act (ESA), Organic Act, the National Forest Management Act (NFMA), National Historic Preservation Act (NHPA), Clean Water and Air Acts (CWA, CAA), all state and local laws, etc.</p> <p>Federal courts have repeatedly held that the federal land agency not only has the authority to consider the adverse impacts on lands and waters outside the immediate ROW corridor, it has an obligation to protect these resources under FLPMA. In <i>County of Okanogan v. National Marine Fisheries Service</i>, the court affirmed the Forest Service’s imposition of mandatory minimum stream flows as a condition of granting a ROW for a water pipeline across Forest Service land.²² This was true even when the conditions/requirements restricted or denied vested property rights (in that case, water rights). The Forest Service thus cannot issue a ROW that fails to “protect the environment” required by FLPMA, including the environmental resource values in and out of the ROW corridor. “FLPMA itself does not authorize the Supervisor’s consideration of the interests of private facility owners as weighed against environmental interests such as protection of fish and wildlife habitat. FLPMA requires all land-use authorizations to contain terms and conditions which will protect resources and the environment.”</p> <p>The Interior Department, interpreting FLPMA Title V and its right-of-way regulations, has held that: “A right-of-way application may be denied, however, if the authorized officer determines that the grant of the proposed right-of-way would be inconsistent with the purpose for which the public lands are managed or if the grant of the proposed right-of-way would not be in the public interest or would be inconsistent with applicable laws.”</p> <p>Similar to the <i>County of Okanogan</i> and <i>Colorado Trout Unlimited</i> federal court decisions noted above, the Interior Department has held that the fact that a ROW applicant has a property right that may be adversely affected by the denial of the ROW does not override the agency’s duties to protect the “public interest.” In <i>Kenneth Knight</i>, the BLM’s denial of the ROW was affirmed due not only to the direct impact of the water pipeline, but on the adverse effects of the removal of the water in the first place:</p> <p>[T]he granting of the right-of-way and concomitant reduction of that resource, would, in all likelihood, adversely affect public land values, including grazing, wildlife, and riparian vegetation and wildlife habitat. The record is clear that, while construction of the improvements associated with the proposed right-of-way would have minimal immediate physical impact on the public lands, the effect of removal of water from those lands would be environmental degradation. Prevention of that degradation, by itself, justified BLM’s rejection of the application.</p> <p>That was also the case in <i>Clifford Bryden</i>, as the adverse impacts from the removal of the water was considered just as important as the adverse impacts from the pipeline that would deliver the water.</p> <p>In <i>King’s Meadow Ranches</i>, the Interior Board of Land Appeals (IBLA) affirmed the denial of right-of-way for a water pipeline, where the pipeline would degrade riparian vegetation and reduce bald eagle habitat. The Department specifically noted that under FLPMA Title V: “[A]s BLM has held, it is not private interests but the public interest that must be served by the issuance of a right-of-way.” As the IBLA recently held: The public interest determination is more than a finding that no laws will be violated by granting the ROW. Even if UUD [Unnecessary or Undue Degradation] can be avoided, degradation to public resources posed by a requested ROW may factor into BLM’s determination of whether that ROW would be in the public interest. For example, in <i>Sun Studs</i>, we upheld BLM’s rejection of a logging road ROW permit based on environmental considerations without any suggestion that the environmental harm rose to the level of unlawful degradation.</p> <p>The Interior Department has ruled that pipelines and associated infrastructure, including those across public land related to a mining operation, are not covered by statutory rights under the Mining Law. “[A] right-of-way must be obtained prior to transportation of water across Federal lands for mining.” Although these cases dealt with BLM lands, they apply equally to Forest Service lands. As noted in <i>Alanco</i>, ROWs for access roads (as opposed to internal mine roads) are subject to FLPMA’s Title V requirements.</p>		

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			<p>The IBLA has expressly rejected the argument that rights under the mining laws apply to pipelines and roads associated with water delivery:</p> <p>Clearly, FLPMA repealed or amended previous acts and Title V now requires that BLM approve a right-of-way application prior to the transportation of water across public land for mining purposes. See 43 U.S.C. § 1761 (1982). As was the case prior to passage of Title V of FLPMA, however, approval of such an application remains a discretionary matter and the Secretary has broad discretion regarding the amount of information he may require from an applicant for a right-of-way grant prior to accepting the application for consideration. <i>Bumble Bee Seafoods, Inc.</i>, 65 IBLA 391 (1982). A decision approving a right-of-way application must be made upon a reasoned analysis of the factors involved in the right-of-way, with due regard for the public interest. See <i>East Canyon Irrigation Co.</i>, 47 IBLA 155 (1980). BLM apparently contends that a mining claimant does not need a right-of-way to convey water from land outside the claim for use on the claim. It asserts that such use is encompassed in the implied rights of access which a mining claimant possesses under the mining laws. Such an assertion cannot be credited.</p> <p>The implied right of access to mining claims never embraced the right to convey water from outside the claim for use on the claim. This latter right emanated from an express statutory grant in the 1866 mining act. See 30 U.S.C. § 51 (1970) and 43 U.S.C. § 661 (1970). In enacting FLPMA, Congress repealed the 1866 grant of a right-of-way for the construction of ditches and canals (see § 706(a) of FLPMA, 90 Stat. 2793) and provided, in section 501(a)(1), 43 U.S.C. § 1761(a)(1), for the grant of a right-of-way for the conveyance of water under new procedures. In effect, Congress substituted one statutory procedure for another. There is simply no authority for the assertion that mining claimants need not obtain a right-of-way under Title V for conveyance of water from lands outside the claim onto the claim.</p> <p>The same analysis applies to transmission lines, pipelines, etc., delivering or transporting power, water, water, tailings, etc., on federal land. The leading treatise on federal natural resources law confirms this rule: “Rights-of-way must be explicitly applied for and granted; approvals of mining plans or other operational plans do not implicitly confer a right-of-way.”</p> <p>The fact that the Forest Service mining regulations consider roads and pipelines associated with the project part of the mineral “operations,” 36 CFR § 228.3, does not override these holdings or somehow create statutory rights where none exist.</p> <p>[I]t does not follow that the Forest Service must use these Part 228 regulations merely because an action falls within the regulation’s definition of operations. The Forest Service’s reliance on its definition of operations ignores the purpose of its own regulations. Part 228 regulates “use of the surface of National Forest System lands in connection with operations authorized by the United States mining laws (30 U.S.C. 21-54 [Mining Law of 1872]).” 36 C.F.R. § 228.1. Therefore, authorization under the Mining Law of 1872 acts as a precursor to any regulation through Part 228.</p> <p>Further, “Access to patented mining claims, mineral leases, and private property inholdings are not subject to 36 CFR part 228, subpart A nor to the access provisions as discussed herein.” U.S. Forest Service Minerals Manual § 2817.25.</p> <p>Overall, the SDEIS and agency review of these facilities fails to apply the proper discretionary and public interest review applicable to Title V and its implementing regulations. This failure, as well as the fundamental errors in assuming that Perpetua has a statutory right to receive approval of any delivery, conveyance, transmission, or access facilities, further undermines the agencies’ NEPA alternatives and mitigation analysis.</p> <p>Lastly, the Forest Service failed to comply with the financial requirements of FLPMA regarding ROW applications and approvals. At a minimum, the Forest Service must obtain “Fair Market Value” (FMV) for the use of federal land and resources. FLPMA requires that “the United States receive fair market value of the use of the public lands and their resources.” 43 U.S.C. § 1701(a)(9). “The holder of a right-of-way shall pay in advance the fair market value thereof, as determined by the Secretary granting, issuing, or renewing such right-of-way.” 43 U.S.C. § 1764(g). In addition, Perpetua must fully</p>		

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			“reimburse the United States for all reasonable administrative and other costs incurred in processing an application for such right-of-way and in inspection and monitoring of such construction, operation, and termination of the facility pursuant to such right-of-way.” Id. Forest Service regulations state that: “(a) ...special use authorizations shall require the payment in advance of an annual rental fee as determined by the authorized officer. (1) The fee shall be based on the fair market value of the rights and privileges authorized, as determined by appraisal or other sound business management principles.” 36 C.F.R. § 251.57.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	21	Since the DEIS, Perpetua has abandoned some mining claims and submitted new mining claims, as discussed already. The Forest Service cannot simply assume the claims are valid, the claims cover the proposed activities, and that the Stibnite Gold Project will have the same effects as it would have previously under the different configuration of claims.	REG	<p>The Forest Service is not assuming the validity of the mining claims included in the SGP. The status of the mining claims for the area of the SGP is described in Section 4 and Appendix II of the 2021 Feasibility Study Technical Report which was prepared in compliance with the National Instrument 43-101 of the Canadian Securities Administrators Standards (NI 43-101) for reporting mineral properties (M3, 2021). The purpose of NI 43-101 is to ensure that misleading or erroneous information on mineral properties is not published or represented to potential investors on the stock exchanges overseen by the Canadian Securities Authority. A 43-101 feasibility study is a comprehensive technical and economic description of a mineral project prepared by experts who must have the prerequisite qualifications ("Qualified Persons").</p> <p>Section 4 of the Feasibility Study describes the mineral title of the SGP property in some detail. It references a legal opinion prepared by a well-known law firm with expertise in these matters, Parson, Behle & Latimer. The report also states, "no significant flaws or title issues have been identified in multiple formal title reviews of the claims performed by qualified, independent, title examiners".</p> <p>This report describes the mineralization at the SGP property and the location of the mineral resources to be mined on patented and unpatented mining claims within the property. The report also states that, as of the effective date of the report, December 2020, the property taxes were paid in full for the patented mining claims. Maintenance of the unpatented mining claims requires that the BLM be provided with the serial numbers and evidence of maintenance fees of the claims on or before September 1 of each year. The report states that this was completed for the most recent filing year prior to release of the report on August 3, 2020 and that an Affidavit of Satisfaction was subsequently recorded with Valley County on August 20, 2020. This information can be considered reliable evidence that the subject claims are properly authorized by the 1872 Mining Law.</p> <p>The Feasibility Report was cited in the SDEIS and is part of the Project Record. The property ownership information of the report has been reviewed by the Forest Service and determined to be reliable.</p> <p>Based on the reliable property ownership description in the Feasibility Study Technical Report, the Forest Service believes the SGP is properly regulated under the 36 CFR Part 228 regulations.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	60	<p>VIII. FAILURE TO MINIMIZE ALL ADVERSE ENVIRONMENTAL IMPACTS AND TO PROTECT PUBLIC RESOURCES</p> <p>Even under the Forest Service’s erroneous decision to regulate the project solely through its Part 228A regulations, the agency failed to minimize all adverse impacts, as shown herein. Under the Organic Act and Part 228A regulations, the agency must “maintain and protect fisheries and wildlife which may be affected by the operations.” 36 C.F.R. § 228.8(e). These impacts also violate the Forest Service’s duties to “minimize adverse environmental impacts on National Forest surface resources.” 36 C.F.R. § 228.8. “The operator also has a separate regulatory obligation to ‘take all practicable measures to maintain and protect fisheries and wildlife habitat which may be affected by the operations.’ 36 C.F.R. § 228.8(e).” “Under the Organic Act the Forest Service must ...require [the project applicant] to take all practicable measures to maintain and protect fisheries and wildlife habitat.”</p>	REG	<p>The compliance with the regulations cited in the comment relating to minimizing adverse effects, and taking all practicable measures to maintain and protect fisheries and wildlife habitat are open to interpretation and judgment on a site-specific basis. The Forest Service believes that application of the existing regulatory and Forest Plan requirements identified in Table 2.4-12 along with the proponent proposed Design Features listed in Table 2.4-13 of the SDEIS show the intent of both parties to maintain and protect the fisheries and wildlife resources. The environmental effects descriptions for fisheries and wildlife contained in Sections 4.12 and 4.13 of the SDEIS describe the impacts to these resources and any mitigative measures that can be applied to avoid or reduce these impacts.</p>

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			<p>The CWA, Organic Act, and agency regulations preclude the Forest Service from approving aspects of a mining operation that would violate federal or state water quality standards.</p> <p>Under the Clean Water Act Section 313, the Forest Service cannot authorize mining operations that do not comply with state and federal water quality regulations, including a state’s antidegradation policy. 33 U.S.C. § 1323(a).</p> <p>The Organic Act mandates the same compliance, as the Part 228 regulations “further require that mining operators comply with applicable state and federal water quality standards including the Clean Water Act; [and] take all practicable measures to maintain and protect fisheries and wildlife habitat.” The 228 regulations require that the operator submit sufficient information to enable the agency to ensure that the Project will comply with all applicable state and federal requirements to protect water quality and fisheries. See 36 C.F.R. §§ 228.4(c)(3), 228.8(b), 228.8(e). The SDEIS does not show, or properly analyze, that all aspects of the project will fully protect “fisheries and wildlife habitat.” This is in addition to the agency’s/project’s failure to fully protect all uses, including Treaty-reserved rights and resources.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	61	<p>Part 228 regulations are used, the Organic Act prevents the Forest Service from adversely affecting public waters, such as the waters and springs that will be adversely affected/eliminated by the project.</p> <p>This is also true for the critical wetlands, riparian areas, and Groundwater Dependent Ecosystems that will be severely impacted by the project. In addition to the Executive Order on Wetlands Protection (which requires the Forest Service to protect wetlands), the Organic Act requires the Forest Service to protect public land water resources, which has not been done.</p> <p>[N]ational forests...shall be as far as practicable controlled and administered in accordance with the following provisions. No national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States. 16 U.S.C. §475.</p> <p>“The legislative debates surrounding the Organic Administration Act of 1897 and its predecessor bills demonstrate that Congress intended national forests to be reserved for only two purposes – ‘to conserve the water flows, and to furnish a continuous supply of timber for the people.”</p>	REG	<p>Impacts of the SGP on surface water and groundwater resources are described in Sections 4.8 and 4.9 of the SDEIS. Impacts to wetlands and riparian resources are described in Section 4.11. These sections also include descriptions of any mitigative measures proposed by the Forest Service to avoid or reduce certain of these impacts or their severity.</p> <p>The Purpose statement of the 36 CFR 228A regulations in 36 CFR 228.1 clearly states that National Forest System lands can be utilized in connection with operations authorized by United States mining laws. This is different than the statement made in the comment that Congress intended national forests to be reserved for only two purposes - "to conserve the water flows and to furnish a continuous supply of timber for the people".</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	62	<p>“The objects for which the forest reservations should be made are the ... preservation of forest conditions upon which water conditions and flows are dependent.”</p> <p>New Mexico recognized that the “preservation” of conditions for water flow was aimed primarily at providing water for uses outside the forest boundaries – contradicting the agency’s position here that it has no authority over actions on the forests that may eliminate or impair off-forest resources. “Congress authorized the national forest system principally as a means of enhancing the quantity of water that would be available to the settlers of the arid West.” Yet instead of “enhancing” water supplies, the project will adversely affect water that would otherwise be available and in good quality for the Forest, to downstream water users, and under rights reserved and guaranteed to the Nez Perce Tribe by treaty.</p> <p>Although the Act itself and the New Mexico decision shows that the Forest Service’s abdication of authority here is invalid, this does not mean that mining is precluded whenever it affects downstream water supplies. “Congress intended the national forests to be put to a variety of uses ... not inconsistent with the two principal purposes of the forests.”</p> <p>Thus, the Forest Service failed to “preserv[e] forest conditions upon which water conditions and flows are dependent.” Here, the Forest Service never considered whether its approval of the Stibnite Gold Project is “consistent with” one of the “primary purposes” of the Payette National Forest – “enhancing” and “preserving” water conditions/flows. And based on the information that is provided in the SDEIS, the Stibnite Gold Project is not consistent with that purpose, as it will destroy, alter, and degrade wetlands and creeks throughout the mining area and along the transportation and utility routes.</p>	REG	<p>Section 4.8 of the SDEIS describes proposed changes to existing stream channels within the SGP operations area. Some of these changes would be temporary during operations and the channels would be restored during reclamation activities. Other changes would be permanent. One of the major changes is to the East Fork SFSR which currently flows through the Yellow Pine Pit that block fish passage upstream. This stream would be temporarily rerouted during operations around the enlarge open pit in a diversion tunnel designed to allow fish passage. The Yellow Pine Pit would then be backfilled and the stream restored across the backfill and a new in-stream lake to permanently restored fish passage through this reach.</p> <p>The existing Blowout Creek would not be impacted by the operations but would be reconstructed voluntarily to restore a stable and less erosive condition than is currently present.</p> <p>Meadow Creek would be diverted during operations and reconstructed during reclamation to a more natural channel and floodplain. There would be an artificial channel reach where the creek passes over the TSF embankment outer slope which would present a permanent barrier to upstream fish passage.</p> <p>The SDEIS states that surface water flow rates in affected streams would be lessened during parts of the mine operations but are not expected to be permanently impacted by the SGP and natural flow rates would be restored within about 10 years of cessation of operations.</p> <p>Section 4.9 of the SDEIS describes the water treatment plans for the SGP which would be driven largely by mine dewatering and contact runoff water from mine operations areas. The</p>

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			<p>Regarding long-term impacts to public resources, the SDEIS admits that long-term or perpetual treatment of water pollution would be needed. SDEIS at 2-91. At the outset, the SDEIS admits that treatment issues have not been adequately considered in the DEIS: "Evaluation of post closure water treatment is ongoing." SDEIS at 2-91. This is the exact same statement from the first DEIS (at 2-75), yet the problem has not been resolved. The agency cannot proceed to issue a Final EIS without allowing the public to comment on final treatment issues in the SDEIS.</p>		<p>reclamation of tailings, pit backfills, and the largest development rock storage facility (buttress) includes placement of impermeable geosynthetic covers overlain by growth material. After this is accomplished the water treatment rate is predicted to decrease until treatment potentially can cease in mine year 40. Permanent treatment is not inevitable. The treatment effluent to site receiving streams would comply with the water quality standards for the streams. Water treatment processes are described in Section 4.9.2 to satisfy the understanding of reasonably foreseeable conditions.</p> <p>Section 4.11 of the SDEIS describes that more than 119 acres of wetlands in the mine site would be permanently filled. This section also states that compensatory mitigation of these impacted acres would ensure no net loss of wetland functions. The SDEIS also describes potential impacts to wetlands adjacent to mine operations or new/improved access roads including from pollutants and sediments delivered to receiving streams but that mitigation measures are expected to reduce these impacts.</p> <p>Section 4.12 of the SDEIS discusses impacts to fisheries. It states that long-term arsenic, antimony, and mercury concentrations in the West End Pit lake would be slightly exceed the strictest potentially applied water quality standards, which are for human consumption of the water and any fish in the water. However, the pit lake is not expected to be a drinking water source or overflow to surface water streams and would be fishless. Impacts of these contaminants in the pit lake were described in the SDEIS as minor, permanent and localized.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	63	<p>Allowing such perpetual pollution conditions to exist, including a permanently polluted pit lake, violates the Forest Service's duties to protect public resources, water quality, aquatic life, and wildlife. The Forest Service cannot approve any operations that will require long-term or perpetual treatment (e.g., mine water treatment). The potential for a financial assurance/bond to cover treatment of perpetual pollution (as noted in the SDEIS) does not satisfy the agency's obligation not to approve operations that would result in such conditions in the first place.</p> <p>Allowing an operation to begin that will admittedly never be fully reclaimed due to its unending need for perpetual treatment violates the Forest Service's duties to ensure the protection of public resources under the Organic Act, Minerals Policy Act of 1970, and other applicable laws. Although written for coal mines, there is no reason why the Forest Service cannot adopt this requirement for the Stibnite Gold Project in order to comply with the Organic Act, NFMA, CWA, etc.</p> <p>Under the Organic Act, NFMA, the CWA, 1970 Act, and the Part 228 regulations (as well as the Part 251/261 rules), the Forest Service cannot approve a mine that does not ensure that reclamation will be completed – i.e., a mine that will require perpetual treatment. Under the Part 228 regulations, the agency can only approve a mine that can be reclaimed. In detailing the reclamation requirements, the regulation states that the:</p> <p>[O]perator shall, where practicable, reclaim the surface disturbed in operations by taking such measures as will prevent or control onsite and off-site damage to the environment and forest surface resources including:</p> <ol style="list-style-type: none"> (1) Control of erosion and landslides; (2) Control of water runoff; (3) Isolation, removal or control of toxic materials; (4) Reshaping and revegetation of disturbed areas, where reasonably practicable; and (5) Rehabilitation of fisheries and wildlife habitat. <p>36 CFR § 228.8(g) (emphasis added). By allowing the continuation/creation of a mine with perpetual toxic/polluted waters, the agency has violated these requirements.</p> <p>As noted in the Forest Service's Anatomy of a Mine regulatory guidance report, reclamation is a critical and required component of a logical, complete and reasonable mining plan:</p>	REG	<p>The water chemistry of the West End Pit lake is predicted to be within compliance with potentially applicable water quality standards except for three parameters and the pollution caused by these is considered to be minor, permanent, and localized to the lake.</p> <p>The need for operation of onsite water treatment is predicted to decrease after mine operations cease until about mine year 40 when treatment might be able to be terminated.</p>

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			<p>Satisfactory reclamation should emphasize three major objectives:</p> <ol style="list-style-type: none"> 1. The productivity of the reclaimed land should at least equal that of the premine surface. This does not necessarily mean that the site must be restored to an approximation of its original condition, or that surface uses after mining will be the same as those existing prior to mining. For example, an area used for marginal grazing prior to mining may be changed to a useful and attractive recreational complex, or perhaps in another case to a housing area. 2. Satisfactory reclamation should leave the mined area in a condition that will not contribute to environmental degradation either in the form of air- or water-borne materials, or from chemical pollution. 3. The reclaimed area should be aesthetically acceptable and it should be safe for the uses intended. <p>The Mining and Minerals Policy Act also mandates successful and final reclamation of mine operations approved by the Forest Service, requiring “the reclamation of mined land, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities.” 30 U.S.C. § 21a. No such plan to “lessen any adverse impact” from the creation of the polluted waters has been proposed or required in this case.</p> <p>The creation of a perpetual source of contaminated water, especially one which is a direct threat to wildlife, violates the federal laws and regulations noted herein. As such, the Forest Service cannot issue a record of decision (ROD) that may involve such activities and must reject any plan of operations that does not prevent the mine water contamination. Furthermore, the Forest Service’s failure to fully review, and subject the review to public comment, these water quality treatment issues violates NEPA, as discussed below.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	77	<p>X. THE SDEIS FAILS TO ADEQUATELY EXPLAIN AND DEMONSTRATE HOW THE PROPOSED PROJECT WOULD COMPLY WITH THE ENDANGERED SPECIES ACT</p> <p>The Endangered Species Act (ESA) represents “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” <i>Tennessee Valley Authority v. Hill</i>, 437 U.S. 153, 180 (1978). “The plain intent of Congress in enacting this statute was to halt and reverse the trend towards species extinction, whatever the cost.” <i>Tennessee Valley Authority</i>, 437 U.S. at 184. In enacting the ESA, Congress spoke “in the plainest of words, making it abundantly clear that the balance has been struck in affording endangered species the highest of priorities, thereby adopting a policy which it described as ‘institutionalized caution.’” <i>Id.</i> at 194.</p> <p>One would be hard pressed to find a statutory provision whose terms were any plainer than those in [Section] 7 of the Endangered Species Act.” <i>Tennessee Valley Authority</i>, 437 U.S. at 173. “It’s very words affirmatively command all federal agencies ‘to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence’ of an endangered species or ‘result in the destructions or modification of habitat of such species.’” <i>Id.</i>, (quoting 16 U.S.C. 1536) (emphasis in original). “This language admits of no exception. Pursuant to Section 7 of the ESA, each federal agency must consult with the United States Fish and Wildlife Service (FWS) and/or NOAA Fisheries to ensure that any proposed action is not likely to jeopardize the continued existence of any threatened or endangered species, or result in the destruction or adverse modification of the species’ critical habitat. 16 U.S.C. § 1536(a)(2). As recognized in the SDEIS, FWS “generally manages ESA-listed terrestrial and freshwater plant and animal species, while NOAA Fisheries is responsible for marine fisheries, including anadromous fish.” SDEIS, p. 3-263.</p> <p>During Section 7 consultation, the action agency, FWS, and NOAA Fisheries must use the best scientific data available. 16 U.S.C. § 1536(a)(2). If the proposed action “may affect” any listed species or critical habitat, the action agency must engage in “formal consultation” with FWS and/or NOAA Fisheries. 50 C.F.R. § 402.14(a). To complete formal consultation, FWS and/or NOAA Fisheries must provide the action agency with a “biological opinion” explaining how the proposed action will affect listed species and critical habitat. 16 U.S.C. § 1536(b)(3); 50 C.F.R. § 402.14(g)(3)-(4), (l)(1). The biological opinion must include the current status of the listed species, a detailed discussion of the “effects of the action” on</p>	REG	In compliance with the ESA, the PNF is preparing a Biological Assessment for submission to the USFWS and NOAA and this document will be available when the Final EIS is issued.

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			<p>listed species and critical habitat, and the expert agency’s conclusion as to whether the action is likely to jeopardize a listed species or adversely modify critical habitat.</p> <p>16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(h); Wild Fish Conservancy v. Salazar, 628 F.3d 513, 518 (9th Cir. 2010).</p> <p>If FWS and/or NOAA Fisheries conclude that the action is likely to jeopardize the continued existence of a listed species, or result in the destruction or adverse modification of critical habitat, FWS and/or NOAA Fisheries must outline “reasonable and prudent alternatives” to the proposed action. 16 U.S.C. § 1536(b)(3)(A). If FWS and/or NOAA Fisheries conclude in the biological opinion that the action is not likely to jeopardize listed species, or destroy or adversely modify critical habitat, the expert agency must provide an “incidental take statement” with the biological opinion, specifying the extent of incidental takings of listed species, the “reasonable and prudent measures” considered necessary or appropriate to minimize such impact, and the “terms and conditions” that must be complied with to implement those measures. Id. § 1536(b)(4); 50 C.F.R. § 402.14(i). If at any time the anticipated amount of incidental taking is exceeded, the agencies must immediately reinitiate consultation. 50 C.F.R. § 401.14(i)(4); id. § 402.16(a).</p> <p>The ESA mandates that “federal agencies take no action that will result in the ‘destruction or adverse modification’ of designated critical habitat.” National Wildlife Federation v. National Marine Fisheries Service, 524 F.3d 917, 933 (9th Cir. 2007) (quoting 16 U.S.C. 1536(a)(2)). “Destruction or adverse modification” of critical habitat is defined as a direct or indirect alteration that appreciably diminishes the value of the critical habitat for the conservation of a listed species. 50 C.F.R. § 402.02. During the Section 7 consultation, the agencies must consider impacts that appreciably diminish the value of critical habitat for either the survival or recovery of the species. National Wildlife Federation v. National Marine Fisheries Service, 524 F.3d at 934; Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service, 378 F.3d 1059, 1069-71 (9th Cir. 2004).</p> <p>Thus, the agencies’ assessment of the impacts of a proposed action on a listed species’ critical habitat during ESA consultation must include the project’s impact on the species’ habitat in terms of the species’ recovery as well as its survival, and how the action may impact the physical or biological features that were the basis for the species’ critical habitat determination. 50 C.F.R. § 402.02; National Wildlife Federation, 524 F.3d at 935; Gifford Pinchot, 378 F.3d at 1069. In addition, the agencies are not allowed to characterize as “insignificant” the potential impacts on a species’ critical habitat by considering only the broad scale or long-term impacts. National Wildlife Federation, 524 F.3d at 935; Gifford Pinchot, 378 F.3d at 1069.</p> <p>For the proposed Stibnite Gold Project, the Forest Service states that the following species have been included in informal consultation discussions based on suitable habitat and known occurrences in and around the Project:</p> <ul style="list-style-type: none"> • Canada Lynx (Federally Threatened) • Northern Idaho Ground Squirrel (Federally Threatened) • Wolverine (Proposed Threatened) • Killer whale (Federally Endangered) • Snake River Spring/Summer Chinook salmon (Federally Threatened with Designated Critical Habitat) • Snake River Basin Steelhead (Federally Threatened with Designated Critical Habitat) • Columbia River bull trout (Federally Threatened with Designated Critical Habitat) • Monarch Butterfly (Federal Candidate) • Whitebark Pine (Federally Threatened) <p>SDEIS, p. 6-4.</p> <p>In order to comply with Section 7 of the ESA, it is clear from the SDEIS and the proposed action that the Forest Service must engage in formal consultation with both FWS and NOAA Fisheries concerning the potential impacts to listed species, especially concerning the impacts to the federally threatened Chinook salmon, steelhead, bull trout, and their formally designated critical habitats.</p>		

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			<p>The Forest Service acknowledges in the SDEIS that the federally threatened Chinook salmon, steelhead trout, and bull trout are known to be present in the analysis area. SDEIS, p. 3-266. NOAA Fisheries listed the Snake River spring/summer-run Chinook salmon Evolutionary Significant Unit as threatened under the ESA in 1992. Id. The Forest Service acknowledges that this threatened species is found throughout the analysis area, including the South Fork Salmon River subbasin. Id. Additionally, designated critical habitat for Chinook salmon “includes all presently and historically accessible rivers and streams within the analysis area, except for the Payette River drainage.” Id., p. 3-270. The Forest Service further acknowledges that Chinook salmon and its designated critical habitat would be adversely affected by the proposed action. Id., pp. 4-357 - 4-366.</p> <p>NOAA Fisheries listed the Snake River Basin Steelhead Distinct Population Segment as threatened in 1997. SDEIS, p. 3-280. The threatened steelhead is found in the East Fork, South Fork Salmon River drainage and its tributaries downstream of the Yellow Pine pit lake. Id. NOAA Fisheries has also designated critical habitat for Snake River Basin steelhead throughout much of the analysis area, including the East Fork, South Fork Salmon River drainage to approximately 0.4 km upstream of the confluence with Sugar Creek. Id. The Forest Service recognizes that the proposed action would adversely affect steelhead, including its critical habitat. Id., pp. 4-366 – 4-373.</p> <p>FWS listed the Columbia River Distinct Population Segment of bull trout in 1998. SDEIS, p. 3-286. Bull trout are currently known to use spawning and rearing habitat in at least 28 streams within the South Fork Salmon River subbasin. Id. FWS also designated critical habitat for bull trout throughout the South Fork Salmon watershed, including the East Fork, South Fork Salmon River. Id. The Forest Service acknowledges that the proposed action would adversely affect bull trout, including its critical habitat. Id., pp. 4-373 – 4-379.</p> <p>Based on the Forest Service’s analysis and acknowledgments within the SDEIS, the Forest Service, FWS, and NOAA Fisheries must formally consult on the adverse impacts of the proposed action on threatened fish and their designated critical habitat in the analysis area in order to comply with Section 7 of the ESA. 16 U.S.C. § 1536(a)(2). This formal consultation must result in either reasonable and prudent alternatives, if jeopardy or adverse modification is found to be likely, or an incidental take statement that fully satisfies the requirements of the ESA. Moreover, during the consultation process and within the Biological Opinion, or Biological Opinions, the Forest Service, FWS, and NOAA Fisheries must use the best scientific data available. 16 U.S.C. § 1536(a)(2). The agencies must also consider all phases and the entire scope of the agency action. See <i>Conner v. Burford</i>, 836 F. 2d 1521 (9th Cir. 1988); <i>Greenpeace v. NMFS</i>, 80 F. Supp. 2d 1137 (W.D. Wash. 2000). The agencies also cannot arbitrarily limit the time frame of the proposed action. See <i>Wild Fish Conservancy v. Salazar</i>, 628 F.3d 513 (9th Cir. 2010); <i>American Rivers v. U.S. Army Corps of Engineers</i>, 271 F. Supp. 2d 230 (D.D.C. 2003).</p> <p>Additionally, in order to determine whether the proposed project’s adverse impacts may jeopardize one or more of the listed species under the ESA, FWS and NOAA Fisheries must identify each of the species’ tipping points for survival and recovery, and then determine whether the project’s impacts would reach that threshold. <i>Ctr. for Biological Diversity v. Salazar</i>, 804 F. Supp. 2d 987, 999-1000 (D. Ariz. 2011). The agencies must know at what point survival and recovery will be placed at risk for each species before they can conclude whether or not jeopardy may result from further impairments to habitat that is already degraded. <i>Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.</i>, 524 F.3d 917, 936 (9th Cir. 2008).</p> <p>During the Section 7 consultation, FWS and NOAA Fisheries may rely on mitigation measures “only where they involve ‘specific and binding plans’ and ‘a clear, definite commitment of resources for future improvements’ to implement those measures.” <i>Ctr. for Biological Diversity</i>, 804 F. Supp. 2d at 100, quoting <i>Nat’l Wildlife Fed’n</i>, 524 F.3d at 935-36. Furthermore, “mitigation measures supporting a [biological opinion’s] no jeopardy or no adverse modification conclusion must be ‘reasonably specific, certain to occur, and capable of implementation; they must be subject to deadlines or otherwise-enforceable obligations; and most important, they must address the threats to the species in a way that</p>		

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			<p>satisfies the jeopardy and adverse modification standards.” Id., quoting Ctr. for Biological Diversity v. Rumsfeld, 198 F. Supp. 2d 1139, 1152 (D. Ariz. 2002).</p> <p>Overall, despite the anticipated, significant adverse impacts to listed species and critical habitat, the SDEIS fails to demonstrate that the proposed Project can meet the strict standards under the ESA to protect the listed species and to ensure that there will be no destruction or adverse modification of their designated critical habitats. The commenters request copies of the biological opinions for the proposed Project as soon as they are completed and available.</p>		
Idaho Regulatory Agencies	17718	8	<p>For the Idaho Department of Lands, the Permit or Authorization bullets should comply with State Statute and Rule. Therefore:</p> <ul style="list-style-type: none"> • <i>Submittal of a completed Reclamation Plan Application Package that includes the Reclamation Plan.</i> • <i>Approval of the Reclamation Plan.</i> • <i>Submittal of a completed Application for Permanent Closure of Cyanidation Facilities.</i> • <i>Approval of Permanent Closure Plan.</i> • <i>Approval of the estimate of total third-party Reclamation and Closure costs to be used in establishing the financial assurance amount.</i> • <i>Submittal and approval of the Permanent Closure Report</i> 	REG	No further response required. General in nature or position statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	18649	2	<p>Each workday, I am reminded of the complex permitting framework that must be successfully navigated if the Stibnite Gold Project is going to be constructed and operational. It is fair to state that, through all of the necessary ancillary permits, the SGP will be required to adopt and manage every environmental construct involving water, air, listed species and their habitat, and hazardous waste management that has been enacted into law. That permitting infrastructure is wholly separate from the exercise of legal authority by the Forest Service to approve the Plan of Restoration and Operation for the Project.</p> <p>I am providing below a menu of the plentiful legal authority and permits that the SGP will be required to initially accommodate and then comply with in order to begin construction and operation. I list the appropriate law and permits separately in this comment letter to stamp an exclamation point on the distinction that the evolution of a proposed action through NEPA, where the impact of an action on the environment is analyzed (but not legally “permitted”), is conceptually distinct from the regulatory framework that Perpetua will welcome as the Project moves into construction and operation.</p> <p>Federal Clean Air Act • Permit to Construct (PTC) (see State of Idaho) Clean Water Act • Section 402 NPDES (see State of Idaho)/SWPPP • Section 404 Individual Permit for stream and wetland impacts Endangered Species Act • Section 7 Consultation with USFWS/NOAA Fisheries National Historic Preservation Act • Cultural/Historical Impacts Analysis State of Idaho Clean Air Act (Permit to Construct (IDEQ)) Clean Water Act • IPDES Water Discharge (IDEQ)) • 401 Certifications (IDEQ) Cyanidation Permit (IDEQ) Groundwater Management Program Point of Compliance (IDEQ) Waste Water Permits (IDEQ) Solid Waste Permit (IDEQ) Water Rights (IDWR) TSF Dam Safety & Construction Permit (IDWR) - Reclamation Plan Approval (IDL)</p>	REG	No further response required. General in nature or position statement.

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			<p>Right of Way Encroachment (ITD) County/Local Government Planning & Zoning Local Health District Permits Building Permits Road Use Authorizations Conditional Use Permits</p> <p>These are the laws that the Stibnite Gold Project will comply with every day in order to operate. It is difficult to imagine any gaps in Perpetua's regulatory compliance portfolio for the SGP.</p>		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	18649	8	<p>From managing the beneficial changes that culminate with the 2021 MMP identified as the Preferred Alternative in the SDEIS, I am confident that this action alternative is worthy of being designated the Selected Alternative in the Final EIS and ultimately the Record of Decision. Certainly, some minor adjustments may be in order based on Perpetua's commitment to continually improve the Project. But what is presented to the public and cooperating agencies in the 2021 MMP fulfills the opportunity to advance responsible resource development under the 1872 Mining Law.</p>	REG	No further response required. General in nature or position statement.
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	3	<p>III. Recent Administrative and Congressional Critical Minerals Directives</p> <p>The SGP embodies several key objectives in the Administration's and Congress' recent critical minerals policies. First, the SGP will become the Nation's only source of domestically mined antimony⁵, which is one of the critical minerals included in the U.S. Geological Survey's (USGS') critical minerals list⁶. Secondly, as a remining project, the SGP is a perfect demonstration project for the remining goals embraced in recent statutes, Executive Orders, and other federal decisions. The remining components of the SGP include:</p> <ol style="list-style-type: none"> 1) Reprocessing and recovering gold and antimony from legacy mine wastes with recoverable metal values; and 2) Removing non-valuable mine wastes from area streams where they are currently leaching metals and degrading water quality and placing these wastes in modern, engineered facilities designed to isolate these materials from the environment. <p>As explained in the DoD's DPA award announcement, the U.S. military has a critical need for the antimony from the SGP:</p> <p>"This investment is essential to ensure the timely development of a domestic source of antimony trisulfide for the manufacture of small arms and medium caliber cartridges, as well as many other missile and munition items."</p> <p>Since publication of the Draft EIS in August 2020, there have been several Administrative and Congressional critical minerals actions that are directly relevant to the SGP including the following:</p> <ul style="list-style-type: none"> • President Trump's September 30, 2020 Executive Order 13953 entitled "Addressing the Threat to the Domestic Supply Chain from Reliance on Critical Minerals from Foreign Adversaries;" • President Biden's February 24, 2021 Executive Order 14017 "On America's Supply Chains." <ul style="list-style-type: none"> • This Executive Order directed the Secretaries of Commerce, Energy, Defense, and Health and Human Services to complete a supply chain review in 100 days and specified that the Secretary of Defense must prepare "a report identifying risks in the supply chain for critical minerals" and describe and update the work done pursuant to President Trump's Executive Order 13953 on critical minerals. • The June 2021 report "Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth," which is the 100-day Supply Chain Review Report prepared in response to Executive Order 14017; 	REG	<p>No further response required. General in nature or position statement.</p> <p>The Forest Service's consideration of the Project on the basis of its ability to produce gold, silver, and antimony is described in SDEIS Section 1.6 as the Project's Purpose and Need.</p>

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			<ul style="list-style-type: none"> • The March 2022 “Request for Information (RFI) to inform the Interagency Working Group on Mining regulations, Laws, and Permitting” in the Federal Register (Vol 87, No. 62) published by the Office of the Secretary of the Department Interior. • One of the questions in the IWG’s RFI pertains specifically to critical minerals and asks: “What types of incentives would be appropriate to encourage the development of critical minerals?;” and • The March 2022 announcement that President Biden was invoking his authority under Title III of the Defense Production Act and gave the Department of Defense the authority to increase domestic mining and processing of critical minerals that are used for storage batteries. <p>The June 2021 100-Day supply chain report includes a 53-page critical minerals section prepared by the DoD that outlines the following key findings:</p> <ul style="list-style-type: none"> • Strategic and critical minerals and materials are the building blocks of a thriving economy and a strong national defense. • Critical minerals and materials are used in nearly every electronic device, support high value-added manufacturing and high-wage jobs, in numerous sectors; • The global strategic and critical materials and minerals supply chains are at serious risk of disruption—from natural disasters or <i>force majeure</i> events, and are rife with political intervention and distortionary trade practices. • This risk is more than a military vulnerability; it impacts the entire U.S. economy and our values. • The need for strategic and critical materials is likely to intensify to enhance or enable many environmentally friendly “green” technologies, such as electric vehicles, wind turbines, and advanced batteries. • Expanding U.S. production and processing capacity will require investments in mining, including in non-traditional types of mining, in processing, and in recycling. <p>The 100-day supply chain report is directly relevant to the SGP because this report explicitly requires the Secretaries to evaluate reprocessing mine wastes as a viable source of critical minerals. As a remining and reprocessing project that will recover the critical mineral antimony from legacy mine wastes, the SGP is exactly the type of remining project described in the 100-Day Report.</p>		
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	13	<p>VIII. The Rosemont Case is not Applicable to the SGP</p> <p>Based on two of the alternatives that the Forest Service appropriately eliminated from additional analysis, it appears that project opponents are seeking to apply an Arizona federal District Court’s decision in litigation pertaining to the proposed Rosemont copper mine to the SGP13. Their efforts misapply the <i>Rosemont</i> Court’s ruling, which cannot be extrapolated or applied by analogy to other proposed mining operations due to the different, unique, and site-specific geological and land configuration facts at the Rosemont Project compared to other mineral deposits.</p> <p>Section 1.10.3.1 of the SDEIS discusses why the Forest Service eliminated “Changes to the General Mining Law” as an issue warranting additional analysis. In this section, the Forest Service correctly characterizes the Mining Law as a land tenure statute that governs property rights and explains that it is not an environmental protection statute¹⁴. The Mining Law gives citizens the right to enter, use, and occupy federal lands open to location for mineral exploration and development purposes.</p> <p>Section 1.10.3.2 of the SDEIS explains that the Forest Service eliminated using its special use regulations at 36 CFR 251 Subpart B (the 251 regulations) to evaluate the SGP from additional analysis in the SDEIS because these regulations do not apply to mining. As correctly discussed in Section</p>	REG	No further response required. General in nature or position statement.

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			<p>1.10.3.2, Section 251.50(a) explicitly exempts mining from these special use regulations. The Forest Service correctly eliminated both issues from detailed analysis in the SDEIS because</p> <p>The record before the <i>Rosemont</i> Court emphasizes that the lands proposed for mine waste disposal facilities (e.g., waste rock and tailings storage areas) were unmineralized and that mining claims had been located on these lands. In <i>Rosemont</i>, the District Court ruled that these mining claims were invalid. However, this ruling is unique to the on-the-ground facts at the Rosemont Project as dictated by the geology and land configuration at Rosemont. Therefore, the District Court's holding in <i>Rosemont</i> is not a blueprint for any other proposed mining project because the geology and land configurations are different for every mineral deposit. Each mineral deposit's unique geological characteristics means the appropriate arrangement for mining claims and mill sites must be custom-tailored to fit that deposit's geologic facts.</p> <p>As affirmed by the <i>Rosemont</i> court, the Mining Law authorizes locating mining claims on lands that are mineral in character and mill sites on lands that are not mineral in character¹⁵. Mill sites can be used for ancillary mining features such as development rock and tailings storage facilities that are needed to support mining activities. As is readily evident from Figure 3.9-3, "Stibnite Mining District Geology" in the SDEIS, Perpetua is proposing to locate the tailings impoundment and associated embankment/buttress on lands in the Meadow Creek drainage that are not mineralized. Mill sites could be located on these non-mineralized federal lands pursuant to Section 42 of the Mining Law.</p>		
Jolie Drake	18929	2	<p>Unfortunately, the antiquated General Mining Act of 1872 gives Perpetua (or anyone, foreign or domestic) the right to mine on Idaho land while paying zero royalties. However, this act does not also grant them the right to cause environmental damage or harm the recreational use and enjoyment of nearby areas. This SDEIS does not provide the breadth and granularity required to fully assess the risks and required mitigation for a project of this scope. Nor did the abbreviated comment period allow adequate time for a thorough enough review of a project of this magnitude.</p>	REG	<p>SDEIS Chapter 4 analyzed the potential Project effects on 23 classifications of environmental resources present in the Project vicinity. The Final EIS includes expanded discussion of mitigation measures per that analysis and public comments received on the SDEIS.</p> <p>The 75-day public comment period was deemed adequate for public review of the SDEIS.</p>
Jolie Drake	18929	7	<p>With all the environmental risks associated with the Perpetua mining project, and lack of sufficient federal oversight, we should not support nor allow this project to move forward. In spite of the 1872 mining act, there is recent precedent for denying a minerals mining permit. Last year, the federal government blocked the Twin Metals copper mine along the pristine Boundary Waters in northern Minnesota and in late 2020, the Pebble Mine gold mine project was denied by the U.S. Army Corps of Engineers because it could not adequately comply with Clean Water Act guidelines, thus they concluded "the proposed project is contrary to the public interest." I would propose that similar justification is equally warranted in this sensitive and unique habitat in Idaho.</p>	REG	<p>No further response required. General in nature or position statement.</p>
Pam Wissenbach	19213	3	<p>Question two is why doesn't Perpetua have to bond using cash, not company stock? There is no way to know what the stock will be worth in the future or if the company will be in business.</p>	REG	<p>Reclamation performance bonds for plans approved by the Forest Service must comply with FSM 6560 which does not allow a Principal to self-bond with company stock.</p>
Karen Balch (North Fork Veterinary Service)	19228	3	<p>However, in 2012, Midas Gold Corp. proposed exploration for possible future mining of gold, silver, antimony at the Stibnite, Yellow Pine mine site. As one the of the first citizen appellants, I began to feel that the USFS appeared to be "advocates" in promoting the mining company rather than representing the American public who own the federal lands. I was perplexed why it seemed that the USFS seemed to be acting on behalf of the mining companies. But it's a perception that has persisted throughout this whole process to me. Sadly, I have felt throughout this ongoing process review that the USFS is more of an adversary rather than a non-biased referee. Maybe that's because I oppose this project on every level and perceive that "by the powers that be" this project is a slam dunk given just moving through the required steps.</p>	REG	<p>Processing of mining permit applications on National Forest System lands is a duty assigned to the Forest Service. The Forest Service does not advocate on behalf of the mine proponent but processes the permit per Forest Service requirements and guidelines.</p>
Alan Haslam (Vice President, Permitting, Perpetua	19325	51	<p>"However, the agency will need to evaluate the eventual applications for rights of way to make a final determination." Recommend removing this passage as inapplicable to a Purpose and Need statement. It should be deleted in the Final EIS. Likely only the IPCo powerline additions and upgrades off-site on NFS lands will be the subject of rights of way applications or amendments under 36 CFR 251 as a third party connected action. As recognized elsewhere in this SDEIS, the remainder of the SGP included in the</p>	REG	<p>Edit has not been made. The statement reflects the agency's duty and the current status of right of way applications.</p>

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Resources Idaho, Inc.)			2021 MMP, including access roads on NFS lands, will properly be the subject of review and approval of the plan of operations under 36 CFR 228A.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	52	<i>"All functions, work, and activities on NFS lands in connection with prospecting, exploration, development, mining, or processing of mineral resources and all uses reasonably incident thereto, including roads that are constructed and maintained in connection with development and mining of mineral resources, are operations authorized by the U.S. mining laws (36 CFR 228.3(a))"</i> - Here and wherever else this sentence may appear in the SDEIS, consider revising "authorized by the U.S. mining laws" to "within the scope of 36 CFR 228 subpart A" to more closely track the text of 36 CFR 228.3(a).	REG	The language of this sentence combines wording from 36 CFR 228.1 and 228.3. The subject wording of this comment, "authorized by the U.S. mining laws" is taken directly from 36 CFR 228.1. The requested edit will not be made in the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	53	Consider adding reference to the 2016 amendment of the 2012 Planning Rule here, which clarified/refined direction for Forest Plan Amendments.	REG	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	54	Consider adding "as amended" after the reference to 36 CFR 219.13 here.	REG	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	58	<i>"This is dismissed from consideration because making or amending law is an explicit function of Congress and not within the authority of the Secretary of Agriculture, or the Forest Supervisors."</i> Recommend adding: "Also, it is addressed by other laws, regulations, or policies."	REG	The subject paragraph only discusses the 1872 Mining Law itself and not other laws, regulations, or policies. The requested edit will not be made in the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	59	"36 CFR Part 251 Land Uses" - Recommend that the transmission lines be specifically addressed in this response, to clarify why 251 does not apply to that part of it. Special Use Authorization are mentioned in Table 1.7-2. This is made more of a focus because the transmission line would require forest plan amendments.	REG	The subject paragraph only discusses the response to the prior DEIS comment why the Proposed Action is not being permitted under 36 CFR 251. It does not apply to the third-party power line work. The requested edit will not be made in the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	75	The presentation of Tables 2.4-12 and 2.4-13 (and similar smaller tables in resource sections of Chapter 4 or Specialist Reports) is somewhat confusing: Table 2.4-12 includes Forest Plan guidelines, design features with regulatory basis, and design features with no regulatory basis listed. It is unclear who developed the stated Design Features, even if a regulation is listed. Table 2.4-13 includes additional proponent proposed design features intended to reduce or avoid environmental impacts that do not include any citations of regulatory basis. We believe the intention of these tables is to separate the features that are required by USFS or another agency (Table 2.4-12) from those that Perpetua has proposed without a regulatory impetus (Table 2.4-13). This is a good goal, and could be better achieved if the first table had a very clear regulatory basis for each entry, and if both tables included citation document for the description of the features (i.e. Forest Plan, Perpetua MMP documents, etc).	REG	Table 2.4-12 in the SDEIS already includes references to the applicable regulatory requirements. This is necessary because these requirements are found in a number of generally applicable documents applicable to any project like the Proposed Action. Adding citations for the project-specific Perpetua 2021 MMP design features in Table 2.4-13 is not necessary because these are described in other parts of the EIS document itself. The requested edit will not be made in the EIS.
Meg FitzMaurice	19329	4	Perpetua Resource Co. has long advertised their intent to "restore" the old Stibnite mining site as part of their efforts. Perpetua advertises on their website "our project is designed to restore the environment." It should be noted that while SMP will in part be located at the old Stibnite mining site over half of the SMP will take place on previously undisturbed lands, the majority of which	REG	No further response required. General in nature or position statement.

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			<p>are public lands administered by the National Forest. If Perpetua's intent with SGM is truly to restore the area then:</p> <p>1) Why does it violate the Payette and Boise Land Resource Management Plans? Why does the USFS need to significantly amend the Forest Plan to allow for long term and indefinite degradation of resources, aquatic and wildlife?</p> <p>2) Why does it violate the Clean Water Act?</p> <p>3) Why does it violate the Endangered Species Act?</p> <p>4) Why does it conflict with established Treaty and Tribal Rights?</p> <p>5) Why does the SDEIS lack detailed reclamations plans or analysis of the effectiveness of the limited proposed mitigation measures?</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	143	<p>2. Clean Water Act Regulatory Evaluation</p> <p>The proposed mine would fill and disturb wetlands and streams, all Waters of the United States, including many wetlands. Currently, the Army Corps and U.S. EPA interpret Waters of the United States as consistent with the pre-2015 regulatory regime until further notice. Under Section 404 of the federal Clean Water Act (CWA), there are two types of authorizations — general permits, and standard or individual permits. In the case of this proposed mine, an individual permit would be the applicable type of authorization. An individual permit can be issued only if the proposed discharge complies with the environmental standards under Section 404(b)(1), also known as the 404(b)(1) Guidelines (the Guidelines), which are binding regulations. The Guidelines set out four independent tests for permit issuance, described below.</p> <p>a. Section 230.10(a): Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. (This standard is referred to as the LEDPA, or least environmentally damaging practicable alternative.)</p> <p>b. Section 230.10(b): No discharge of dredged or fill material shall be permitted if it [among other things], (1) Causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable State [or approved Tribal] water quality standard; ...</p> <p>c. Section 230.10(c): Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States. ...</p> <p>d. Section 230.10(d): Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.</p> <p>If a proposed discharge is found to comply with the Guidelines, the Army Corps then must make a determination of whether the proposed project would be contrary to the public interest.</p>	REG	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	144	<p>3. Section 230.10(a): Alternatives</p> <p>An alternatives analysis under NEPA is separate and distinct from what is required under the 404(b)(1) Guidelines. The standards are not identical: for example, NEPA is non-regulatory and requires disclosure and evaluation of a reasonable range of alternatives; Section 404 is regulatory and the Guidelines allow only the least environmentally damaging practicable alternative (LEDPA) to be authorized under the CWA. While this might lead to some differences in the NEPA and 404 analyses, the Corps and federal and state resource agencies typically work to integrate the information requirements under both processes to the extent appropriate and feasible.</p> <p>Key to evaluating alternatives under CWA Section 404 is determining the Basic Project Purpose and the Overall Project Purpose of the proposed mine. In this case, the Forest Service determined that the Basic Project Purpose is to extract gold, silver, and antimony from ore. The SDEIS states that the Overall</p>	REG	The location of the mining operations described in the Proposed Action is fixed by the occurrence of the mineral resources in that location that are controlled by the proponent. There are no reasonable alternatives to that general location. The rest of this comment is general in nature and no further response is required here.

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			<p>Project Purpose is to mine, gold, silver, and antimony from ore deposits associated with SGP’s mining claims and rights in Valley County, Idaho.” (emphasis added). Though the first part of the Project Purpose is fine, the emphasized portion is where the Service erred. Fastening the analysis of alternatives to the SGP in a specific location automatically constrains that analysis to that location and renders the alternatives analysis meaningless.</p> <p>An overall project purpose will normally describe the proposed activity in order to characterize the applicant’s fundamental objectives. Practicable alternatives (see discussion below) are examined in light of overall project purposes. An overall project purpose defined too generally could theoretically require examination of countless potential alternatives; conversely an overall project purpose framed too specifically could automatically eliminate everything but the applicant’s proposed alternative from consideration; this appears to be the case here. In most cases, the project purpose is framed so that it is neither so broad (e.g., “to operate a profitable business”) as to involve consideration of an unwieldy number of alternatives nor so narrow as to constrain the analysis unreasonably, as was done by the Forest Service for this proposed mine project.</p> <p>While determining the overall project purpose is necessarily somewhat case-specific, the intent is to capture the fundamental objectives of a project (i.e., mining for the ore bodies described). Doing so enables an evaluation of potentially practicable and less environmentally damaging alternatives during the permit review process while also bounding the analysis to avoid spending time on alternatives that simply could not meet the project’s purpose. Potentially practicable and less environmentally damaging alternatives include existing or previously closed mining operations or alternative ore deposits that are or were available to the applicant when it entered the market. By improperly defining the overall project purpose too narrowly, the Service’s analysis fails to assess the possibility that less environmentally damaging practicable alternatives may, in fact, exist.</p> <p>Applicants, particularly those well along in project planning or who already invested time and resources in a particular proposal (as is the case here), may naturally desire an overall project purpose statement that contains a number of specifics aimed at increasing the likelihood that the alternatives analysis will lead to the project they already have in mind. However, the regulations require a credible alternatives analysis be performed, one that aims to identify the LEDPA rather than a proposed project “justification” analysis that steers toward a predetermined outcome.</p> <p>Finally, the 404(b)(1) regulations place the burden of proof squarely on the applicant to prove that its proposal is the least damaging alternative if the applicant’s project would discharge dredged or fill material in “special aquatic sites” for purposes that are not water-dependent. The level of documentation should reflect the significance and complexity of the discharge activity.¹⁷⁶ Therefore, the applicant is required under the regulations to “clearly demonstrate” that less environmentally damaging alternatives do not exist. In the absence of such a clear showing, the Corps is required to deny the application for a permit.</p> <p>Section 230.10(a) of the Guidelines requires that;</p> <p>(a) Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.</p> <p>(1) For the purpose of this requirement, practicable alternatives include, but are not limited to:</p> <p>(i) Activities which do not involve a discharge of dredged or fill material into the waters of the United States or ocean waters;</p> <p>(ii) Discharges of dredged or fill material at other locations in waters of the United States or ocean waters;</p> <p>(2) An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. If it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded or managed</p>		

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			<p>in order to fulfill the basic purpose of the proposed activity may be considered. Neither the SDEIS, the Clean Water Act Section 404 (b) (1) Evaluation Framework for the Stibnite Gold Project (Appendix B to the DEIS),178 nor any of the related documents discuss a thorough evaluation of alternatives, especially other locations for the mine project.</p> <p>Despite how Perpetua presents the proposed project in the SDEIS, it has proposed only one mine site location, with two potential access routes (Johnson Creek Route and Burntlog Route). Though the SDEIS describes a few variations regarding where to locate some facilities for the SGP, e.g., the TSF, most of the variations are simply approaches to minimize adverse impacts to aquatic resources¹⁷⁹ and not substantive alternatives for the mine project. The approaches to minimize impacts are welcome, but those approaches are required for any alternative under both NEPA and CWA Section 404. Perpetua has not identified any alternative sites for the proposed mine itself. Under NEPA, and especially under CWA Section 404, that does not constitute “a range of reasonable alternatives.”</p> <p>As described in the SDEIS, as part of the NEPA process, the USFS conducted an extensive alternatives development, screening, and evaluation process with the participation of the USACE. In the documents reviewed, there is little evidence that the USFS or the USACE “conducted an extensive alternatives development, screening, and evaluation process.” Missing from the alternatives discussion in the SDEIS and its related documents is a discussion of:</p> <ul style="list-style-type: none"> • other sites for the mine and its attendant facilities that were evaluated (not access route variations); • their location, owners, availability; • the aquatic resources present at those other sites; • the anticipated adverse impacts to those aquatic resources that would occur at those sites were a mine to be developed; • conceptually how those adverse impacts could be compensated; and, • for other sites that were evaluated and rejected, the reasons for rejection. 		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	193	<p>6. New road construction for the Burntlog Route violates Forest Service regulations regarding Forest Planning, access across National Forest lands, the Idaho Roadless Rule and Travel Management</p> <p>New construction for the Burntlog Route would violate the Forest Plan. The newly constructed road would pass through Management Areas 20 and 21 which the Forest Service has prioritized for active and passive restoration and maintenance of aquatic, terrestrial, & hydrologic resources. Management actions may only degrade resource conditions for 15 years or less and must be designed to avoid degradation of existing conditions in the long-term: General Standard 2005 Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).</p> <p>General Standard 2010 Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary (up to 3 years) or short-term (3-15 years) time periods, and must be designed to avoid degradation of existing conditions in the long-term (greater than 15 years). The Burntlog Route construction, operations and obliteration will result in over 20 years of negative impacts to aquatic, terrestrial, & hydrologic resources, in direct violation of the Forest Plan. Road construction is deemed so incompatible with protecting these resources that the Standards 2008, 2012 and 2015 have a prohibition on road construction not related to the identified exemptions: Road construction and reconstruction may only occur where needed: a) To provide access related to reserved or outstanding rights, or b) To respond to statute or treaty, or c) To address immediate response situations where, if the action is not taken, unacceptable impacts to hydrologic, aquatic, riparian or terrestrial resources, or health and safety, would result. And Standards 2050 and 2154: New roads shall not be built except to replace existing roads in RCAs or directly repair human-caused damage to TEPC fish habitat in streams unless it can be demonstrated through the project-level NEPA analysis and related Biological Assessment that adverse effects to TEPC species or their habitats are avoided unless outweighed by demonstrable short- or long-term benefits to those TEPC species or their habitats. New road construction for the Burntlog Route will also violate several Forest Plan objectives (Boise Forest</p>	REG	The reroute of Stibnite Road and the designation of a temporary OSV route to replace an existing OSV route are actions that fall under the Travel Management Rule (36 CFR 212), Subparts B and C respectively (FSM7715.03(5)). These actions require consideration under the Travel Management Rule Minimization Criteria (36 CFR 212.55(b)). The Travel Management Rule analysis was added to Section 4.19 of the Final EIS.

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			<p>Plan III-376): Objective 2014 Improve water quality by reducing road-related accelerated sediment delivery to upper Johnson Creek and its tributaries.</p> <p>Objective 2015 Assist in de-listing South Fork of Salmon River drainage, including upper Johnson Creek, from the State of Idaho's impaired water bodies list by applying appropriate and active watershed restoration to reduce sediment, which is the identified pollutant of concern.</p> <p>Objective 2016 Improve stream bank stability by reducing sediment delivery to Johnson Creek, and by revegetating banks with native plant species as needed.</p> <p>Perpetua is proposing construction and operations related to the Burntlog Route to provide access related to reserved or outstanding rights. However, as detailed above, there is already reasonable access to the Stibnite area by way of Forest Roads 412 and 375 as evident with the Forest Service's development of the Johnson Creek Alternative. These same roads previously supported decades of large scale mining activities, including open pit cyanide leach operations. There are also doubts about whether all of Perpetua's claims are valid, as detailed above. As such, we do not believe that any Forest Plan amendments to allow additional road construction are needed or legally supportable.</p> <p>New construction for the Burntlog Route also violates National Forest travel regulations. Forest Service regulations provide that "Where there is existing access [...] that is adequate or that can be made adequate, there is no obligation to grant additional access through National Forest System lands." (36 C.F.R. 251.110(c) and (g)).</p> <p>The Burntlog Route is also impermissible under the Idaho Roadless Rule (36 C.F.R. 294, Subpart C). The Idaho Roadless Rule generally prohibits road construction in Idaho Roadless Areas (IRA), including the Black Lake (5,335 ac.) and Burnt Log (23,699 ac.) roadless areas through which the proposed Burntlog Route would pass. The large majority of land in these two IRAs is classified by a "Backcountry/ Restoration" management theme by the Idaho Roadless Rule. DEIS at 3.23-7. The Rule provides a limited exception for road construction to access valid existing claims when it is found to be needed: "Road construction is only permissible in Idaho Roadless Areas designated as Backcountry/Restoration when the Regional Forester determines ... (iii) A road is needed pursuant to statute, treaty, reserved or outstanding rights, or other duty of the United States." 36 CFR § 294.22(b)(1) (emphasis added). The inclusion of the word "needed" is significant in the consideration of the road construction associated with this project. It requires the Regional Forester to consider the necessity of the road construction in balancing the underlying intent and direction of the roadless rule (to protect roadless values and integrity) with any statutory and/or outstanding rights. In this instance there is no "outstanding right" because that right is currently satisfied by existing access along the Johnson Creek and up the East Fork South Fork Salmon River (identified as the Yellow Pine Alternative in the DEIS and the Johnson Creek Alternative in the SDEIS) which does not bisect roadless areas.</p> <p>The limitation on the construction and use of temporary roads for administrative purposes is reiterated in the FEIS for the Idaho Roadless Rule, which states "Temporary roads are not intended for public use and are not subject to the Highway Safety Act of 1966." Public motorized use of the road would not be an administrative use, and therefore the proposal to authorize it is inconsistent with the Idaho Roadless Rule.</p> <p>Allowing public motorized use on the new 15 miles of the Burntlog Route would violate the Travel Management Rule which limits motorized public access to roads, trails and areas designated for motor vehicle or over-snow vehicle use (36 C.F.R. 261.13). The Forest Service is classifying the 20-year+ Burntlog Route as a temporary road needed to provide access to mineral claims under the Mining Law of 1872. The Idaho Roadless Rule specifically incorporates definitions of Forest Roads and Temporary Roads from 36 CFR § 212.1. According to those definitions, a temporary road is "authorized by contract, permit, lease, or other written authorization that is not a forest road or trail and that is not included in a forest transportation atlas." The Idaho Roadless Rule goes on to clarify (36 CFR Part, Subpart C, § 294.21 Definitions) that "Temporary roads are available for administrative use until decommissioned."</p>		

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			<p>Setting aside the issue that the Burntlog Route is not consistent with the Idaho Roadless Rule and Payette Forest Plan, the Burntlog Route should not be available for public motorized use as a Forest Road or Trail (some motorized trails overlap with Forest Service administrative roads on the Payette). The proposed new section of the Burntlog Route is not included in the Forest Transportation Atlas, is not considered a Forest Road, has not been designated for motor vehicle or OSV use (36 C.F.R. 261.13) and is therefore only available for administrative use and implementation of the Special Use Permit, and not public motorized travel.</p> <p>However, the Forest Service is considering allowing public motorized use of the Burntlog Route during the approximate one year time in which the replacement Stibnite Gold public access road is being constructed from the north part of the Operations Area, through the mine site, and on to Thunder Mountain: The newly constructed Burntlog Route connecting to Thunder Mountain Road would be a temporary road necessary for mining purposes and would meet 36 CFR 228A requirements for environmental protection to assume that mine operations are conducted to minimize adverse environmental impacts to the extent feasible for roads. Accordingly, the road would not be designated for public motor vehicle use under 36 CFR 212.50 on the Motor Vehicle Use Map. Therefore, for public motor vehicle use to be allowed on the road when other public access roads are blocked by mine operations, one of the other exceptions from the prohibitions on motor vehicle use on NFS land at 36 CFR 261.13 must be met. The approved plan of operations would meet the exception for written Forest Service authorization under 36 CFR 261.13(h) by including a provision in the mine plan for public use of the road when other public road access is blocked by mine operations. SDEIS 4-490.</p> <p>The Forest Service is considering utilizing 36 CFR 261.13(h) which allows the Forest Service to authorize motor vehicle use under a written authorization:</p> <p>(h) Motor vehicle use that is specifically authorized under a written authorization issued under Federal law or regulations; However, this exemption was never intended to be used so broadly. The Forest Service travel management directives state, "Examples of a written authorization include contracts, easements, and permits." (FSM 7716.2(1)(h)). Contracts, easements, and permits are not issued to the general public. They are issued to entities that have approved for special uses. Therefore, it is illegal to authorize public use of the Burntlog Route under this exemption. Even if the Forest Service were to authorize construction and public use of the Burntlog Route, the agency would have to properly adhere to Subparts B and C of its travel management regulations.</p> <p>Such a federal action would still have to be consistent with NEPA and the NEPA analysis for such a proposal here is clearly lacking. Furthermore, 36 CFR 261.13(h) was never intended to open such a sensitive route for public access for that duration.</p> <p>By setting this precedent, the Forest Service will open itself up to an expectation that the Forest Service will open the Burntlog Route whenever the Johnson Creek Route/Stibnite Road is closed for any length of time. The replacement public route through the Operation Area to Thunder Mountain will not be open for at least a year while it is being constructed and will also be closed for several days each year due to any number of reasons: mining sequencing such as blasting and hauling, avalanches along the Stibnite road, spill cleanups, or other issues. The Specialist Report appears to confirm this expectation: Burntlog Route, which would be open to public use when other routes into the area are not available, could increase disturbance to wildlife species as the public could use the road at any time of day.²³⁹ (Emphasis added.)</p> <p>Using 36 CFR 261.13(h) in this circumstance sets a bad precedent for other issues where the Forest Service has determined that increased motorized recreational activity will have negative environmental impacts.</p> <p>Regardless of whether or not general or specific criteria apply, the agency must demonstrate how its "written authorization" complies with the Travel Management Rule, including how the environmental analysis in support of that authorization demonstrated the agency adequately considered the general effects, and the minimization criteria (if applicable). The Forest Service would need to demonstrate how it considered public motorized use of a new road within an IRA in its written authorization and would</p>		

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			<p>require supporting analysis that addresses impacts to roadless characteristics (i.e., natural resources), quiet recreational opportunities, and conflicts among uses of NFS lands, especially if those lands have a semi-primitive, non-motorized setting. Specifically, 36 CFR 212.55(a) states in part: "the responsible official shall consider effects on National Forest System natural and cultural resources, public safety, provision of recreational opportunities, access needs, conflicts among uses of National Forest System lands, the need for maintenance and administration of roads, trails, and areas that would arise if the uses under consideration are designated; and the availability of resources for that maintenance and administration." We maintain that the road should not be open to public motorized use absent a travel management designation decision consistent with subpart B of the Travel Management Rule (and consistent with the Roadless Rule as well, given location through an IRA).</p>		
<p>Bonnie Gestring (Northwest Program Director, Earthworks) and seven others</p>	<p>17634</p>	<p>213</p>	<p>An important element of all Forest Service travel management planning is compliance with the "minimization criteria". These criteria were outlined in Executive Orders 11644 and 11989, issued by Presidents Nixon and Carter in 1972 and 1977, respectively. The criteria require federal land management agencies, when designating routes (and areas) open to motorized travel, to: 1) minimize damage to soil, watershed, vegetation, or other resources of the public lands; 2) minimize harassment of wildlife or significant disruption of wildlife habitats; 3) minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands; and 4) minimize conflicts among different classes of motor vehicle uses of National Forest System lands or neighboring Federal lands.²⁴² The Forest Service codified these "minimization criteria" in subparts B and C (the OSV Rule) of its travel management regulations.²⁴³ When modifying the snowmobile trail system, designating new OHV routes, or making other determinations that affect motorized use of routes or areas the Forest Service is required to abide by the minimization criteria.</p> <p>REST04 in the Payette Forest Plan states that "On all lands outside of designated travel ways, motorized use shall be prohibited unless otherwise authorized." Neither of the two proposed new OSV routes in the SDEIS alternatives are currently designated OSV routes on the Payette National Forest.</p> <p>In order to designate these routes – even as temporary routes – the Forest Service must follow the requirements of the Travel Management Rule and comply with the minimization criteria. The fact that the area through which the proposed OSV routes would travel is not closed to OSV use does not affect the need to adhere to Travel Management regulations when designating these routes as groomed OSV routes. The Payette National Forest has not conducted Subpart C travel management planning, and thus has not gone through a process to determine where OSV use is appropriate. The forest is continuing to operate under a pre-Travel Management Rule paradigm of "open unless designated closed", which is incompatible with current agency policy. Committing to a 20-year groomed OSV trail in the absence of any travel management decisions contravenes agency policies and prejudices the future Subpart C process. Elsewhere in the Forest Service system the agency has acknowledged that grooming increases OSV use by over 50%²⁴⁴ — thus, designating new groomed routes is likely to have significant impacts on wildlife, natural resources, and other uses.</p> <p>In response to litigation from Winter Wildlands Alliance, The Wilderness Society, and WildEarth Guardians, the Payette National Forest clarified that it administers over-snow motor vehicle use in accordance with prior decisions and that the Forest Service needs to conduct winter travel planning.²⁴⁵ Section 3.16.2.3 is the only part of the DEIS that addresses the Travel Management Rule. Although this section briefly describes the Rule, and states in that "The Forest Service issued orders including maps showing the areas where OSV use is allowed, prohibited, or restricted", this statement should be amended to clarify that these orders — and the forest — are not compliant with Subpart C of the Travel Management Rule. This section of the SDEIS should also state that any new ORV — including OSV — designations necessitate application of the Travel Management Rule. Specifically, if the Payette Forest wishes to designate new ORV routes (and parking areas) to offset routes lost to the Stibnite Gold Project, it must ensure that the new routes are located in a manner that minimizes damage to natural resources, minimizes harassment of wildlife or significant disruption of wildlife habitat, minimizes conflict between uses, and minimizes conflict between differing classes of motor vehicles. Of particular concern</p>	<p>REG</p>	<p>The reroute of Stibnite Road and the designation of a temporary OSV route to replace an existing OSV route are actions that fall under the Travel Management Rule (36 CFR 212), Subparts B and C respectively (FSM7715.03(5)). These actions require consideration under the Travel Management Rule Minimization Criteria (36 CFR 212.55(b)). The Travel Management Rule analysis was added to Section 4.19 of the Final EIS.</p>

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			<p>for our organizations, given the location of these proposed routes, is the impact that each route will have on wildlife populations and on roadless characteristics.</p> <p>The SDEIS does not even mention that there are requirements the Forest Service must abide by when designating ORV routes, including groomed snowmobile trails, much less apply these requirements to the proposed new routes. The Forest Service must explain how taking actions that could dramatically increase OSV use on the Cabin Creek Road and along Johnson Creek will satisfy the requirement to minimize harassment of wildlife or significant disruption of their habitat. If these routes cannot be located in a manner that complies with the minimization criteria, they cannot be designated.</p> <p>The Forest Service's assertion that these trails can be authorized under 36 CFR 228A as part of a plan of operations²⁴⁶ is incorrect. Access and infrastructure for recreation is not necessary to conducting mine operations. Designating routes for recreational use and access falls squarely under the Travel Management Rule. While the Forest Service can certainly designate routes for this purpose as part of the Stibnite Gold Mine NEPA analysis, it must apply the requirements of the Travel Management Rule when doing so.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	221	The SDEIS fails to discuss in any way what impact the proposed OSV route along Johnson Creek will have. Because the Payette National Forest has not conducted winter travel management planning in accordance with Subpart C of the Travel Management Rule, it cannot assume that its existing system of OSV routes and areas comply with this Rule. The forest must apply the OSV Rule when designating new OSV routes in association with this project, even if the new routes are temporary or are adjacent to an existing route. Therefore, even though the Johnson Creek route will parallel an existing OSV route (the Johnson Creek road), the Forest Service cannot assume that a) the impacts of this route are the same as the existing route or b) that the existing route complies with the Travel Management Rule.	REG	The reroute of Stibnite Road and the designation of a temporary OSV route to replace an existing OSV route are actions that fall under the Travel Management Rule (36 CFR 212), Subparts B and C respectively (FSM7715.03(5)). These actions require consideration under the Travel Management Rule Minimization Criteria (36 CFR 212.55(b)). The Travel Management Rule analysis was added to Section 4.19 of the Final EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	225	As recounted elsewhere, this violates the Idaho Roadless Rule and the Forest Plan. The added recreational pressures on this area are in no way related to mining activities and would make the mining impacts on ecological integrity even worse instead of mitigating them. As such, the Forest Service should make as few changes in existing recreational access as possible and not expand motorized use unless necessary. The Forest Service and Perpetua should continue to allow public access through the Stibnite Operational Area on to Thunder Mountain, with a new route sited through the project area to avoid mining operations. As noted elsewhere, we believe that this is a public road and that Perpetua and the Forest Service need to utilize the normal ambient air quality standards for members of the public on this route. To manage public expectations and avoid delays, we recommend that Perpetua and the Forest Service have a web page describing the estimated schedule and potential closure times for each day and week.	REG	<p>The proposed public access road through the operations area would avoid interaction with mining activities. The EPA and IDEQ agree that the public access road through the proposed mining operations area would be under the control of Perpetua while mining is in progress. They have concluded that ambient air quality standards would not apply to the road during this time.</p> <p>The recommendation for up-to-date scheduling of when public access might be interrupted on certain roads has been included in the EIS as a mitigation measure.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	379	<p>CC. Additional Review of State Regulations Needed</p> <p>In the SDEIS, the Forest Service consistently defers to the state of Idaho on issues involving the management of federal lands and the effects on public resources. In many instances, the Forest Service assumes to some degree that various state processes have sufficiently addressed key resource issues associated with the SGP. However, these state rulemaking and permitting processes may actually have fewer safeguards in place to protect taxpayers, public health, water quality, fisheries and wildlife compared to NEPA and other federal laws.</p> <p>Perpetua Resources has been closely involved in several recent state rulemaking and permitting processes that will impact the SGP. These include the Idaho Department of Lands rulemaking regarding financial assurances and cyanidation regulations, and Idaho Department of Environmental Quality's air quality permit. In each of these instances, the mining company successfully reduced the permitting requirements or safeguards for key elements over the objections of conservation organizations and others. Groups like the Idaho Conservation League had pointed out that the new proposed rules and permits are less protective than regulations in other states. The federal government was not directly involved in the rulemaking processes or air quality permitting, but the EPA did comment on the final draft of the state air permit expressing significant concerns.</p>	REG	This comment suggests that the Forest Service is deferring to state regulatory programs for the environmental analysis. This is not correct. The SDEIS clearly identifies the state regulatory programs that would apply to the Proposed Action and where the state has created certain environmental standards that would apply to the project these have been included in the EIS. The Forest Service has not deferred the necessary hard look at the environmental impacts required under NEPA and has required Perpetua to provide separate environmental documentation to support the NEPA analysis separately from what they may prepare for the state agencies. An example of this is discussed in Section 4.3 of the SDEIS where separate air emission inventory and air quality impact modeling was required by the Forest Service to support its evaluation of the reasonably foreseeable impacts as required under NEPA. The Forest Service NEPA air impact evaluation included impacts from fugitive dust emission as well as off-site vehicle emissions.

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			<p>State regulatory and land management agencies have professional staff who are dedicated to their jobs. However, the state of Idaho and state agencies are not subject to many of the same standards, requirements, safeguards and the multiple-use mission that the federal government must meet. The state of Idaho also prides itself on being the “least regulated state in the Union” and has a gubernatorial directive to remove two regulations for every one passed. This is why it is critically important that the Forest Service carefully scrutinize the permits issued by the State of Idaho regarding the SGP; and, if the state permit conditions do not meet the federal standards for the protection of public resources and multiple uses, the Forest Service must apply more protective measures and/or permit conditions as required by federal policy, rules and law.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	380	<p>1. Financial assurances</p> <p>Perpetua’s staff and attorneys participated in state rulemaking regarding financial assurances for mining operations. Perpetua convinced the Idaho Department of Lands to accept corporate guarantees as a financial assurance in replacement of cash as a bonding mechanism. Corporate guarantees are essentially a promise to pay based on the reputation and brand of the mining company. Corporate guarantees have proven to be problematic based on numerous examples of mining companies being unable to pay for long term water treatment costs. In fact, Idaho taxpayers are still covering the long term water treatment costs of Asarco’s Triumph Mine. The Forest Service did not participate in this rulemaking.</p> <p>While the majority of the Stibnite Gold Project is on federal land, some portions are on private property owned by Perpetua. It is unclear if the new state bonding regulations - which can be much cheaper for the mining company and far less protective to taxpayers - would apply to the private properties within the Operations Area Boundary or if the federal bonding requirements would apply to the entire project.</p> <p>We are concerned that if the less protective state bonding rules are utilized for the sections of private property, the financial assurances will ultimately be insufficient to pay for successful reclamation on that property. With insufficient reclamation on private properties, we are concerned that environmental problems originating on private property can affect nearby public resources on National Forest System lands. Potential issues include slope instability, increased sedimentation, noxious weeds, heavy metal seepages and water temperatures too high for one or more listed fish species.</p> <p>As such, we strongly recommend that the federal bonding mechanism be used across the entire project area, including across private properties, and that Corporate Guarantees do not play any role in the financial assurance mechanism. We also recommend that the Forest Service include both the reclamation plan and the bonding calculations in a Supplemental SDEIS so the public can have a say in these critical negotiations. Please see our other comments on bonding for additional details.</p>	REG	<p>Reclamation performance bonds for mine plans approved by the Forest Service must comply with FSM 6560 which does not allow a Principal to self-bond with company stock. The acceptable types of surety include surety bond, cash in lieu of bond, letter of credit, or long-term trust.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	381	<p>2. Cyanidation</p> <p>The staff and attorneys of Perpetua’s predecessor, Midas Gold, participated in a state rulemaking regarding cyanidation regulations for mining operations. Midas Gold convinced the Idaho Department of Lands to lower the standards for mine tailings facilities by allowing a single layer liner instead of the previously required double layer. The Idaho Conservation League pointed out that this is inconsistent with requirements in other states and that all liners leak to some extent. The Forest Service did not participate in this rulemaking.</p> <p>We are concerned that the Forest Service is accepting this controversial lower standard as sufficient for the liner of the tailings storage facility. The tailings storage facility needs to contain over 100 million tons of tailings containing toxic materials, prevent infiltration of meteoric water during reclamation and after closure, prevent leakages through the bottom liner, and endure for millenia. If leaks do occur, as our comments point out they are likely to, the long term costs to taxpayers and impacts to downstream resources, including listed fish species, are likely to be extensive and permanent. Instead of deferring to the state on this issue, the Forest Service needs to conduct its own independent review and ensure that public resources are protected.</p>	REG	<p>The proposed tailings storage facility liner system is described in the TSF Liner System subsection of Section 2.4.5.8 of the SDEIS. The liner system consists of two geosynthetic liners the top one being 60-mil LDPE in direct contact with a geosynthetic clay liner (GCL). This liner system would be place over a prepared subgrade of a minimum of 12 inches of earth bedding material. A system of drainpipes would be installed above the liner system to help reduce future hydraulic head on the liner system itself. This is intended to reduce potential leakage through any defects or perforations of the LDPE membrane. If any leakage were to occur, the GCL directly underlying the LDPE membrane is intended to attenuate the leakage. This type of liner system is comparable, or more protective than required by the state regulations for TSF liners in western states with significant mining operations, namely Nevada. When the SDEIS was prepared, it was independent of the state's review of any information submitted by the proponent for their cyanidation permit. Thus, the Forest Service conducted its own impact analysis of the TSF and this is what is included in the SDEIS.</p>

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	382	<p>3. Air Quality/Permit to Construct</p> <p>When Perpetua Resources (then Midas Gold) submitted its original Plan of Operations, the Forest Service deemed it acceptable to initiate the NEPA process and developed it as Alternative 1 in the DEIS. When the company submitted a Modified Plan of Operations, the Forest Service developed that as Alternative 2 in the DEIS. Now the Forest Service is analyzing another iteration, the 2021 Modified Mine Plan.</p> <p>In each of these cases, the Forest Service deferred to the Idaho Department of Environmental Quality (IDEQ) regarding the Air Quality Permit/Permit to Construct. The Forest Service simply accepted that the initial draft permit was sufficiently protective of public health, water quality, plants and wildlife. However, that initial draft permit overlooked over 90% of arsenic emissions from the fugitive dust that would be generated by mining activities. These high levels of arsenic would have had significant impacts on the public and the public resources the Forest Service manages. The Idaho Conservation League and other organizations successfully objected to this permit. A subsequent version of the draft permit was issued and was again successfully objected to by ICL and others on the grounds that it was still not sufficiently protective of public health. During the public comment period for the third version of this permit, both the Idaho Conservation League and EPA submitted comments with additional recommendations to protect public health. IDEQ failed to respond to these comments and also failed to incorporate these measures into this permit. In fact, the EPA Region 10 indicated that IDEQ did not reach out to EPA to discuss their comments and concerns. This third version of the permit was officially issued on June 17, 2022. On July 22, 2022, the Nez Perce Tribe, the Idaho Conservation League, and Save the South Fork Salmon officially submitted a petition administratively appealing the issuance of the permit. Perpetua attempted, unsuccessfully, to dismiss the appeal, and oral arguments are slated for spring 2023. The Forest Service has not participated in any of these proceedings.</p> <p>Had ICL and others not objected to the state's first draft air quality permit, the Forest Service could have assumed that this permit to construct was sufficiently protective of public health and the environment. Instead, as written, this flawed permit would have allowed Perpetua's mining activities to blanket the Operations Area Boundary with fugitive dust containing toxic levels of arsenic. This degree of arsenic contamination would have had significant impacts on National Forest lands and public resources, and would have been exceedingly difficult to remediate. To help address the remaining shortcomings of the third version of the permit, the Forest Service should require ambient air quality monitoring at the Operations Area Boundary and at several points along the public route through the SGP to Thunder Mountain. Ambient air quality monitoring at surface mines is not a novel concept. Several open pit surface mines across the West currently require ambient air monitoring, including the Bingham Canyon Copper Mine in Utah, and the Cripple Creek and Victor Gold Mine in Colorado. Any ambient air quality monitoring should be conducted according to a publically reviewable plan that is developed based on best industry practices.</p>	REG	This comment suggests that the Forest Service is deferring to state regulatory programs for the environmental analysis. This is not correct. The SDEIS clearly identifies the state regulatory programs that would apply to the Proposed Action and where the state has created certain environmental standards that would apply to the Project these have been included in the EIS. The Forest Service has not deferred the necessary hard look at the environmental impacts required under NEPA and has required Perpetua to provide separate environmental documentation to support the NEPA analysis separately from what they may prepare for the state agencies. An example of this is discussed in Section 4.3 of the SDEIS where separate air emission inventory and air quality impact modeling was required by the Forest Service to support its evaluation of the reasonably foreseeable impacts as required under NEPA. The Forest Service NEPA air impact evaluation included impacts from fugitive dust emission as well as off-site vehicle emissions.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	383	<p>4. Water Quantity</p> <p>Perpetua's Water Rights application is an entirely separate process from the NEPA process for the Stibnite Gold Project. In this case, the Forest Service recognized that Perpetua's use of the water rights could have negative effects on outstandingly remarkable values in the Wild and Scenic Main Salmon River. The Forest Service and several other parties are protesting specific water rights related to this application. We appreciate the Forest Service's involvement in this issue. We also believe that additional measures on the part of the Forest Service related to the development of alternatives and design features in the NEPA process could be used to avoid, minimize, and mitigate impacts for water resources.</p>	REG	Based on review of input from the public on the SDEIS, the Forest Service has included added mitigation measures in the Final EIS to address impacts to water resources that could be impacted by the SGP.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	384	<p>5. Summary</p> <p>While the state permitting is designed to be protective of the human environment, the Forest Service should view the state permitting process as a starting point and not the end point. Projects such as the SGP will have significant and permanent negative impacts on National Forest System lands. We recognize that the Forest Service has limited capacity to engage in state rulemaking and state permitting</p>	REG	The state permitting agencies are in regular communication with the Forest Service on their permitting activities and the Forest Service does intend to review the permit terms and conditions when they are ready to examine.

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			processes. This is why it is critically important for the Forest Service to thoroughly review all state permits relevant to the SGP to ensure they comply with federal standards regarding protection of multiple uses and public resources. By utilizing a Supplemental SDEIS, we believe the Forest Service can utilize the NEPA process to conduct this review and make additional project improvements as needed so that public lands and public health are adequately protected.		
Jolie Drake	18929	2	Unfortunately, the antiquated General Mining Act of 1872 gives Perpetua (or anyone, foreign or domestic) the right to mine on Idaho land while paying zero royalties. However, this act does not also grant them the right to cause environmental damage or harm the recreational use and enjoyment of nearby areas. This SDEIS does not provide the breadth and granularity required to fully assess the risks and required mitigation for a project of this scope. Nor did the abbreviated comment period allow adequate time for a thorough enough review of a project of this magnitude.	REG	SDEIS Chapter 4 analyzed the potential Project effects on 23 classifications of environmental resources present in the Project vicinity. The Final EIS includes expanded discussion of mitigation measures per that analysis and public comments received on the SDEIS. The 75-day public comment period was deemed adequate for public review of the SDEIS.
Jolie Drake	18929	7	With all the environmental risks associated with the Perpetua mining project, and lack of sufficient federal oversight, we should not support nor allow this project to move forward. In spite of the 1872 mining act, there is recent precedent for denying a minerals mining permit. Last year, the federal government blocked the Twin Metals copper mine along the pristine Boundary Waters in northern Minnesota and in late 2020, the Pebble Mine gold mine project was denied by the U.S. Army Corps of Engineers because it could not adequately comply with Clean Water Act guidelines, thus they concluded "the proposed project is contrary to the public interest." I would propose that similar justification is equally warranted in this sensitive and unique habitat in Idaho.	REG	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	6	The Tribe is outraged that the Forest chose to proceed with the Modified Mine Plan as its Preferred Alternative. The Forest remains stubbornly resistant to embracing its legal duty to the Tribe because it will require denying Perpetua authorization to proceed with its Project. The Forest lacks authority to violate the Tribe's treaty rights and must deny the Project. On November 30, 2022, the White House issued a Presidential Memorandum on Uniform Standards for Tribal Consultation. That Presidential Memorandum builds on President Biden's January 26, 2021, Presidential Memorandum acknowledging foundational principles underlying the Nation-to-Nation relationship with tribes and reaffirming the United States' commitment to uphold treaty and trust responsibilities. The White House, in coordination with 17 federal agencies, including the United States Department of Agriculture ("USDA"), also released a new best practices report to integrate tribal treaty and reserved rights into agency decision-making processes. This report was developed in consultation with Tribal Nations and implements the agencies' Memorandum of Understanding Regarding Interagency Coordination and Collaboration for the Protection of Tribal Treaty Rights and Reserved Rights. An essential point raised by tribes in this report is that "[f]ederal agencies must give effect to treaty rights and should seek to safeguard them as agencies contemplate action," and "ensure that agency actions do not impair Tribes' ability to exercise those rights." The report complements Secretarial Order 3403: Joint Secretarial Order on Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters issued by USDA and the Department of Interior ("DOI") on November 15, 2021. The Joint Secretarial Order commits to ensuring that USDA and DOI and their component bureaus and offices are managing federal lands and waters in a manner that seeks to protect the treaty, religious, subsistence, and cultural interests of tribes.	REG	The Forest Service consideration of a mining application is required under U.S. Mining Law. As described in SDEIS Section 1.6.1, that consideration is to ensure that the proposed occupancy and use of National Forest lands is consistent with statutory and regulatory requirements plus ensure that measures are included that provide for the mitigation of environmental impacts and reclamation of surface disturbance. Selection of the 2021 Modified Mine Plan as the Preferred Alternative is consistent with the consideration of statutory and regulatory requirements along with the mitigation of environmental impacts including impacts to treaty rights as added to the revised EIS.
Samuel Penney (Chairman)	19396	20	1872 Mining Law and the Claims Validation Prerequisite for Occupancy The Forest's purpose and need statement is flawed because it assumes without proof or analysis that "Perpetua's proposed use of the surface of [National Forest System] lands" is "authorized by the U.S. mining law." The Forest Service may not simply assume that Perpetua has a "statutory" right to occupy National Forest System lands to extract valuable minerals, without evidence that Perpetua has met the statutory criteria to occupy the land. The SDEIS simply states that "the Forest Service's need for action [is] established by the agency's responsibilities under the locatable minerals regulations at 36 CFR Part 228, subpart A, and the General Mining Law of 1872, as amended" and that its review and approval of	REG	The Forest Service is not assuming the validity of the mining claims included in the SGP. The status of the mining claims for the area of the SGP is described in Section 4 and Appendix II of the 2021 Feasibility Report which was prepared in compliance with the National Instrument 43-101 of the Canadian Securities Administrators Standards (NI 43-101) for reporting mineral properties (M3, 2021). This report describes the mineralization at the SGP property and the location of mining claims within the property. This report was cited in the SDEIS and is part of the Project Record. This information has been reviewed by a qualified Forest Service mineral examiner and determined to be reliable.

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			<p>Perpetua’s proposed uses of federal land are authorized by the 1872 Mining Law and governed by the Forest Service’s hardrock mining regulations at 36 CFR Part 228 Subpart A. This is insufficient.</p> <p>In Center for Biological Diversity v. U.S. Fish and Wildlife Service, the Ninth Circuit Court of Appeals held that the Forest Service could not approve a mining operation on National Forest System lands without validating the mining claims that the mining operation will permanently occupy. “If a valuable mineral deposit has been discovered on a claim, a miner may occupy the claim for mining purposes. In the absence of a discovery of a valuable mineral deposit, Section 22 gives a miner no right to occupy the claim beyond the temporary occupancy necessary for exploration.” The Court agreed with the district court that the right of occupancy under the 1872 Mining Law requires that the claimant demonstrates as a statutory prerequisite, for each claim, the presence of valuable minerals on the claim. The Court further held that the mining regulations under Part 228A, Subpart A do not apply to unvalidated mining claims.</p> <p>Here, the Forest Service appears to violate the Ninth Circuit Court of Appeals’ holding. There is no evidence in the record validating the existence of valuable minerals on each of Perpetua’s mining claims. There is similarly no evidence in the record documenting that each millsite claim is associated with a valid mining claim, overlays nonmineralized ground, and otherwise meets the strict requirements of United States mining law. In fact, the number and location of Perpetua’s mill site claims along Meadow Creek (depicted in the figure below prepared by the Tribe) suggests that many mill site claims in this area may not be associated with a valid mining claim. Since there is no evidence in the record demonstrating that the Forest determined the validity of Perpetua’s mining claims, the Forest cannot presume that the mining regulations under Part 228A, Subpart A apply at this juncture and must do the requisite due diligence to determine claims validity and make those determinations available for Tribal and public review and comment in another SDEIS prior to issuing a decision on the Project.</p> <p>If the Forest cannot confirm that Perpetua’s mining claims are valid or determines that they are invalid, the Forest must evaluate Perpetua’s use and occupancy of National Forest System lands under Parts 251 and 261 regarding special use regulations under the Organic Act. The Part 251 regulations apply to occupancy and use of National Forest System lands. Under these regulations, the applicant must file a special use proposal with the District Ranger or Forest Supervisor having jurisdiction over the affected land. The Forest Service must then conduct an initial screening to determine whether the proposed use meets the “minimum requirements applicable to all special uses.” If the proposal passes this initial screening, the Forest Service must conduct a second level screening which requires, among other things, a showing that the proposed use is in the public interest. If the proposed use satisfies the Forest Service’s screening criteria, the Forest Service may grant a special use permit, but must include terms and conditions to “[m]inimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment,” among other requirements. The Forest Service must also “[o]therwise protect the public interest.” “The USFS will grant a special-use application submitted under Part 251 only if the proposed use complies with the applicable forest plan and ‘will not create an exclusive or perpetual right of use or occupancy’” or ‘involve disposal of solid waste or disposal of radioactive or other hazardous substances’ on forest lands.” Under the related Part 261 regulations, the Forest Service is also required to prohibit the destruction of cultural resources on public lands.</p> <p>Despite these requirements recently affirmed by the Ninth Circuit Court of Appeals in Center for Biological Diversity v. United States Fish & Wildlife Serv., the Forest Service states in the Stibnite Gold Project SDEIS Comment Response Table: “228A regulatory framework was applied pending additional guidance from counsel. No validity assessment of unpatented claims was incorporated per Forest Service practice.” Since the Forest Service has either failed to inquire as to whether all of the mining and millsite claims are valid for the Project or has failed to include the information it does have in the SDEIS, the administrative record does not show that the proposed facilities, uses, and associated operations are in fact authorized by United States mining law.</p>		

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Samuel Penney (Chairman)	19396	21	<p>Right-of-Way Requirements under FLPMA</p> <p>The Forest has also failed to comply with requirements for special uses on federal lands and rights of way under the Federal Land Policy and Management ("FLPMA") right of way ("ROW") provisions for the Project. At least three important potential substantive requirements flow from the FLPMA's ROW provisions. First, the Forest Service has a duty under Section 505(a) to impose conditions that "will minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment."48 Second, Section 505(b) requires a Forest Service determination as to what conditions are "necessary" to protect federal property and economic interests, as well as "otherwise protect[ing] the public interest in the lands traversed by the rightof-way or adjacent thereto," and third, the Forest Service must ensure the ROW grants "do no unnecessary damage to the environment" and be "consistent with ... any other applicable laws." A grant of a ROW supporting other activities must satisfy all applicable treaties and laws, regulations and policies, including FLPMA, the Endangered Species Act, Organic Act, the National Forest Management Act ("NFMA"), National Historic Preservation Act, Clean Water Act, and Clean Air Act. It is not evident from the SDEIS that the Forest Service has complied with any of these requirements.</p>	REG	<p>As described in Section 1.7 of the SDEIS, the Forest Service is reviewing the 2021 MMP under the regulations pertaining to locatable minerals development on NFS lands. Part 36 CFR 228.3 defines mining operations as "<i>All functions, work, and activities in connection with prospecting, exploration, development, mining or processing of mineral resources and all used reasonable incident thereto, including roads and other means of access on lands subject to the regulations in this part, regardless of whether said operations take place on or off mining claims.</i>"</p> <p>Also discussed in Section 1.10.3.2 of the SDEIS, mining operations subject to 36 CFR 228 subpart A and not considered "special uses" subject to 36 CFR 251 Subpart B according to 36 CFR 251.50 (a).</p>
Samuel Penney (Chairman)	19396	22	<p>1.7 Federal Decision Framework</p> <p>The Tribe is concerned that the SDEIS discloses that resources and/or areas would not maintain or move towards Forest Plan desired conditions into the foreseeable future under the action alternatives. Further, Appendix A states that "[i]t is recognized that not all proposals would move towards or achieve desired conditions, goals, or objectives and there may be tradeoffs between moving towards or achieving these for one resource or another" which implies that the Project and its environmental impacts are acceptable consequences. The Tribe argues that any project or proposal must meet all relevant laws, regulations, and policies, not vice versa. The established regulations must not cater to or be amended to meet a proposed project. The Tribe recognizes there are tradeoffs in land management, however, when Forest Plan desired conditions, goals, objectives, standards, and guidelines are dismissed or amended to meet a proposal, they lose meaning, effectiveness, and adversely impact the federal trust responsibility of the Forest Service to the Tribe. Perpetua's mining Project does not align with the direction of the Forest Plans; it moves the Forest away from meeting desired conditions.</p> <p>The Tribe looks forward to the Forest's rationale for deviation from compliance in the decision document. The Payette and Boise National Forest Plans define guidelines "[a]s Forest Plan management direction, a guideline is a preferred or advisable course of action generally expected to be carried out. Deviation from compliance does not require a Forest Plan amendment (as with a standard), but rationale for deviation must be documented in the project decision document."</p>	REG	<p>Approving mining operations authorized by the 1872 Mining Law is different than any other proposed actions within the Forest. Most proposed actions originating within the Forest Service can be tailored to achieve certain future conditions, goals and objectives stated in the Forest Plans. However, mining operations are designed by the proponents around the constraints of natural site conditions, reasonably available methods of operation, and economics. Therefore, review and approval of mining operations on the NFS lands needs to consider what level of environmental protection is reasonable and feasible instead of forcing compliance with all Forest Plan goals or objectives.</p> <p>The 36 CFR 228A rules recognize that the U.S. mining laws confer a statutory right to enter NFS lands. The rules also recognize that mining operations can produce significant impacts to forest resources and the goal of the Forest Service rules and procedures is, "<i>where feasible</i>", to minimize adverse environmental impacts on the NFS surface resources. Rule 228.8 incorporates requirements for harmonizing operations with scenic values, maintaining and protecting fisheries and wildlife, and reclaim the surface disturbed by mining to "<i>practicable</i>" degrees. The Forest Service believes the 2021 MMP, as mitigated, complies with the intent of the 228A regulations.</p>
Samuel Penney (Chairman)	19396	23	<p>In Table 1.7-2 Key Permits, Approvals, and Regulation Compliance Likely Required, there is a permit missing. Under Idaho Department of Environmental Quality ("IDEQ") permits (on page 1-14), a Title V operating permit will be required once the 40 CFR 63 Subpart EEEEEEE – National Emission Standards for Hazardous Air Pollutants ("NESHAPs") for Gold Mine Ore Processing and Production Area Source Category units start up.</p>	REG	<p>The permit noted in the comment has been added to Table 1.7-2.</p>
Samuel Penney (Chairman)	19396	39	<p>The environmental baseline described in the SDEIS accounts for neither the Tribe's existing Clean Water Act lawsuit against Perpetua, nor EPA's ongoing discussions with Perpetua to address, through a potential CERCLA order, restoration of the Stibnite mine site as required under federal law. The Tribe's expectation of the CERCLA process is that remediation of the existing conditions will be undertaken comprehensively and site-wide regardless of whether mining operations were permitted, started and then stopped, or proceed to completion. Without this information, the Forest cannot accurately identify and disclose in the DEIS the environmental baseline conditions in the Project area.</p>	REG	<p>Section 1.3 of the SDEIS describes the CERCLA history of the site and the actions to be taken under the ASAOC. The SDEIS describes the CERCLA status of the SGP operations area at the time the EIS was prepared. To consider future legal outcomes would have been speculative. If the CERCLA status of the site changes before the Final EIS is released, those changes will be described in the document.</p>

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Samuel Penney (Chairman)	19396	42	Given that mining and storing 450 million tons of waste rock and tailings at the site cannot realistically, much less practically, be done without creating more environmental damage, the SDEIS should clearly have stated that the no action alternative with required remediation is the least damaging practicable alternative, and therefore the only alternative that the Corps can permit under Section 404 of the Clean Water Act.	REG	The USACE will select the least environmentally damaging practicable alternative (LEDPA) through their Section 404 permitting process. This was not available at the time the SDEIS was prepared.
Samuel Penney (Chairman)	19396	47	2.4.9 Environmental Design Features To protect air quality after the SGP begins operations, the Forest Service relies on the state of Idaho's monitoring and enforcement of the SGP air permit to construct ("PTC"). However, the state of Idaho lacks the robust compliance assurance, monitoring, and enforcement resources that will be necessary to inspect and regulate such a facility in a remote location and ensure the SGP is meeting permit conditions and not violating the National Ambient Air Quality Standards ("NAAQS"). The minimum inspection frequency required of the air permit is once every five years. Given the extraordinary level of fugitive emissions controls necessary to achieve 93.3% control, and the State's own acknowledgement that this level of control will be very challenging, a once every five years inspection frequency is woefully inadequate to ensure NAAQS compliance.	REG	The Final EIS includes information on dust monitoring at certain locations at the SGP to confirm the dispersion modeling results discussed in the SDEIS.
Samuel Penney (Chairman)	19396	50	Also in Table 2.4-12, there is a statement: "Dust abatement chemicals would be used in accordance with the applicable road maintenance Biological Assessment." There may be a potential conflict with meeting 93.3% dust control efficiency criteria on haul roads if use of dust abatement chemicals is limited.	REG	Use of dust abatement chemicals is part of the Project as proposed to meet the proposed dust control efficiency.
Samuel Penney (Chairman)	19396	55	Information Missing in the SDEIS Under NEPA's implementing regulations, "[w]hen an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking. (a) If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement." Table 4.1-1 Incomplete and Unavailable Information in the DEIS provides a list of information that was not included in the DEIS but deemed relevant to reasonably foreseeable significant adverse impacts and essential to a reasoned choice among alternatives. The Forest, however, did not include with this Table, or anywhere in the DEIS, any explanation justifying the Agency's decision not to include this information in the DEIS because the overall cost of obtaining this information would be exorbitant. Without this justification, the Forest was required under NEPA to include all of the missing information identified in Table 4.1-1 in the DEIS. The SDEIS does not reference the DEIS or provide similar information on incomplete and unavailable information, leaving the inference that there no longer is incomplete or unavailable information deemed relevant to reasonably foreseeable significant adverse impacts and essential to a reasoned choice among alternatives. It is doubtful that this is the case, and regardless the SDEIS should have addressed this regulatory requirement.	REG	The 2020 DEIS table cited in this comment was not included in the SDEIS because the Forest Service addressed all of the listed items in that table with the information included in the SDEIS.
Samuel Penney (Chairman)	19396	70	CHAPTER 3 AFFECTED ENVIRONMENT 3.2.2.1 1872 Mining Law The statutory right to search for, develop, and extract mineral deposits on public-domain lands open to mineral entry was established by the General Mining Act of 1872 ("1872 Mining Law") and later legislation. These rights include the right to initially locate a mining claim and the right to reasonable access to the claim for further exploration, mining, or necessary ancillary activities, consistent with the Mining and Mineral Policy Act of 1970 and other applicable laws. As described elsewhere in this EIS, regulations at 36 C.F.R. 228 Subpart A apply to Forest Service regulation of surface use of National Forest System lands for locatable mineral operations. The relevant laws, regulations, and policies in the SDEIS fail to reference the Minerals and Geology Resources management direction of the Payette National Forest Land and Resource Management Plan and the Boise National Forest Land and Management Plan specifically the standards and guidelines, such	REG	The compliance of the SGP with the current Payette NF Plan and the Boise NF Plan is discussed in Section 1.7 of the SDEIS. This section states that both Forest Plans provide direction relevant to the 2021 MMP and its action alternatives. The approach taken for this discussion is not to describe all applicable Forest Plan components for the SGP but to identify those Forest Plan components that might need to be amended to allow the SGP to be consistent with the Forest Plans.

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			as, but not limited to Standard MIST06 and Guidelines MIGU02, MIGU08, MIGU09, MIGU10, and MIGU11 in both Forest Plans.		
Samuel Penney (Chairman)	19396	71	The SDEIS needs to clearly explain how the Project will meet Forest Plan compliance. In Appendix A, the SDEIS states that “[t]he Plan submitted by Perpetua aligns with the forest-wide goals and objectives for the PNF and BNF as they relate to Minerals and Geology resources.” The SDEIS leaves out reference to each Forest Plan’s standards and guidelines for Mineral and Geology Resources. In doing so, the SDEIS does not explain how the Project aligns with Forest Plan direction or how the Project would meet these standards and guidelines. For example, the SDEIS fails to reference Guideline MIGU11 and does not show how it considers relocation, closure, changes in management strategy, alteration, or discontinuance for resources (e.g., soils, vegetation, wetlands, water quality, aquatic species, terrestrial species, etc.) that will be degraded or lost due to mine facilities or practices.	REG	<p>The compliance of the SGP with the current Payette NF Plan and the Boise NF Plan is discussed in Section 1.7 of the SDEIS. This section states that both Forest Plans provide direction relevant to the 2021 MMP and its action alternatives. The approach taken for this discussion is not to describe all applicable Forest Plan components for the SGP but to identify those Forest Plan components that might need to be amended to allow the SGP to be consistent with the Forest Plans.</p> <p>The SDEIS identifies those Forest Plan components that might need to be amended to allow the 2021 MMP to be consistent with the Forest Plans. The intention of this approach is that the 2021 MMP would apparently be consistent with all other Forest Plan components not needing to be amended.</p> <p>Impacts of the proposed mining operations to soils, vegetation, wetlands, water quality, aquatic species, terrestrial species etc. are each described and evaluated in separate sections of the SDEIS other than the Sections 3.2 and 4.2, Geologic Resources.</p>
Samuel Penney (Chairman)	19396	78	The SDEIS references Forest Service Manual 2840 Reclamation and includes the statement “[r]eclaimed areas may not always achieve desired conditions in the Forest Service management direction.” which appears to contradict the objectives and policies in FSM 2840. Under what circumstances and authorities can the Forest Service allow a proposed project to deviate from desired conditions? If the Forest cannot ensure that disturbed lands are reclaimed to a use that is consistent with long-term forest land and resource management plans, then the Forest should reject the Project.	REG	The SDEIS correctly describes the uncertainty in the outcome of future mine land reclamation activities related to the SGP. The 36 CFR 228A regulations that apply to this project include recognition of the inherent variability of reducing environmental effects of mining. Section 228.8, Requirements for Environmental Protection, paragraph (g) includes the modifier "where practicable" for the expected reclamation activities. FSM 2840 cites 36 CFR 228A as one of the authorities for the manual. The FSM 2840.3, Policy, paragraph 3 also states that "Reclamation requirements shall be those reasonable, practicable, and necessary to attain standards". The goals and objectives of the proposed 2021 MMP reclamation plan are discussed in Section 4.5.2 of the SDEIS as well as the predicted outcomes of the reclamation efforts. Impacts to vegetation resources are described in Section 4.10.2. The Forest Service believes that the reclamation activities included in the 2021 MMP are in compliance with the 36 CFR 228A rules.
Samuel Penney (Chairman)	19396	112	3.10 Vegetation The relevant laws, regulations, policies, and plans in the SDEIS need to include FSM 2070 Vegetation Ecology and statutes therein (e.g., FSM 2070.11), including reference to the Surface Mining Control and Reclamation Act of 1977 that “...directs the establishment on the mined areas, and all other lands affected, a diverse, effective, and permanent vegetation cover of the same seasonal variety native to the area of land to be affected and capable of self-regeneration and plant succession at least equal in extent of cover to the natural vegetation on the area...” The SDEIS should also note in Chapter 3.10.3 that the Payette and Boise Forest Plans not only provide a framework for analysis of impacts on vegetation, but they also outline management direction for vegetation (e.g., desired conditions, standards, and guidelines).	REG	The Surface Mining Control and Reclamation Act of 1977 applies to the regulation of coal mining and does not apply to hard rock mineral operations. The directly applicable Forest Service Manual to the SGP is FSM 2800 and its subparts. FSM 2817.21 describes the requirement for inclusion of reclamation of areas disturbed by mining operations and also states that, "Although improvement of surface resource conditions, above those existing prior to the mining operations or preparations for future use, are desirable goals, they cannot be forced on operators as an added cost." The Forest Service believes the reclamation and closure activities proposed by the 2021 MMP are consistent with the requirements of the 36 CFR 228A regulations and the applicable requirements of FSM 2800 and its subparts.
Samuel Penney (Chairman)	19396	134	Section 3.11.3, Clean Water Act, page 3-243. In February of 2022 the Corps adopted the pre-2015 rule and this no longer categorically excludes ephemeral features as jurisdictional waters and the General Condition 23(d) Stream Mitigation threshold changed to all losses of stream bed that exceed 3/100-acre. Although impact analysis has been completed and jurisdictional review by Corps is underway, the Tribe is unclear how this review will address impacts to WOTUS identified in the SDEIS. Would this increase the impacted acreage if adopted? The results of this review including (identification of acreage, full analysis and disclosure of impacts) need to be addressed in an addendum or supplement to the DEIS.	REG	The EIS analysis of impacted acreage is based on the USACE jurisdictional determination.

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Samuel Penney (Chairman)	19396	143	Under relevant laws, regulations, policies, and plans, the SDEIS should reference Forest Service Manual 2840 Reclamation, specifically section 2841 which includes “[r]eclamation components for plans of operations: Forest Supervisors shall ensure the following administrative and environmental components are adequately addressed in each Plan of Operations when applicable:...[f]ish and wildlife habitat reclamation or mitigation.”	REG	Forest Service requirements associated with reclamation are described in SDEIS Table 2.4-12.
Samuel Penney (Chairman)	19396	162	<p>Wetlands</p> <p>As the SDEIS notes, there are numerous wetland resources identified in the Operations Area Boundary and adjacent areas throughout the analysis area. Wetlands provide important ecological functions for associated streams and rivers. Impacts to wetland and riparian areas are impacts to fisheries, wildlife, and vegetation habitat and therefore treaty rights and resources.</p> <p>Congress enacted the Clean Water Act (“CWA”) in 1972 to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The CWA establishes several goals, including attainment and preservation of “water quality which provides for the protection and propagation of fish, shellfish, and wildlife...” To further its goals, the CWA prohibits “discharge of any pollutant” into navigable waters except in accordance with the CWA terms.</p> <p>The Corps issues permits for the discharge of dredged or fill material pursuant to section 404 and subject to the Corps’ and EPA’s 404(b)(1) Guidelines (“Guidelines”). Corps regulations governing the issuance of Section 404 permits declare that “[m]ost wetlands constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest.” The Corps must ensure compliance with the 404(b)(1) Guidelines before issuing a permit. The Guidelines prohibit the permitting of any discharge of dredged or fill material: 1) if there is a practicable alternative to the proposed discharge, 2) if the discharge causes or contributes to violations of applicable state water quality standards, 3) if the discharge will cause or contribute to significant degradation of the environment, or 4) unless all appropriate steps have been taken to minimize potential adverse impacts. These factors both individually and cumulatively must be considered when evaluating the specific details of the 404 application.</p> <p>The Corps cannot authorize a discharge without “sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with [the Section 404(b)(1)] Guidelines.” When a project is not “water dependent,” and the Project would fill “special aquatic sites,” including wetlands, the Corps’ regulations create a rebuttable presumption that there are practicable and environmentally preferable alternatives, and such alternatives are presumed to have less adverse impact unless “clearly demonstrated” otherwise. This substantive requirement mandates the Corps to select the least environmentally damaging practicable alternative). Pursuant to the Guidelines, no discharge of dredged or fill material shall be permitted if, among other things, a practicable alternative to the proposed discharge would have less of an adverse impact on the aquatic ecosystem. An alternative is practicable “if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.” Practicable alternatives include “activities which do not involve a discharge of dredged or fill material,” as well as “discharges of dredged or fill material at other locations” where such discharges would result in fewer impacts to the aquatic environment. The applicant has the burden of demonstrating that no feasible alternative exists, and the Corps must engage in a reasoned analysis of this issue. The Corps cannot blindly and uncritically accept an applicant’s study of alternatives and its assertions that no practicable alternative exists. Under the regulations, any “practicable” alternative to achieve the basic and overall project purposes must be determined to be cost effective, when viewed from the perspective of the industry as a whole. The financial circumstances of a particular applicant are not considered relevant if an alternative could be achieved practicably by a “typical” applicant. The preamble to the 404(b)(1) regulations states:</p> <p>“Our intent is to consider those alternatives which are reasonable in terms of the overall scope/cost of the proposed project. The term economic might be construed to include consideration of the applicant’s financial standing, or investment, or market share, a cumbersome inquiry which is not necessarily</p>	REG	No further response required. General in nature or position statement.

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			<p>material to the objectives of the Guidelines. We consider it implicit that, to be practicable, an alternative must be capable of achieving the basic purpose of the proposed activity.”</p> <p>But the least environmentally damaging practicable alternative need not be the least-costly, nor the most profitable. The regulations presume that less environmentally damaging alternatives are available to the applicant and practicable, unless the applicant clearly demonstrates otherwise. In the absence of such a clear showing, the Corps is required to deny the permit application.</p> <p>The Corps also cannot authorize any discharge of dredged or fill material that will cause or contribute to significant degradation of the waters of the United States. The “degradation or destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts covered by the [] Guidelines.”</p> <p>To ensure the mandatory CWA requirements are satisfied, the Corps must evaluate the direct, secondary, and cumulative impacts of the activity on a number of resources. The EPA Guidelines require the Corps to make detailed factual determinations regarding the individual and collective effects associated with the discharge activity, and “no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States.” “Findings of significant degradation related to the proposed discharge shall be based upon appropriate factual determinations, evaluations, and tests required by subparts B and G ..., with special emphasis on the persistence and permanence of the effects outlined in those subparts.”</p> <p>The Corps cannot issue a 404 permit if it “would be contrary to the public interest.” This requires the Corps to consider “the probable impacts” of a proposed project on “[a]ll factors which may be relevant to the proposal[,] including the cumulative effects.” “Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case.”</p> <p>All factors which may be relevant to the proposal must be considered including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.</p> <p>The Corps must fully consider the impacts from the entire mine in making its public interest determination. “To require [the Corps] to ignore the indirect effects that would result from its actions would be to require it to wear blinders that Congress has not chosen to impose.” In addition to the above-analyzed cases, the Ninth Circuit has recognized the Corps’ duty to consider these impacts in order to ensure that issuance of the 404 permit is in “the public interest.” In <i>Ocean Advocates</i>, after finding that the Corps failed to consider the cumulative impacts from increased shipping traffic resulting from the issuance of a 404 permit for an oil refinery dock, the court noted that upon remand and consideration of these effects, “the Corps may impose conditions on the operation of permitted terminals at any time ‘to satisfy legal requirements or to otherwise satisfy the public interest.’ 33 C.F.R. § 325.4(a).”</p> <p>The 404(b)(1) Guidelines also prohibit the Corps from issuing a 404 permit “unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.” Those seeking a 404 permit must mitigate the impacts of the proposed dredge and fill activities by “avoiding, minimizing, rectifying, reducing, or compensating for resource losses.” The purpose of the compensatory mitigation program is to “offset unavoidable impacts to waters of the United States authorized through” 404 permits.</p> <p>Mitigation is required for “significant resource losses which are specifically identifiable, reasonably likely to occur, and of importance to the human or aquatic environment.” These adverse effects to aquatic resource functions, whether direct or indirect, must be mitigated. Additionally, under NEPA, an EIS must: (1) “include appropriate mitigation measures not already included in the proposed action or alternatives,” and (2) “include discussions of:... Means to mitigate adverse environmental impacts (if not</p>		

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			<p>already covered under 1502.14(f).” “All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperation agencies...”</p> <p>As part of reviewing and approving the mitigation plan, Corps regulations require that Perpetua provide “financial assurance” to cover mitigation costs: “(n) Financial assurances. (1) The district engineer shall require sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with applicable performance standards...” “The rationale for determining the amount of the required financial assurances must be documented in the administrative record for either the DA permit or the instrument.”</p>		
Samuel Penney (Chairman)	19396	197	<p>4.9 Surface Water and Groundwater Quality</p> <p>According to the SDEIS, the West End pit is predicted to take 57 years to fill to approximately six feet below the level of where the predicted outflow from the pit lake to the surface water would be anticipated to spill over.380 In the event that water levels rise to the level near spill over, temporary water treatment is proposed to occur if needed; however, the unlined West end pit lake is predicted to receive groundwater inflow and produce groundwater outflow infuse connecting groundwater sources with persistent (at a minimum to Mine Year 112 where modeling was concluded) and elevated levels of antimony, arsenic, and mercury. The SDEIS does not clearly define whether the Project will be responsible for treatment of potential spillover events in perpetuity. In reference to Sugar Creek, which “is listed 303(d) category 5 for arsenic (primary contact recreation) and mercury (cold water aquatic, primary contact recreation, salmonid spawning) and receives water from West End Creek, the SDEIS does not cover whether impaired groundwater release from the West End Pit falls under the proposed IPDES permit for the Project or whether these effects have been modeled to infer the potential consequences on the downstream water quality standards of West End Creek, which is listed by IDEQ as fully supporting or good quality in categories 1 and 2 of §305(b) of the Clean Water Act (“CWA”).</p> <p>Under the 2022 U.S. District Court of Colorado decision, Stone v. High Mountain Mining Company, groundwater discharges from a settling pond into a navigable water of the United States fall under the CWA § 301 and 402 and therefore require a National Discharge and Elimination System (“NPDES”) permit for discharge of pollutants to surface waters via groundwater. The Project should be required to obtain an IPDES permit for the discharges of pollutants from the West End pit groundwater outflow to surface waterbody, West End Creek. The SDEIS and the SGP IPDES application does not reference obtaining an IPDES permit, monitoring requirements, or effluent limitations for this specific groundwater discharge coming from West End Pit seepage.</p>	REG	<p>SDEIS Section 4.8.2.2 indicates that the West End Pit lake is not expected to overflow.</p> <p>SDEIS Section 4.9.2.2 describes potential outflow of the West End Pit lake to groundwater and related effects on groundwater quality and surface water quality in West End Creek and Sugar Creek.</p>
Samuel Penney (Chairman)	19396	200	<p>The SDEIS states that the underdrain flows would be collected in a sump downstream of the toe of the buttress, monitored for water quality, then either discharged to Meadow Creek if underdrain water is not exceeding water quality standards or otherwise pumped to the ore processing facility, or sent to a contact water pond for either treatment and discharge or water used for the mill process. Because the underdrain collection of seepage is proposed to enter Meadow Creek at a point source as the first option, an IPDES permit with water treatment requirements, monitoring requirements, and effluent limitations for all constituents of concern (aluminum, antimony, arsenic, cadmium, copper, manganese, mercury, zinc, sulfate, and TDS) should be put in place and included in the SDEIS for review. The monitoring requirements and effluent limitations for all the above constituents previously mentioned above, are not made clear in the Stibnite Gold Project IPDES Permit Application. What conditions would the IPDES permit, if any, require? Would it be practicable to treat metals to meet State water quality standards? How frequent will the sump be monitored? How long will post-closure monitoring and/or treatment occur? These are fundamental questions left unanswered in the SDEIS. It is also unclear in the SDEIS on how the TSF Underdrain Internal Outfall will be routed to a treatment facility.</p> <p>It is assumed that the underdrain system will contain all seepage below the lower geosynthetic cover in the TSF; however, this assumption is unreasonable and it should not be assumed that because an underdrain system is in place that all seepage will be contained. The SDEIS does not account for the</p>	REG	<p>The underdrain flow is included in the EIS effects analysis as a discharge that meets Idaho water quality criteria, potentially following water treatment if it does not meet water quality criteria without treatment. Specific requirements of the IPDES permit are determined by IDEQ via its permitting process, but the completed IPDES would result in a discharge that meets State requirements.</p> <p>Monitoring of the discharge would be required until a determination was made that water treatment could be discontinued. The current estimate for this time period is approximately 40 years.</p> <p>Predicted water chemistry associated with the tailings storage facility is described in SDEIS Section 4.9.2.2 and was incorporated into the evaluation of water treatment methods.</p>

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			volume of seepage not collected by the underdrain system and thus fails to require this contaminated water allocated to the IPDES permit.		
Samuel Penney (Chairman)	19396	424	<p>APPENDIX A: Payette National Forest and Boise National Forest Land and Resource Management Plans Consistency Review and Amendments</p> <p>Perpetua's mining project does not align with the direction of the Forest Plans; it moves the Forest away from meeting desired conditions. The Forest acknowledges and justifies this in part in Appendix A of the SDEIS where it states: "[i]t is recognized that not all proposals would move towards or achieve desired conditions, goals, or objectives and there may be tradeoffs between moving towards or achieving these for one resource or another." The Tribe recognizes there are tradeoffs in land management, however, when Forest Plan desired conditions, goals, objectives, standards, and guidelines are dismissed or bent to meet a proposal, they lose meaning and effectiveness.</p> <p>The Forest Plan amendments waive or remove the time frame for resource impacts. How is it possible to waive a project's time frame (20 years) and stay true to the non-degradation intent of the Forest Plan components? What purpose do Forest Plan standards serve if they can so easily be bent or set aside?</p> <p>The Tribe is disappointed in the Forest's rationale in Table 1 for deviation from Forest Plan compliance. Perpetua will not be able to maintain or restore ecosystem integrity when the entire upper Meadow Creek watershed is permanently altered. Adverse impacts to surface water and groundwater quality and quantity will occur in perpetuity and thus will degrade Tribal resources.</p>	REG	The potential impacts to water resources caused by the Proposed Action and action alternatives are described in Sections 4.8 and 4.9 of the SDEIS. Impacts to Heritage Resources and Tribal Rights are described in Sections 4.17 and 4.24 of the SDEIS. Proposed changes to the PNF and BNF Forest Plans considered for the potential approval of the 2021 MMP as the Agency Preferred Alternative are described in Section 1.7 of the SDEIS.
Samuel Penney (Chairman)	19396	426	The Payette and Boise National Forest need to reinitiate Section 7 consultation with the Regulatory Services on the Payette and Boise Forest's Land and Resource Management Plans regarding the proposed Plan amendments. What is the status of Section 7 consultation for this? The Tribe would like to be involved through government consultation in this process. This proposed Project will have an adverse effect on ESA-listed fish and their habitat so the Forest must demonstrate (e.g., from monitoring results of projects below main spawning areas) during planning or consultation that similar projects have been implemented and sediment delivery to streams was avoided or minimized.	REG	<p>The Forest Service has conducted Section 7 consultation with the USFWS and NOAA Fisheries (referred to as the Services) regarding plant and animal species on the Endangered Species List that would be potentially affected by the Project. The Forest Service prepared a Biological Assessment and submitted it to the Services for their use in the Section 7 consultation process. The Services have accepted the Biological Assessment and the Services will each issue a Biological Opinion regarding the project effects on ESA-listed species and mitigation requirements.</p> <p>Section 7 consultation can be incorporated into government-to-government consultation.</p> <p>Project effects on ESA-listed fish species are described in SDEIS 4.12.2.</p> <p>Sediment monitoring in the Project's Operational Area would be required under an approved Water Resources Monitoring Plan.</p>
Samuel Penney (Chairman)	19396	429	<p>The 2003 NOAA Fisheries Biological Opinion for the Land and Resource Management Plan Revisions for the Boise, Payette, and Sawtooth (Southwest Idaho Ecogroup) National Forests ("SWIE LRMP") has the following Terms and Conditions: 2. To implement RPM #2, Maintain linkages between the SWIE LRMP and broad-scale restoration/recovery strategies, the Forest Service shall:</p> <p>In the Upper Salmon, South Fork Salmon, and Little Salmon River subbasins, not allow likely to adversely affect actions with adverse effects lasting three years or longer on ESA-listed anadromous fish species or their habitat prior to completion of the appropriate consultation framework document, unless informed or driven by recommendations from existing or new subbasin assessments or watershed analyses.</p> <p>There is no documentation in the Project record any existing or new subbasin assessments or recent watershed analyses for the upper EFSFSR, as required in the above-referenced 2003 BiOp for actions resulting in likely adverse effects lasting longer than three years. The Tribe accordingly requests that the Forest perform these requisite assessments and analysis and provide it for Tribal and public review and comment in a new SDEIS prior to initiating Endangered Species Act consultation on the Project and prior to issuing a final EIS or decision on the Project.</p>	REG	The documentation of the subbasin assessment as required by the 2003 Biological Opinion has been added to the project record.

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			Have the default WCI values for this subbasin based on the best available data on functioning habitat conditions for ESA-listed fish within SFSR subbasin been revised within the Aquatic Conservation Strategy?		
John Rygh		20	To ensure protection of groundwater the State of Idaho would be required to set Points of Compliance. The Forest Service should be involved in this process as much as possible. Three points should be set; one on the East Fork South Fork Salmon River (EFSFSR) just above the confluence with Sugar Creek, one on Sugar Creek just above the confluence with the EFSFSR, and one on Meadow Creek just above the confluence with the EFSFSR. These should utilize paired wells (or isolated sampling intervals within one wellbore) to monitor both alluvial groundwater and bedrock groundwater. Corrective actions should be specified should threshold contaminate concentrations be exceeded.	REG	Idaho Cyanide Permits are prepared individually for each application and permit conditions and limits are based on the site-specific characteristics of the proposed operations, their operating and closure procedures, and the natural conditions at the project site. At the time this SDEIS was prepared the permit limits and requirements had not yet been established by IDEQ. This was clearly stated in the last sentence of the IPDES Permits and Cyanidation Permit subsection on page 4-224.

National Environmental Policy Act

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John Vander Woude (Representative)	7154	5	As a Representative and an Idahoan, I hope that you will consider my thoughts during the review process.	NEPA	No further response required. General in nature or position statement.
Judy Boyle (Representative, District 9, Seat B)	7158	4	The NEPA process has been robust and the Forest Service's decision to designate the 2021 MMP as the preferred Alternative signals to me that you too understand the benefits this project will have on Idaho should it be permitted.	NEPA	No further response required. General in nature or position statement.
Conway Ivey (Executive Chairman, Ivy Minerals, Inc.)	13274	10	This obstructive and lengthy approach conflicts with the public policy purposes of the National Environmental Policy Act and the Forest Service multiple use policy mentioned at the beginning of my letter. So, the USFS in coming to its decision should do the following; <ul style="list-style-type: none"> The USFS should let the facts guide their actions. In my 40 years in the mining industry I have never observed a proposed mining project that has undergone more analysis and review, that contains more environmental protections and mitigations, or that offers such an enormous opportunity to clean up historic environmental contamination that will otherwise impact the environment for decades or centuries. And all this for a region that needs jobs, needs infrastructure, and that is eager for the chance to help the United States achieve a domestic source of a critical mineral so that we are not dependent on China, Russia, or other unreliable sources. In short, the USFS should approve SGP because it has so many benefits, because it has so many protections and mitigations, and because it has been studied and analyzed for so long and in so much detail that any claim of unknowns and uncertainties is either ungenueine or reflects only those things that are unknowable for any project. I know the USFS will thoughtfully consider all viewpoints as it has for 7 years during this NEPA process, but as lead agency, it has to put facts first. <p>The Modified Mine Plan clearly fits within the four corners of the regulatory guidance and requirements of the National Environmental Policy Act and the Multiple Land Use Policy of the USFS.</p>	NEPA	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Snake River Fund	16536	3	Potential impacts from the Stibnite Gold Project extend far beyond the proposed 14,221 acre operational boundary and present concerns to all citizens living within or recreating upon the South Fork Salmon River watershed and the thousands of miles of river downstream.	NEPA	The geographic scope of effects was disclosed by the resource affected in Chapter 3 of the SDEIS. The geographic scope of effects differs by resource as these analysis areas are determined by setting meaningful bounds incorporating an area where the contribution of the alternatives is no longer quantitatively or qualitatively meaningful.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	9	WMC understands that the Forest Service must remain impartial. However, NEPA requires agencies to disclose and give equal treatment to both the positive and negative impacts associated with a proposed action. The SDEIS and the Specialist Reports that augment the information in the SDEIS fully document beneficial impacts as well as the unavoidable or residual adverse impacts that would result from the	NEPA	A summary table of environmental impacts is found in Table 2.8-1. A reference to this table was added to the Final EIS Executive Summary section.

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			<p>MMP. The Final EIS needs to discuss this information in a more evenhanded manner that does not inappropriately dwell on the adverse impacts while overlooking the beneficial impacts. Because no new information or different analyses are needed to disclose the full range of impacts associated with the SGP, this information can be synthesized and clarified in the Executive Summary in the Final EIS. This synthesis is mainly an editing task to ensure the Final EIS presents a more accurate and complete discussion of project impacts that is easier for the public to understand.</p> <p>A reader-friendly easy way to improve the Executive Summary in the Final EIS would be to add a table that briefly lists the beneficial and adverse environmental, economic, and social impacts that would result from development of the MMP and the mitigation measures that would eliminate or reduce adverse impacts. This table would facilitate the public's understanding of how the MMP will affect the environment, local communities, and other stakeholders. Rather than having to read the entire Final EIS, the public could use this table to obtain a quick overview of the project impacts.</p>		
Hendrickson, Emily (President, Women's Mining Coalition)	17429	25	<p>Judging from recently published opinion pieces and comments on the 2020 Draft EIS, certain project opponents are asserting that the 2019 Arizona Federal District Court's decision in Center for Biological Diversity et. al. v. U.S Fish and Wildlife Service et. al. (the "Rosemont" case) should be applied to the SGP. Their assertions are without merit because the ruling in Rosemont was decided based on the site-specific geological and land configuration facts at Rosemont. This decision cannot be extrapolated to other mineral deposits and proposed mining operations where the geologic conditions are not analogous to Rosemont.</p> <p>In Rosemont, the record before the District Court unequivocally documented that the lands proposed for the Rosemont Project's waste rock and tailings storage facilities were not mineralized and that mining claims had been located on these lands. Based on these specific facts, the District Court ruled that these mining claims were invalid. However, this decision cannot be simplistically exported to other mineral deposits and proposed mining projects where the site-specific facts are different. Because each mineral deposit is geologically unique, the correct mining claim and/or mill site configuration must be similarly site specific to accommodate the geologic facts. Because the on-the-ground situation at Rosemont is unique to Rosemont, the District Court's ruling is not a blueprint for any other proposed mining project. Consequently, the District Court's Rosemont opinion is not applicable to the SGP or to any other proposed mine because no two mines or mineral deposits are identical. The Ninth Circuit Court of Appeals ruling in Rosemont discusses the difference between mining claims and mill sites stating: "The Mining Law allows mining companies to occupy federal land on which valuable minerals have been found, as well as non-mineral federal land for mill sites..." Mill sites can be used for development rock and tailings storage facilities and other ancillary uses needed to support a mining operation. Figure 3.9-3 in the SDEIS "Stibnite Mining District Geology," clearly illustrates where mineralized zones are located at the Stibnite Mine. Perpetua is proposing to locate the tailings impoundment and associated embankment/buttruss on lands in the Meadow Creek drainage that are not mineralized. Mill sites could be located on these non-mineral lands pursuant to Section 42 of the Mining Law. As discussed in Sections 1.10.3.1 and 1.10.3.2 of the SDEIS, the Forest Service eliminated two alternatives from detailed analysis that pertain to the applicability of the Mining Law and the Forest Services' 36 CFR Subpart 228A surface management regulations for locatable minerals. These alternatives were likely suggested by project opponents who are seeking to force fit the Rosemont decision to the SGP. As explained above, the Rosemont case is a one-off judicial ruling that is confined to the site-specific geological facts at the Rosemont Project. Therefore, it is not applicable to the Stibnite mineral deposit – or to any other mineral deposit. The Forest Service has thus correctly decided to not evaluate these alternatives in detail in the SDEIS. The Final EIS should similarly dismiss these alternatives from further consideration.</p>	NEPA	No further response required. General in nature or position statement.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	2	<p>Previous DEIS Comments: DEIS comments submitted by TIFO in 2020 focused on analyses regarding Contaminants of Concern (COC)s, specifically toxic metals. The comments emphasized the lack of transparency, material balances, and coherence in the document; and highlighted the resulting difficulties in determining the extent and disposition of toxic contaminants throughout the proposed alternatives. Because of these shortcomings it was not possible to develop comprehensive material balances and verify coherence. Rudimentary material balances were developed by TIFO, through reverse</p>	NEPA	Section 1.9 of the EIS states that the comments received on the 2020 DEIS were reviewed and considered as additional scoping input for the SDEIS preparation. These comments were analyzed in a content analysis process to develop public concern statements. Perpetua also reviewed the comments received on the 2020 DEIS and sought to respond to many of these comments by revising and resubmitting their Plan of Operations. This process produced the Modified Plan of Operations (ModPro2) submitted in October 2021, which then became the

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			<p>engineering of Midas Gold support documents. Tables supporting the detailed calculations and data sources were attached to TIFO's DEIS comments. The comments and Tables illustrated the lack of transparency that precluded objective analyses of potential health and environmental risks associated with the SGP.</p> <p>Unfortunately, the Forest Service did not respond to public comments on the DEIS before substituting a new Preferred Alternative developed by Perpetua. Perpetua and the Forest Service characterize the new Alternative as refining the DEIS in response to public comments, without providing specific responses. As a result, the SDEIS Alternative comparison is limited to two site ingress/egress transportation routes and the status of previous comments is unknown. The Forest Service ignored public comments and de facto allowed Perpetua to determine which public comments are relevant and implied that responses are inherent in the SDEIS revisions. The Forest Service did little to address the lack of transparency and coherence in the SDEIS, and the documents remain fatally flawed. The introduction of a new Alternative in the SDEIS necessitated repeating the reverse engineering analyses to estimate material balance calculations with a different combination of Midas Gold and Perpetua support documents. SDEIS material balances are summarized in Tables attached below. TIFO's 2020 comments and DEIS material balance support Tables are provided as supplemental material.</p>		<p>2021 MMP which constituted a revised Proposed Action for Forest Service review. Sections 1 and 2 of the ModPro2 document explain how the changes in the modified plan of operations is partly in response to comments received on the 2020 DEIS. Appendix A of the ModPro2 document shows the comparison of the action alternatives reviewed in the 2020 DEIS and the ModPro2 plan. Because the 2021 MMP contained substantial changes to the Proposed Action that are relevant to environmental concerns the Forest Service decided to prepare a SDEIS. Also, based on comments received on the 2020 DEIS and the effects of the 2021 MMP, the Forest Service revised the action alternatives considered in the SDEIS. A major change in the format of the SDEIS and the 2020 DEIS was that technical supporting information was moved from the EIS to supporting Specialist Reports. The authors of these reports reviewed the public concern statements derived from the 2020 DEIS comments which advised the authors of the specialist reports regarding content of those reports to be responsive to what was learned from the 2020 DEIS comments. Per 40 CFR § 1503.4(a) the Final EIS will respond to individual comments or groups of comments. The Final EIS will contain responses to the comments received on the SDEIS and concern statements summarizing comments on the DEIS.</p> <p>The commenter submitted quantitative re-evaluation of the chemical characterization data in the 2020 DEIS to prepare elemental material balances for the different ore and waste materials of the operations. However, the elemental material balances are not solely indicative of potential environmental effects or how these effects compare to existing regulatory limits and guidance. These elemental material balances are not typically used in NEPA analyses of proposed mining operations. This is because quantification and relocation of elemental masses may not be directly associated with physical environmental effects. For example, relocating a certain mass of elemental antimony from an open pit to a development rock storage facility is not as informative as the mineral form and concentration of the mineral that contains the element, and how mobile would the element be in the environment based on the whole rock chemistry and the proposed management plan for the development rock. The impact analyses included in the SDEIS do utilize typically acceptable data and methods to predict chemical impacts to environmental media and then compares these projected impacts to existing regulatory requirements and guidance.</p>
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	4	The Forest Service has also imposed extraordinary burdens on Public Reviewers by i) allowing Perpetua to submit the new Alternative in the SDEIS without considering and replying to Public Comments on the DEIS, and ii) failing to conduct objective independent analyses for key health and air quality analyses, by deferring to analyses conducted by SGP for the Idaho Department of Environmental Quality (IDEQ) Permit to Construct (PTC). This has required reviewers to revisit analyses based on the DEIS Alternatives, repeat those analyses for the new SDEIS Preferred Alternative, compare the differences, and comment on both documents and the comparison. Similarly, reviewing the air quality analyses required obtaining and critiquing much of the support material from IDEQ. TIFO requested an extension detailing these challenges on December 15, 2022 and received no response from the Forest Service (letter attached).	NEPA	The Forest Service released the SDEIS on October 28, 2022, and required that all comments be submitted by January 10, 2023. This was a 75-day public comment period which was 30 days longer than the required 45-day comment period. Per 40 CFR 1502.9(c) the Forest Service determined that a supplement to the DEIS was required because the new alternative contained substantial changes that were relevant to environmental concerns. Per 40 CFR § 1503.4(a) the Final EIS responds to individual comments or groups of comments. The Final EIS contains responses to the comments received on the SDEIS and concern statements summarizing comments on the DEIS. A criticism of the 2020 DEIS was that it included too much technical information making it too long and difficult to review. In response to this criticism the Forest Service provided most of the technical supporting information for the SDEIS in separate specialist reports that were made available at the same time as the SDEIS. The air quality impact analysis in the SDEIS was supported by air emissions inventory and impact modeling information that was independent from that prepared by Perpetua for the IDEQ PTC and is contained in the Air Resources Specialist Report. The Forest Service conducted its own air impact analyses and did not defer to the IDEQ impact analyses. For the convenience of the reviewers, the emissions information that was used by the IDEQ for the PTC was disclosed in the specialist report and compared to the emissions inventory information used for the SDEIS.
von Lindern, Ian (Founder, Terragraphics)	17436	5	Both the DEIS and SDEIS lack transparency and coherence. The USEPA defines transparency to "... ensure that the regulatory science underlying its actions is publicly available in a manner sufficient for independent validation." https://www.regulations.gov/document?D=EPA-HQ-OA-2018-0259-9322 . Coherence is the quality of being logical and consistent, or presented in a manner in which all the parts	NEPA	The SDEIS is a well-organized, comprehensive review of the characteristics and potential environmental effects of the action alternatives considered. All sources of information used in the SDEIS are clearly cited and the specialist reports supporting the SDEIS with important data were made available on the Forest Service project website at the same time as the SDEIS

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International Foundation)			fit together to form a united whole. Neither document meets these criteria. Key data and analyses are contained in obscure, and often unavailable, references. With regard to COCs, neither overall productions figures, nor any material balances are provided. Determining the contaminant quantities, potential chemical forms and toxicity through the proposed immense mining operations and complex metallurgical processes requires tedious reverse engineering.= Various support documents were used to develop rudimentary COC material balances for both the DEIS and SDEIS. These accountings are used below to demonstrate specific health and environmental concerns with DEIS and SDEIS, and the insufficiency of the Forest Service analyses. It is not possible, in the time allotted with the available reference material, for an independent reviewer to assess the consistency and accuracy of the assertions made regarding COCs throughout DEIS or SDEIS.		itself. The important chemistry information for the ore and waste rock to be mined and their potential to release COCs is fully discussed in Sections 3.3, 3.5, 3.8, 3.9 of the SDEIS. The projected impacts of these COCs on environmental media are fully disclosed and discussed in the corresponding sections of Chapters 4 and 5 of the SDEIS. Where appropriate, these COC impacts are compared with applicable regulatory standards and requirements for the receiving media including ambient air, surface water, and ground water.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	10	The Forest Service has never responded to public comments alleging the insufficiencies of the Alternatives in the DEIS. Those DEIS Alternatives were demonstrated to be fatally flawed by rejection from IDEQ. The Forest Service avoided making that determination by electing to provide no response, ignore the Public Comments, and narrowed the SDEIS analyses by substituting and selecting a new Preferred Alternative as suggested by Midas/Perpetua.	NEPA	Section 1.9 of the SDEIS states that the comments received on the 2020 DEIS were reviewed and considered as additional scoping input for the SDEIS preparation. These comments were analyzed in a content analysis process to develop public concern statements. Perpetua also reviewed the comments received on the 2020 DEIS and sought to respond to many of these comments by revising and resubmitting their Plan of Operations. This process produced the Modified Plan of Operations (ModPro2) submitted in October 2021, which then became the 2021 MMP which constituted a revised Proposed Action for Forest Service review. Sections 1 and 2 of the ModPro2 document explain how the changes in the modified plan of operations is partly in response to comments received on the 2020 DEIS. Appendix A of the ModPro2 document shows the comparison of the action alternatives reviewed in the 2020 DEIS and the ModPro2 plan. Because the 2021 MMP contained substantial changes to the Proposed Action that are relevant to environmental concerns, the Forest Service decided to prepare a supplemental draft EIS. Also, based on comments received on the 2020 DEIS and the effects of the 2021 MMP, the Forest Service revised the action alternatives considered in the SDEIS. A major change in the format of the SDEIS and the 2020 DEIS was that technical supporting information was moved from the EIS to supporting specialist reports. The authors of these reports reviewed the public concern statements derived from the 2020 DEIS comments which advised the authors of the specialist reports regarding content of those reports to be responsive to what was learned from the 2020 DEIS comments. Per 40 CFR § 1503.4(a) the Final EIS responds to individual comments or groups of comments. The Final EIS contains responses to the comments received on the SDEIS and concern statements summarizing comments on the DEIS.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	21	However, as noted above, exposure estimates cannot be developed, as the link to the electronic support documents cited by the Forest Service cannot be accessed.	NEPA	Supportive documents (e.g., resource specialist reports, air modeling reports, fisheries baseline and modeling reports, water baseline and modeling reports, etc.) for the SDEIS were made available on the Forest Service project website at the same time as the SDEIS. Where reviewers requested additional information to review, the Forest Service did respond by making the information available.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	15	V. MANY SERIOUS AND UNRESOLVED CONCERNS ABOUT THE PROJECT ANALYSES WARRANT A SUPPLEMENTAL SDEIS. CEQ regulations provide: NEPA regulations must ensure that the environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. "If a [DEIS] is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft ." 40 C.F.R. § 1502.9(a) (1978). The SDEIS is riddled with data gaps, inaccurate description of the current environmental conditions, missing but available baseline information, among other concerns, which require revising and/or supplementing the SDEIS to comply with NEPA.	NEPA	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest	17634	16	A. The SDEIS improperly relies on inaccurate or incomplete baseline data. To take the required "hard look" under NEPA, an EIS must describe the environmental baseline of the	NEPA	As stated in 40 CFR 1502.15 "The environmental impact statement shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under

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Program Director, Earthworks) and seven others			<p>areas to be affected. 40 C.F.R. § 1502.15. An accurate baseline is “essential” to an informed analysis. 40 C.F.R. § 1502.21(b). Baseline conditions are necessary to “determine what effect the project will have on the environment” and thus to comply with NEPA. “Without establishing the baseline conditions which exist. before [a project] begins, there is simply no way to determine what effect the [project] will have on the environment and, consequently, no way to comply with NEPA.” An agency cannot rely on post-approval surveys, studies, or mitigation as a substitute for suitable baseline information. For example, courts have held that the Forest Service violates NEPA when it approves a mine exploration project without gathering baseline groundwater hydrology information to assess impacts of drilling before approving a project. While it may be permissible in some circumstances for an agency to estimate baseline conditions—instead of conducting actual measurements—by using data from a similar area, computer modeling, or some other method, the agency’s method “must be based on accurate information and defensible reasoning.”</p> <p>As shown throughout many sections of these comments, the Forest Service failed to gather and utilize adequate baseline data—data which is available or readily attainable. The Forest Service must correct these errors by gathering and utilizing up-to-date, accurate baseline data, and must issue a revised or supplemental SDEIS for public comment.</p>		<p>consideration. The descriptions shall be no longer than is necessary to understand the effects of the alternatives. Data and analyses in a statement shall be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced.” Baseline data was gathered and described as presented in each of the resource sections in Chapter 3 of the SDEIS. If baseline conditions were summarized due to the vast amount of data, the additional description was provided in the associated resource specialist report or other supporting documents that were also made available on the Forest Service project website with the SDEIS. The Affected Environment sections are within Chapter 3 of the SDEIS. The Forest Service believes that the baseline data used in the SDEIS is sufficient to describe the reasonably foreseeable environmental effects of the alternatives.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	22	<p>Instead of rushing ahead to approve Perpetua’s mine, the Forest Service should take the time to resolve these uncertainties, or should at least disclose these uncertainties and properly factor them into the SDEIS and its analyses.</p> <p>C. There are several instances of missing or incomplete information that are relevant to the foreseeable impacts and essential to a choice among the alternatives.</p> <p>NEPA’s purpose is “to foster excellent action,” and the “NEPA process is intended to help public officials make decisions that are based on an understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.” 40 C.F.R. § 1500.1(c) (1978). To this end, an EIS must “provide full and fair discussion of significant environmental impacts.” Id. at 1502.1 (1978).</p> <p>NEPA requires that “environmental information is available to public officials and citizens before decisions are made and before actions are taken.” Id. at 1500.1(b) (1978). In an EIS, an agency must explain its methodology and results, and include its baseline studies as an appendix for the public to review.</p> <p>Information disclosed during the NEPA process “must be of high quality.” “Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.” As the Ninth Circuit has explained:</p> <p>Congress wanted each federal agency spearheading a major federal project to put on the table, for the deciding agency’s and public’s view, a sufficiently detailed statement of environmental impacts and alternatives so as to permit informed decision making. The purpose of NEPA is to require disclosure of relevant environmental considerations that were given a “hard look” by the agency, and thereby to permit informed public comment on proposed action and any choices or alternatives that might be pursued with less environmental harm.</p> <p>“[T]he very purpose of NEPA’s requirement that an EIS be prepared for all actions that may significantly affect the environment is to obviate the need for speculation by insuring that available data is gathered and analyzed prior to the implementation of the proposed action.” “NEPA requires that the agency provide the data on which it bases its environmental analysis.” NEPA, thus, requires transparency and placing the high-quality information the agency relied on before the public, before approving a project. This is true of supposedly confidential information too. As set forth in many sections in these comments, the SDEIS and its supporting documents rely/depend upon missing, incomplete, confidential, low quality, and inaccurate information. The Forest Service must, therefore, gather, consider, and disclose to the public important and high quality information about the Stibnite</p>	NEPA	<p>Any uncertainties were disclosed in the specific resource section in Chapter 4 of the SDEIS. The associated resource reports and supporting documents (baseline reports, modeling reports, etc.) were cited in the SDEIS and provided on the Forest Service project website along with the SDEIS.</p> <p>As noted in Section 3.1.1 of the SDEIS, the analysis areas vary by resource or resource use, depending on geographic extent of the resource or use and the extent of the potential effects of the SGP. The analysis areas may be larger or smaller than the SGP area, utilizing administrative or natural boundaries, based on potential effects on the resource.</p>

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			<p>Gold Project, the proposed alternatives, and their environmental effects in a supplemental or revised SDEIS and release it for public comment before rushing ahead to approve the Project.</p> <p>Additionally, in determining whether an EIS fosters informed decision-making and public participation, courts consider not only the content of an EIS, but also its form. The NEPA document “is where the [agency’s] defense of its position must be found.” To provide a “full” and “fair” discussion of environmental effects, an agency must address issues “up front” and cannot “cobble together a ‘hard look’ from various other analyses.”</p> <p>Here, even when information is purportedly available, much of it is incomprehensible, or extremely burdensome to find and use. Commenters hired multiple experts to review the SDEIS, who had to spend significant time cobbling together critical information the Forest Service relied upon in reaching its conclusions. The Forest Service must make all information available in a form suitable for public review as part of a supplemental or revised SDEIS released for public comment.</p> <p>D. The limited temporal and geographic scales render the analyses inadequate. “[A]n agency has the discretion to determine the physical scope used for measuring environmental impacts,” so long as its choice represents a reasoned decision and is not arbitrary. Similarly, an agency’s discretion to determine the temporal scope of its NEPA analysis requires the agency to consider the relevant factors and provide a rational connection between the facts found and the choice made. An agency must offer a “reasonable justification for why it drew the line where it did.”</p> <p>As set forth throughout these comments, the Forest Service arbitrarily constrained the temporal and/or geographic scope of its effects analysis to omit disclosure and evaluation of potential significant effects caused by the Stibnite Gold Project. For example, as discussed in more detail later in these comments, data collected to model baseline conditions is limited to small areas of the mine site and are spatially-biased. See infra.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	28	<p>NEPA requires preparation of a supplemental EIS if there are “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c)(ii) (1978).54</p> <p>1. Department of Defense grant A significant new development occurred on December 19, 2022, when the Department of Defense announced \$24.8 million in grant funding for the Stibnite Gold Project, stating that: The DPA Investments Program will provide \$24.8 million to Perpetua to complete environmental and engineering studies necessary to obtain a Final Environmental Impact Statement, a Final Record of Decision, and other ancillary permits. Perpetua will perform this study work related to its Stibnite-Gold Project in central Idaho through 2024.(emphasis added).</p> <p>A similar press release by Perpetua Resources further emphasizes the development of essential information related to the SGP, including environmental baseline data monitoring, environmental and technical studies, as provided by new grant funding, announced on December 19, 2022:</p> <p>Under the funding agreement, Perpetua may request reimbursement for certain costs incurred over 24 months related to environmental baseline data monitoring, environmental and technical studies and other activities related to advancing Perpetua’s construction readiness and permitting process for the Stibnite Gold Project. (emphasis added)</p> <p>These environmental and engineering studies, which the DoD press release says Perpetua will perform through 2024, and are deemed “necessary to obtain a Final Environmental Impact statement,” must be provided for public review and comment in the NEPA process.</p>	NEPA	The Final EIS includes a discussion of the DoD grant which was announced after the SDEIS was released. The Forest Service understands the grant funds are for environmental and engineering work leading to a ROD. The Forest Service is not aware that this work will result in new information relevant to environmental concerns or bearing on the Proposed Action or its impacts to necessitate another SDEIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	75	<p>B. The purpose and need are unreasonably narrow An agency violates NEPA when it “define[s] its objectives in unreasonably narrow terms.” “A purpose and need statement will fail if it unreasonably narrows the agency’s consideration of alternatives so that the outcome is preordained.”</p>	NEPA	Section 1.6.1 of the SDEIS is an accurate statement of the Forest Service’s Purpose and Need and meets the intent of the purpose and need as outlined in 40 CFR 1502.13 because the agency is responding to a plan of operations submitted by an external proponent. The Forest Service must comply with regulations governing the use of surface resources for operations authorized by the United States mining laws on National Forest System lands under 36 CFR

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			<p>One obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing “reasonable alternatives” out of consideration (and even out of existence). The federal courts cannot condone an agency’s frustration of Congressional will. If the agency constricts the definition of the project’s purpose and thereby excludes what truly are reasonable alternatives, the EIS cannot fulfill its role. Nor can the agency satisfy the Act.</p> <p>While the Forest Service is permitted to take the applicant’s purposes into consideration, it cannot draft a narrow purpose statement that restricts the consideration of alternatives to one motivated by private interests. “[A]n applicant cannot define a project in order to preclude the existence of any alternative sites and thus make what is practicable appear impracticable.” Federal courts have routinely found that NEPA prevents federal agencies from effectively reducing the discussion of environmentally sound alternatives to a binary choice between granting and denying an application.</p> <p>Here, the Forest Service defined its objectives in unreasonably narrow terms, and as a result, failed to consider other reasonable alternatives and proposes reaching a preordained conclusion in violation of NEPA. The SDEIS states, with respect to the Forest Service’s purpose and need:</p> <p>1.6.1 Purpose and Need for Federal Action The Forest Service’s purpose is to consider approval of Perpetua’s proposed use of the surface of NFS lands in connection with operations authorized by the U.S. mining law as first described in the Plan submitted September 2016, then refined in 2019 (Brown and Caldwell 2019a), and further modified in 2021 as the 2021 MMP (Perpetua 2021a). The Forest Service’s need for action is to ensure that the proposed occupancy and use of NFS lands is consistent with statutory and regulatory requirements. For purposes of this environmental analysis, the agency is assuming the proposed uses would be able to be authorized under existing regulatory authorities. However, the agency will need to evaluate the eventual applications for rights of way to make a final determination.</p> <p>The need for the action is to: Consider approval of Perpetua’s 2021 MMP for development of the SGP to mine gold, silver, and antimony deposits that, where feasible, would minimize adverse environmental impacts on NFS surface resources; and ensure that measures are included that provide for mitigation of environmental impacts and reclamation of the NFS surface disturbance.</p> <p>SDEIS at 1-8. Elsewhere, the SDEIS describes the Forest Service’s purpose and need as: The Forest Service’s purpose is to consider approval of the Plan to mine and process gold, silver, and antimony from deposits at the mine site in central Idaho for commercial sale. The purpose of the proposed SGP is consistent with Congress’ declaration in the Mining and Mineral Policy Act of 1970 (Public Law 91-631 as amended through Public Law 106-193).</p> <p>The Forest Service’s need for action is established by the agency’s responsibilities under the Locatable Minerals regulations at 36 CFR 228 Subpart A, which were promulgated under authority granted by the Mining Law of 1872 (Mining Law) (30 USC 22 et seq.) and the Organic Administration Act of 1897 (16 USC 478, 482, and 551). These regulations require that all locatable mineral prospecting, exploration, development, mining and processing operations, and associated means of access, shall be conducted in a manner that minimizes adverse environmental effects on NFS surface resources. SDEIS at A-12–A-13. See also A-22, A-29.</p> <p>First, the Forest Service’s focus on the general need to support mineral development under the 1970 Mining and Mineral Policy Act is misplaced. That Act, which merely notes general principles, creates no controlling statutory mandate on the agency. Instead, the Forest Service’s primary mandate is to protect the forest from destruction and depredations under the 1897 Organic Act. The agency’s guiding congressional mandate regarding the national forests is “to regulate their occupancy and use and to preserve the forests thereon from destruction.” 16 U.S.C. § 551. Yet, as discussed throughout these comments, the SGP would be inconsistent with numerous and important aspects of the Payette and Boise Forest Plans and other environmental laws and standards, would adversely affect public resources,</p>		<p>228, subpart A. These regulations require that the Forest Service respond to parties who submit a proposed plan of operations for approval to conduct operations authorized by the United States mining laws on National Forest System lands for part or all of their planned actions including mining, mineral processing, and uses reasonably incident thereto. In accordance with 36 CFR 228.5, the submittal of Perpetua’s proposed mining plan of operations requires the Forest Service to consider whether to approve the proposed mining plan of operations or to require changes or additions necessary to meet the purpose of the regulations for locatable mineral operations.</p>

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			<p>would restrict or eliminate uses and rights enshrined in treaties with the Nez Perce Tribe, and would otherwise significantly degrade forest resources.</p> <p>Instead of focusing the purpose and need on fostering mining, the Forest Service should focus on its authorities and duties under the Organic Act, the CWA, ESA, NFMA, NEPA, and other applicable laws and regulations. This way the Forest Service could consider alternatives and mitigation to Perpetua’s full-scale mine, including alternatives already proposed and/or considered in earlier comments and agency documents, such as: a cleanup/remediation first alternatives; different mining method alternatives, like underground mining; different processing methods; different facility locations; different water management.</p> <p>Second, the Forest Service’s assertion in the purpose and need statement that for “purposes of this environmental analysis, the agency is assuming the proposed uses would be able to be authorized under existing regulatory authorities,” and that it will evaluate later whether Perpetua’s proposal could be authorized, also violates NEPA because it unreasonably limits the alternatives the Forest Service considered. SDEIS at 1-8 (emphasis added). By making the assumption that all of Perpetua’s proposed activities would be authorized, the Forest Service is considering only two very similar alternatives— each of which authorizes the full suite of mining Perpetua has proposed in the manner the company proposes doing them. To credibly evaluate the purpose and need for this Project and associated features of it, the entire section needs to be rewritten following determination of the legal status of Perpetua’s claims and other asserted rights.</p>		
Giles, Robert (Mayor McCall, ID)	17834	1	Except for the Social and Economic Specialist Report, the City of McCall is again mostly excluded from the analyses as was the case in the DEIS. As previously stated in our first comment letter (attached and resubmitted with this letter) general references to McCall are made in many narrative sections but no impacts were specifically analyzed for our community even though we are the largest population center in Valley County and will be impacted a multitude of ways that are spelled out below. We believe this is an error on the part of Forest Service that, should the Forest Service approve the proposed mine, needs to be corrected by conducting additional supplemental analyses to provide complete disclosure of the impacts to the public, and provide appropriate information for the consideration of mitigation measures, required by the National Environmental Protection Act, prior to the issuance of the Final EIS and draft Record of Decision.	NEPA	Section 4.21.2.2 of the SDEIS describes Project effects to tourism, recreation economy, infrastructure, and public services including McCall. Increased road usage associated with the Project is described in Section 4.16.2.2 with Project effects on recreational usage described in Section 4.19.2.2 of the SDEIS.
Giles, Robert (Mayor McCall, ID)	17834	8	The Forest Service should address the impacts of mine traffic and displaced recreational traffic in a second supplemental DEIS.	NEPA	Increased road usage associated with the Project is described in Section 4.16.2.2 of the SDEIS with Project effects on recreational usage described in Section 4.19.2.2 of the SDEIS. The SDEIS notes the potential for reduced recreational access along routes utilized by the Project, but notes that there are alternative recreational locations to the affected routes.
Lynn Oliver	18565	2	The supplied story map for Perpetua's 2021 Modified Mine Plan and Supplemental EIS was outstanding. It sets a new standard for public participation in the NEPA process and this methodology should be incorporated in all future Forest Service projects.	NEPA	No further response required. General in nature or position statement.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	6	Including an estimated financial assurance amount and mechanism, the disclosure of which is particularly important in this project given the long-term water management needs at the site (including post-closure).	NEPA	The calculation of reclamation costs and estimated financial assurance amounts and mechanisms would be based on the final approved mine and reclamation plan in the ROD.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	40	Financial Assurance According to the DSEIS, calculation of the initial bond amount would be completed following the Record of Decision (ROD) when enough information is available to adequately and accurately perform the calculation. ⁴¹ EPA continues to recommend that the FEIS provide a more specific discussion of the estimated financial assurance amount and mechanism, particularly given the water management needs at the site (including post-closure). This would provide a basis for evaluating whether the planned reclamation and closure activities would be effective (funded) in the event of a bankruptcy or compliance issues. Other mining EISs have included financial assurance estimates that comport with the draft reclamation and closure plans and acknowledge that the final financial assurance would be	NEPA	The calculation of reclamation costs and estimated financial assurance amounts and mechanisms would be based on the final approved mine and reclamation plan in the ROD. That bond amount would be specified in a subsequent Forest Service decision following the ROD.

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			determined after the ROD. For example, see the Donlin Gold Project EIS, the Haile Gold Project EIS, and the Northmet Project EIS. This level of disclosure is also important for the SGP. Failure to obtain sufficient financial assurance at the Stibnite Mine Site in the past has resulted in significant, unaddressed contamination at the Site. If not for the NEPA process, there would be no public disclosure of financial assurance estimates. We understand that draft estimates are currently available.		
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	1	The Shoshone-Bannock Tribes (Tribes) have reviewed the available materials presented in the Stibnite Gold Project Supplemental Draft Environmental Impact Statement (Project SEIS) and offer the following comments regarding the overall impact of the Project and associated environmental concerns addressed as technical comments. As this communication includes both generally applicable comments on the Project's impacts to the Tribes and technical comments, please consider the context of both comments and when making the revisions please indicate how the comments were considered and if changes were made to the document when publishing the final document and record of decision.	NEPA	No further response required. General in nature or position statement.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	7	The purpose of NEPA is to require federal agencies to produce a "detailed statement" for "major federal actions significantly affecting the quality of the human environment" that must include analysis and description of impacts to a variety of environmental categories (i.e. water, air, socioeconomic, etc.). Basically, the federal agency is required to take a "hard look" at the Project and issue a decision document based on a reasonable range of alternatives. However, when an agency takes a 'hard look' at a mine plan of operations through a NEPA document the decision space is frustratingly narrow; to the extent where an agency cannot choose a 'no action' alternative or tell a mining company that mining is not in the public interest, regardless of impacts. In essence, the NEPA document becomes a vehicle to permit a mining activity that allows a private company to maximize profits through environmental deterioration and is subsidized by the people with the most connection to the landscape. From this perspective, the NEPA and 1872 mining laws are in direct conflict and should be resolved through regulation or other mechanisms. For example, a reasonable range of alternatives would include requirements to comply with existing Forest Plans, complete backfilling of pits, developing waste storage on private lands, avoiding tailing impoundment facilities, etc.	NEPA	The federal agencies involved in the EIS have responded to their regulatory requirements to objectively review the Proposed Action and consider whether to approve the 2021 MMP as submitted or any alternatives considered in detail in the Final EIS (Section 1.6 of the SDEIS). The development and review of alternatives that were considered is described in Section 2.2 of the SDEIS. Changes to the General Mining Law of 1872 are outside of the scope of this project as these are acts of Congress. Regulation changes or rulemaking cannot be decided with this analysis and subsequent decision as they are outside of the purpose and need of this project and require a separate rulemaking process.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	17	The tailings impoundment facility is located on unpatented mining claims, even though there is no intention to actually mine in that location; while this Project seems to gloss over this fact it is not the only issue with the location or design of the tailing impoundment. The Project actually creates a fish passage barrier, while removing other barriers; resulting in no net gains for passage and perpetual barriers due to the constituents associated with the tailings impoundment. There aren't many options to create sustainability from an inherently non-renewable enterprise, but creating a problem from the beginning is far from demonstrating good stewardship of public resources. In the end, the location of the tailing impoundment appears to be an effort to off-load a long-term waste storage facility on public lands and avoid perpetual maintenance of these contaminants. The Tribes request a complete evaluation and formal opinion on the legality of the 'millsite' areas that will be used to permanently occupy public lands and expand the 'mining' area by thousands of additional acres with little to no oversight; this opinion should be conducted by an objective agency counsel with knowledge of current mineral law in the 9th Circuit and included in the Final EIS and Record of Decision.	NEPA	The Forest Service has completed a review of the mining claims associated with the proposed project and included that review in the project record.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	21	All comments submitted on the DEIS that have not been addressed in the SDEIS and/or mine plan modifications should be considered as valid comments on the SDEIS.	NEPA	Section 1.9 of the SDEIS states that the comments received on the 2020 DEIS were reviewed and considered as additional scoping input for the SDEIS preparation. These comments were analyzed in a content analysis process to develop public concern statements. Perpetua also reviewed the comments received on the 2020 DEIS and sought to respond to many of these comments by revising and resubmitting their Plan of Operations. This process produced the Modified Plan of Operations (ModPro2) submitted in October 2021, which then became the 2021 MMP which constituted a revised Proposed Action for Forest Service review. Sections 1 and 2 of the ModPro2 document explain how the changes in the modified plan of operations is partly in response to comments received on the 2020 DEIS. Appendix A of the ModPro2 document shows the comparison of the action alternatives reviewed in the 2020 DEIS and the ModPro2 plan. Because the 2021 MMP contained substantial changes to the Proposed Action that are relevant to environmental concerns the Forest Service decided to prepare a SDEIS.

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					Also, based on comments received on the 2020 DEIS and the effects of the 2021 MMP, the Forest Service revised the action alternatives considered in the SDEIS. A major change in the format of the SDEIS and the 2020 DEIS was that technical supporting information was moved from the EIS to supporting specialist reports. The authors of these reports reviewed the public concern statements derived from the 2020 DEIS comments which advised the authors of the specialist reports regarding content of those reports to be responsive to what was learned from the 2020 DEIS reviews. Per 40 CFR § 1503.4(a) the Final EIS responds to individual comments or groups of comments. The Final EIS contains responses to the comments received on the SDEIS and concern statements summarizing comments on the DEIS.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18903	2	In addition to requiring a reasonable range of alternatives, NEPA requires agencies to analyze direct, indirect, and cumulative impacts on “ecological...aesthetic, historic, cultural, social, or health” 40 CFR § 1508.1(g)(1) (1978). It is difficult for the public to analyze these impacts on a variety of topics due to a number of areas lacking in specificity, errors or discrepancies. The Forest Service should take the time to correct these errors in order to give the public better insight into the direct, indirect, and cumulative impacts of a project of this magnitude.	NEPA	The specific concerns included in this comment are responded to in other comment/resource categories. No further response required here. General in nature or position statement.
Deantha Skibinski, Executive Director, Alaska Miners Association	18899	6	<p>Redeveloping, Remining, and Restoring a Problematic Legacy Mine Site</p> <p>The SGP entails remining and reprocessing historic mine wastes that contain residual gold and antimony that can be economically recovered, and remining other mine wastes that do not contain valuable minerals and placing them in engineered containment facilities to isolate them from the environment. Both remining activities are important environmental restoration measures that will remove legacy materials from area streams (primarily Meadow Creek) where they are leaching arsenic, antimony and other contaminants into the watershed. The remining components of the MMP and the recovery of antimony from some of the legacy mine wastes are precisely the type of remining activity that recent critical minerals policies have identified as a potential source of critical minerals.</p> <p>On February 24, 2021, President Biden issued Executive Order 14017 (EO 14017) “On America’s Supply Chains.” EO 14017 directed the Secretaries of Commerce, Energy, Defense, and Health and Human Services to complete a supply chain review in 100 days and specified that the Secretary of Defense must prepare “a report identifying risks in the supply chain for critical minerals.”</p> <p>The June 2021 report “Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth,” which is the 100-day Supply Chain Review Report prepared in response to EO 14017, is directly relevant to the SGP because this report explicitly requires the Secretaries to evaluate reprocessing mine wastes as a viable source of critical minerals. As a remining and reprocessing project that will recover the critical mineral antimony from legacy mine wastes, the SGP illustrates the viability of the concept in the 100-Day Report that critical minerals could be recovered from certain legacy mine wastes.</p>	NEPA	<p>No further response required. General in nature or position statement.</p> <p>The Forest Service’s consideration of the Project on the basis of its ability to produce gold, silver, and antimony is described in SDEIS Section 1.6 as the Project’s Purpose and Need.</p>
Joseph Pietri	19062	18	<p>Perpetua plans to expand its exploration.</p> <p>Would that not require a new DEIS? New exploration increases risks of Fire, Water contamination and Hazardous material cleanups. Will Peretua be held responsible and accountable for all incidents related to their work? Perpetua plans to expand its exploration.</p> <p>Would that not require a new DEIS?</p> <p>New exploration increases risks of Fire, Water contamination and Hazardous material cleanups.</p>	NEPA	The proposed future development drilling activities are described in Section 2.4.6.1 of the SDEIS and the potential impacts are incorporated in the document. Future development drilling in concert with these descriptions would be adequately covered under NEPA by this EIS. Any significant changes in future development and exploration drilling from what is described in the Final EIS would be considered for additional NEPA review before approval.
Kira Tenney	19247	1	I am concerned that the proposed Stibnite Gold project would result in significant negative impacts to local and regional economies, community coherence and resilience, water resources, fish and wildlife, public safety, and the interconnected ecosystems within the watershed. As experts have provided data	NEPA	The specific concerns included in this comment are responded to in other comment/resource categories. No further response required here. General in nature or position statement.

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			and information that support the costs of this project would far outweigh the benefits and the SDEIS has not provided the data and information required by NEPA (namely that relevant information will be made available to the public who also play a role in both the decision-making process and the implementation of that decision),		
Kira Tenney	19247	4	Finally, the SDEIS stated an incorrect description of the existing environment, included overstated benefits, had missing information, alternatives, and analysis (which were particularly outlined in comments that requested a SDEIS), made unreasonable assumptions, and included contradictory statements and claims. Legally, based on law such as “Accordingly, the Forest Service must take a ‘hard look’ at the environmental impacts of the Stibnite Gold Project, which means that the agency’s decision must not rely ‘on incorrect assumptions or data in an EIS.’” Native Ecosystems Council v. U.S. Forest Service, 418 F.3d 953, 964 (9th Cir.2005), further research and more accurate reporting of data and analysis for public review is needed.	NEPA	The specific concerns included in this comment are responded to in other comment/resource categories. No further response required here. General in nature or position statement.
Kira Tenney	19247	5	Additionally, the permitting process has been repeatedly delayed as Midas Gold (now Perpetua Resources) has repeatedly failed to provide accurate and timely information, and made repeated and fundamental changes to the mine plan midway through the NEPA process. This changing of plans indicates that there will be continued changes made by Perpetua, that the public would not be able to review as part of and required by NEPA. The public needs to be provided with truthful and accurate information. Would the USFS stand behind in a court of law the accuracy of all statements provided in the SDEIS? While neither Perpetua nor the SDEIS contractor is legally obligated to provide accurate, truthful, and complete information, NEPA clearly requires the USFS to stand behind the information in the SDEIS as accurate, truthful, and complete.	NEPA	The Forest Service has approved the information used to prepare the SDEIS.
Kira Tenney	19247	17	4. Forest Service Commitment to Best Available Science These stand out in the guiding Principles of the United States Forest Service: - We use the best scientific knowledge in making decisions and select the most appropriate technologies in the management of resources. This report does not include the best scientific knowledge and therefore is insufficient for comment. This SDEIS and the DEIS do not use the best scientific knowledge and needs to be updated as such.	NEPA	The Forest Service has approved the information used to prepare the SDEIS.
Zack Waterman (Northern Rockies Conservation Director)	19317	7	We believe that in order for the “hard look” standard of NEPA to be met, the Forest Service must consider additional alternatives, incorporate missing information and analysis necessary to make an informed decision among alternatives, and better consider impacts to eligible, suitable, and congressionally designated Wild & Scenic Rivers, as well as opportunities to mitigate those impacts. Please provide this analysis as a part of a revised SDEIS and allow adequate time for public review. Included with this letter is an attachment with the signatures of thousands of river advocates from across the nation – each of whom formally requests the Forest Service conduct additional analysis on this Stibnite Gold Project prior to the issuance of a Final Environmental Impact Statement.	NEPA	40 CFR 1502.14 states that an EIS must evaluate reasonable alternatives to the Proposed Action. Reasonable alternatives are those that respond to the Purpose and Need, are technically and economically feasible, and potentially reduce environmental effects to at least one resource, as described in Section 2.2.2 of the SDEIS. Potential impacts to Wild and Scenic Rivers was presented in Section 4.23.2.2 and 4.23.2.3 of the SDEIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	55	"Significant issues are those which are used to formulate alternatives to the Proposed Action and to develop mitigation measures." Please provide additional information from chapter 2 about which issues were used to develop which alternatives and mitigation measures, particularly in the 2021 MMP.	NEPA	The Proposed Action (2021 MMP) is not necessarily formulated around the selected issues for the EIS analysis because it was prepared separately and earlier than the SDEIS. The proponent revised their Proposed Action after public comments on the DEIS to reduce new surface disturbance and anticipated environmental impacts. As no additional mining alternatives were identified by the Forest Service that would reduce mining related impacts further, another mining alternative was not included. However, an alternative transportation route that met the Purpose and Need and potentially would reduce surface disturbance was carried forward as the Johnson Creek Route Alternative. The rationale for inclusion of the Johnson Creek Route Alternative is described in Section 2.5 of the SDEIS (see Table 2.5-1). Where mitigation measures were identified in the SDEIS, the issue driving the need for the mitigation measures are identified, see Section 4.8.3 for examples of this.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	56	Issues and indicators identified are not consistently used throughout the summary tables, the affected environment or the environmental consequences. While all the resource issues and their indicators should be made consistent with the other sections, it is particularly problematic in Tribal Rights and Interests, Wetlands and Riparian Resources, Access and Transportation. Please review how issues and indicators are used in the whole SDEIS, and make the list here consistent with lists in Chapter 4 sections and with various areas of Chapter 2.	NEPA	The issues and indicators in Table 2.8-1 have been made consistent with the issues and indicators cited in other sections of the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	57	"NEPA regulations require the agency to identify and eliminate from detailed study those issues that are not significant or that have been covered by prior environmental review, to narrow the scope of the analysis. Reasons for eliminating issues from detailed study include when the issues are related to the following: •General opinions or position statements not specific to the Proposed Action; •Items addressed by other laws, regulations, or policies; •Items not relevant to the potential effects of the Proposed Action, or otherwise outside the scope of this analysis; and/or, •Items that have no or negligible effects. " Please provide a citation for this list.	NEPA	Edit has been made. At the end of the first sentence in the first paragraph of Section 1.10.3 added the following citation "(CEQ Guidance Regarding Scoping, 4-30-81)."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	60	" Executive Orders " Recommend clarifying that this issue was also not considered in detail because it is an opinion or position statement not specific to the Proposed Action.	NEPA	Sufficient reason for the Forest Service action with regards to Executive Orders is found in the last sentence of Section 1.10.3.3. The requested edit will not be made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	64	"The No Action Alternative provides an environmental baseline for comparison of the action alternatives. Under the No Action Alternative, the mining, ore processing, and related activities under the action alternatives, including removal of legacy materials, would not take place. However, existing, and approved activities (i.e., approved exploration activities and associated reclamation obligations) would continue. " It may be helpful to add a sentence clarifying ASAOC activities to this paragraph. Also, approved exploration activities are not guaranteed to continued; please change "would" to "could".	NEPA	Edit has been made. In the second paragraph of Section 2.2.3, beginning with "No Action Alternative -", in the third sentence inserted "work under the ASAOC and" before "approved exploration". In the same sentence, changed "would continue" to "could continue".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	83	Issues and indicators identified are not consistently used throughout the summary tables, the affected environment or the environmental consequences. While all the resource issues and their indicators should be made consistent with the other sections, it is particularly problematic in Tribal Rights and Interests, Wetlands and Riparian Resources, Access and Transportation. Please review how issues and indicators are used in the whole SDEIS, and make the list here consistent with lists in Chapter 4 sections and with various areas of Chapter 1.	NEPA	The issues and indicators in Table 2.8-1 have been made consistent with the issues and indicators cited in other sections of the Final EIS.
Meg FitzMaurice	19329	5	It is clear that SGP will create unavoidable and irreversible environmental, social, and economic risks, many of which are not addressed, lack information and/or a detailed review in the SDEIS. The USFS is required through the NEPA (National Environmental Policy Act) to stand behind the information provided in the SDEIS as accurate and complete. Is the USFS willing to stand behind the accuracy and completeness of this document? I would not.	NEPA	The Forest Service has approved the information used to prepare the SDEIS.
Jon Robison	19330	14	I also note that there may have been a miscalculation with the deadline of January 10. For other projects, day 1 of the comment period begins the day after a project is posted in the Federal Register. If this is the case, the Forest Service should reopen the comment period.	NEPA	Per 40 CFR 1506.11(a), the minimum time periods set forth are calculated from the date of publication of the notice that an EIS is available in the FEDERAL REGISTER.
Jon Robison	19330	15	I am including by reference all scoping, DEIS and SDEIS comments submitted by the Idaho Conservation League and the Nez Perce Tribe.	NEPA	Section 1.9 of the SDEIS states that the comments received on the 2020 DEIS were reviewed and considered as additional scoping input for the SDEIS preparation. These comments were analyzed in a content analysis process to develop public concern statements. Perpetua also reviewed the comments received on the 2020 DEIS and sought to respond to many of these comments by revising and resubmitting their Plan of Operations. This process produced the Modified Plan of Operations (ModPro2) submitted in October 2021, which then became the 2021 MMP which constituted a revised Proposed Action for Forest Service review. Sections 1 and 2 of the ModPro2 document explain how the changes in the modified plan of operations

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					is partly in response to comments received on the 2020 DEIS. Appendix A of the ModPro2 document shows the comparison of the action alternatives reviewed in the 2020 DEIS and the ModPro2 plan. Because the 2021 MMP contained substantial changes to the Proposed Action that are relevant to environmental concerns the Forest Service decided to prepare a SDEIS. Also, based on comments received on the 2020 DEIS and the effects of the 2021 MMP, the Forest Service revised the action alternatives considered in the SDEIS. A major change in the format of the SDEIS and the 2020 DEIS was that technical supporting information was moved from the EIS to supporting specialist reports. The authors of these reports reviewed the public concern statements derived from the 2020 DEIS comments which advised the authors of the specialist reports regarding content of those reports to be responsive to what was learned from the 2020 DEIS reviews. Per 40 CFR § 1503.4(a) the Final EIS responds to individual comments or groups of comments. The Final EIS contains responses to the comments received on the SDEIS and concern statements summarizing comments on the DEIS.
Ruth Lewinski	19378	3	<p>1.0 Inappropriate Response of Public Comments from Previous Proposals Renditions of the Stibnite Gold Mine (SGM) Project have been discussed in Valley County for over a decade. In 2020, I submitted a personal comment for the DEIS, with questions particular to sections disclosed in that document. I never received a response in any kind from the Forest Service prior to the Preferred Alternative proposed by Perpetua (2022). Mine is amongst thousands of public comments that brought forward concerns. To me, this process lacks transparency and diminishes the direct impacts known to the public at this time. My understanding of the NEPA process is limited, but I understand it to be a review process during which the Forest Service and Federal Administration prioritize and acknowledge concerns rather than a private agency determining the appropriate interpretation and response. At this time, as my own concerns have not been addressed, it appears that the SGM has limited public review and is being pushed forward with undue risk and potential to harm without proper NEPA protocol.</p> <p>COMMENT: Prior comments have not been adequately responded to by the US Forest Service in regard to public concern for the proposed Stibnite Gold Mine Project. Please note, my comments for the 2020 DEIS were also submitted at this time.</p>	NEPA	Section 1.9 of the SDEIS states that the comments received on the 2020 DEIS were reviewed and considered as additional scoping input for the SDEIS preparation. These comments were analyzed in a content analysis process to develop public concern statements. Perpetua also reviewed the comments received on the 2020 DEIS and sought to respond to many of these comments by revising and resubmitting their Plan of Operations. This process produced the Modified Plan of Operations (ModPro2) submitted in October 2021, which then became the 2021 MMP which constituted a revised Proposed Action for Forest Service review. Sections 1 and 2 of the ModPro2 document explain how the changes in the modified plan of operations is partly in response to comments received on the 2020 DEIS. Appendix A of the ModPro2 document shows the comparison of the action alternatives reviewed in the 2020 DEIS and the ModPro2 plan. Because the 2021 MMP contained substantial changes to the Proposed Action that are relevant to environmental concerns the Forest Service decided to prepare a SDEIS. Also, based on comments received on the 2020 DEIS and the effects of the 2021 MMP, the Forest Service revised the action alternatives considered in the SDEIS. A major change in the format of the SDEIS and the 2020 DEIS was that technical supporting information was moved from the EIS to supporting specialist reports. The authors of these reports reviewed the public concern statements derived from the 2020 DEIS comments which advised the authors of the specialist reports regarding content of those reports to be responsive to what was learned from the 2020 DEIS reviews. Per 40 CFR § 1503.4(a) the Final EIS responds to individual comments or groups of comments. The Final EIS contains responses to the comments received on the SDEIS and concern statements summarizing comments on the DEIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	246	The SDEIS does not adequately address the potential impacts that the Stibnite Gold Project will have on the FCRNRW, IRAs, Recommended Wilderness Areas and the Chilcoot Peak RNA. Both mine-related use and public motorized access use of the newly constructed portion of the Burntlog Route will exacerbate the negative effects on these special areas and the Forest Service should drop this alternative. The Forest Service should prepare a supplemental SDEIS to re-assess the potential impacts the Stibnite Gold Project will have on these special areas and develop additional measures to avoid, minimize and mitigate the remaining impacts.	NEPA	<p>Per 40 CFR 1503.4 the agency preparing the final environmental impact statement shall assess and consider comments. Possible responses to the comments include supplementation, improvement, or modification of the analyses based on the comments. The Final EIS will include changes made in response to the comments received. The regulations at 40 CFR 1502.9(c)(1) provide guidance on when a supplement to a draft or final environmental impact statement is required.</p> <p>The analysis of impacts to the FCRNRW, IRAs, recommended Wilderness Areas, and the Chilcoot Peak RNA were presented in Section 4.23 of the SDEIS as well as the Special Designations Specialist Report that was made available on the Forest Service project website along with the SDEIS.</p>
Bonnie Gestring (Northwest Program Director,	17634	305	<p>S. Terrestrial Wildlife</p> <p>1. The Forest Service (FS) did not provide a useful summary of the changes between DEIS and SDEIS in relation to wildlife (or most every other resource) which impeded our review of the effects to wildlife</p>	NEPA	Section 1.9 of the SDEIS states that the comments received on the 2020 DEIS were reviewed and considered as additional scoping input for the SDEIS preparation. These comments were analyzed in a content analysis process to develop public concern statements. Perpetua also reviewed the comments received on the 2020 DEIS and sought to respond to many of these comments by revising and resubmitting their Plan of Operations. This process produced the

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Earthworks) and seven others			The project was originally analyzed in a DEIS in 2020. In response to the FS request for public comments, ICL and others provided an extensive analysis of project effects. In October 2022, the FS released a SDEIS. The FS made little effort to provide a comparison of changes between the draft and supplement EIS. The FS did not acknowledge ICL's original concerns, and did not show how the concerns were addressed. This lack of information and transparency does not meet the intent of the NEPA.		Modified Plan of Operations (ModPro2) submitted in October 2021, which then became the 2021 MMP which constituted a revised Proposed Action for Forest Service review. Sections 1 and 2 of the ModPro2 document explain how the changes in the modified plan of operations is partly in response to comments received on the 2020 DEIS. Appendix A of the ModPro2 document shows the comparison of the action alternatives reviewed in the 2020 DEIS and the ModPro2 plan. Because the 2021 MMP contained substantial changes to the Proposed Action that are relevant to environmental concerns the Forest Service decided to prepare a SDEIS. Also, based on comments received on the 2020 DEIS and the effects of the 2021 MMP, the Forest Service revised the action alternatives considered in the SDEIS. A major change in the format of the SDEIS and the 2020 DEIS was that technical supporting information was moved from the EIS to supporting specialist reports. The authors of these reports reviewed the public concern statements derived from the 2020 DEIS comments which advised the authors of the specialist reports regarding content of those reports to be responsive to what was learned from the 2020 DEIS reviews. Per 40 CFR § 1503.4(a) the Final EIS responds to individual comments or groups of comments. The Final EIS contains responses to the comments received on the SDEIS and concern statements summarizing comments on the DEIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	377	<p>AA. Connected Actions associated with the long-distance transport of minerals, namely antimony concentrate, from the mine site to locations for processing are not identified or analyzed.</p> <p>As described in 40 CFR 1508.25, scope consists of the range of actions, alternatives, and impacts to be considered in an environmental impact statement. The scope of an individual statement may depend on its relationships to other statements (Secs.1502.20 and 1508.28). To determine the scope of environmental impact statements, agencies shall consider three types of actions, three types of alternatives, and three types of impacts. They include: (a) Actions (other than unconnected single actions) which may be: 1. Connected actions, which means that they are closely related and therefore should be discussed in the same impact statement. Actions are connected if they: (i) Automatically trigger other actions which may require environmental impact statements. (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously. (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.</p> <p>The description of traffic associated with the project is briefly addressed at page 2-21 through 2-22, but the subsequent analysis provided under the impact topic of Access and Transportation in chapters 3 and 4 inappropriately narrows the analysis area to exclude most of state highway. In fact, the analysis should continue until the mine associated traffic becomes commingled with other interstate traffic, which would be the juncture with I-84 to the south and either the Port of Lewiston or I-90 to the north. Because the "destination" for additional processing is in fact not located at the terminus of Warm Lake Road with SH-55, but rather some further distance to be accessed most likely through interstate travel, the long-distance transportation and processing should be disclosed and analyzed. This is particularly true if the processing of antimony is intended to occur in Mexico or Oman. In such a case, the export of a nationally important mineral to another country for processing should also be described in the socioeconomic section of the document. Alternatively, if the intent is to transport the antimony concentrate to a domestic smelter, those air quality impacts of the smelting process should be included as connected actions.</p> <p>Perpetua Resources anticipates that compost (and potentially other soil amendments) will be imported to the Project site and applied to GM and YPP Till to improve their suitability. It proposes to import 13,850 tons of compost (RCP, p. 352) from dairy or feedlot operations (composted manure), which would be temporarily placed in stockpiles around the facility. The transport of this material would be a connected action, and its transport should be analyzed in the SDEIS.</p>	NEPA	The transportation impact analyses area in the Final EIS as described in Section 3.16.2 includes SH 55 from Cascade to McCall. However, the Transportation Baseline Study (HDR 20171) considered a larger analysis area including SH 55 at Cascade south to I-84 and SH 55 to New Meadows and US 95 from New Meadows north to Grangeville. The current analysis area and analysis has been deemed sufficient and the long-distance transport of minerals, namely antimony concentrate, from the mine site to locations for processing are identified and analyzed.
Leah K. Corrigan	19000	2	<p>The purpose and need is unreasonably narrow</p> <p>The purpose and need for the project is defined very narrowly, in a manner that precludes consideration of reasonable alternatives to the proposed action. The Forest Service used the Stibnite Gold Project plan</p>	NEPA	Section 1.6.1 of the SDEIS is an accurate statement of the Forest Service's Purpose and Need and meets the intent of the purpose and need as outlined in 40 CFR 1502.13 because the agency is responding to a plan of operations submitted by an external proponent. The Forest Service must comply with regulations governing the use of surface resources for operations

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			of operations as the basis for determining the purpose and need, and developed the action alternatives in the plan based on the plan of operations. This approach precluded the Forest Service from analyzing a reasonable range of alternatives to the proposed action (see Section III) that would allow access to public lands to search for minerals consistent with US mining laws, while minimizing adverse environmental impacts to a much greater extent than any of the alternatives in the DEIS. The purpose and need should be defined more broadly to include restoring and maintaining the health of the Salmon River and its tributaries, and the fisheries that the river supports.		authorized by the United States mining laws on National Forest System lands under 36 CFR 228, subpart A. These regulations require that the Forest Service respond to parties who submit a proposed plan of operations for approval to conduct operations authorized by the United States mining laws on National Forest System lands for part or all of their planned actions including mining, mineral processing, and uses reasonably incident thereto. In accordance with 36 CFR 228.5, the submittal of Perpetua's proposed mining plan of operations requires the Forest Service to consider whether to approve the proposed mining plan of operations or to require changes or additions necessary to meet the purpose of the regulations for locatable mineral operations.
Samuel Penney (Chairman)	19396	3	<p>The Tribe has committed thousands of hours and substantial resources evaluating the Project. In 2017, the Tribe reviewed Midas Gold's (now Perpetua Resources or "Perpetua") Plan of Restoration and Operations and submitted scoping comments on July 20, 2017. Based on this review and subsequent information, the Tribe, in October 2018, adopted a resolution opposing the Project. The Tribe concluded that the Project posed an existential threat to its treaty-reserved rights and resources, cultural resources, and other interests. On October 27, 2020, the Tribe submitted over 120 pages of substantive comments on the Draft Environmental Impact Statement ("DEIS").</p> <p>The Forest did not provide the Tribe with a comprehensive review of the Tribe's DEIS comments, only a cursory response that the Tribe received in anticipation of government-to-government consultation three days before the Forest's public release of the SD EIS. Since then, the Tribe has continued to closely monitor the Project through government-to-government consultation and staff-to-staff interactions with the Forest, emphasizing at every opportunity the Agency's obligations, as the Tribe's federal trustee, to protect the Tribe's treaty rights and resources.</p>	NEPA	Section 1.9 of the SDEIS states that the comments received on the 2020 DEIS were reviewed and considered as additional scoping input for the SDEIS preparation. These comments were analyzed in a content analysis process to develop public concern statements. Perpetua also reviewed the comments received on the 2020 DEIS and sought to respond to many of these comments by revising and resubmitting their Plan of Operations. This process produced the Modified Plan of Operations (ModPro2) submitted in October 2021, which then became the 2021 MMP which constituted a revised Proposed Action for Forest Service review. Sections 1 and 2 of the ModPro2 document explain how the changes in the modified plan of operations is partly in response to comments received on the 2020 DEIS. Appendix A of the ModPro2 document shows the comparison of the action alternatives reviewed in the 2020 DEIS and the ModPro2 plan. Because the 2021 MMP contained substantial changes to the Proposed Action that are relevant to environmental concerns the Forest Service decided to prepare a SDEIS. Also, based on comments received on the 2020 DEIS and the effects of the 2021 MMP, the Forest Service revised the action alternatives considered in the SDEIS. A major change in the format of the SDEIS and the 2020 DEIS was that technical supporting information was moved from the EIS to supporting specialist reports. The authors of these reports reviewed the public concern statements derived from the 2020 DEIS comments which advised the authors of the specialist reports regarding content of those reports to be responsive to what was learned from the 2020 DEIS reviews. Per 40 CFR § 1503.4(a) the Final EIS responds to individual comments or groups of comments. The Final EIS contains responses to the comments received on the SDEIS and concern statements summarizing comments on the DEIS.
Samuel Penney (Chairman)	19396	5	The Tribe is also concerned with the U.S. Department of Defense's ("DOD") recent decision giving Perpetua \$24.8 million, through a "critical minerals award," for the Project. According to the DOD, the money to Perpetua will be used to "complete environmental and engineering studies necessary to obtain a Final Environmental Impact Statement, a Final Record of Decision, and other ancillary permits." DOD's decision, which was made without any consultation with the Tribe regarding the effects of the Project on the Tribe's treaty-reserved rights, appears focused on facilitating authorization of the Project while the Forest's and Corps' review is underway and during the Tribal and public comment period. The Tribe expects that, under NEPA and other applicable federal law, any additional environmental or engineering review of the Project must undergo Tribal and public review through an additional SDEIS prior to a final decision.	NEPA	The Final EIS includes mention of the DoD grant which was announced after the SDEIS was released. The Forest Service understands the grant funds are for environmental and engineering work leading to a ROD. The Forest Service is not aware that this work will result in new information relevant to environmental concerns or bearing on the Proposed Action or its impacts to necessitate another SDEIS.
Samuel Penney (Chairman)	19396	18	National Environmental Policy Act Framework Section 101 of the National Environmental Policy Act ("NEPA") declares a broad national commitment to protecting and promoting environmental quality. The purposes of NEPA are: to declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality. To ensure that NEPA's commitment is infused into the ongoing programs and actions of the Federal Government, the Act also establishes some important 'action-forcing procedures.' Section 102 directs, to the fullest extent possible, all agencies of the Federal Government shall: [I]nclude in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human	NEPA	The specific concerns included in this comment are responded to in other comment/resources categories. No further response required here. General in nature or position statement.

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			<p>environment, a detailed statement by the responsible official on--(i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. The statutory requirement that a federal agency contemplating a major action prepare an Environmental Impact Statement ("EIS") serves NEPA's "action-forcing" purpose in two important respects. It ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision. Simply by focusing the agency's attention on the environmental consequences of a proposed project, NEPA ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast.</p>		
Samuel Penney (Chairman)	19396	19	<p>1.0 FOREST SERVICE PURPOSE AND NEED FOR ACTION NEPA requires agencies to "briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." In accordance with this requirement, the Forest Service articulated the purpose and need for the Project as follows:</p> <p>"The Forest Service's purpose is to consider approval of Perpetua's proposed use of the surface of [National Forest System] lands in connection with operations authorized by the U.S. mining law as first described in the Plan submitted September 2016, then refined in 2019 (Brown and Caldwell 2019a), and further modified in 2021 resulting in the 2021 MMP (Perpetua 2021a)." The Forest Service further articulated the "need for action" as to "[c]onsider approval of Perpetua's 2021 MMP for development of the SGP to mine gold, silver, and antimony deposits that, where feasible, would minimize adverse environmental impacts on NFS surface resources; and ensure that measures are included that provide for mitigation of environmental impacts and reclamation of the NFS surface disturbance."</p> <p>Failure to Consider Actual Purpose and Need for Project in SDEIS As articulated, the Forest Service's "purpose" and "need for action" in evaluating the Project sidestep the fundamental issue: is there a real world purpose or need for the Project? The SDEIS simply fails to address this basic question.</p> <p>The fact is there is not a clear purpose for the Project given its site-specific nature. There are other places in the world where gold, silver, and antimony may be mined with far less environmental impact than in the Project's proposed location. In addition, the SDEIS does not address whether there is current or future demand for gold, silver, and antimony in the United States or elsewhere.</p> <p>The United States is currently, and for the foreseeable future, a global supplier of gold and silver, and its current and future planned production of both metals exceeds global demand. Thus, there is no apparent need in the United States, including Idaho, for an additional gold or silver mine.</p> <p>More factual information is necessary to demonstrate the need to meet United States or global requirements for these minerals.</p> <p>Agencies have "discretion to develop and rely on statements of purpose and need that are consistent with the agency's decision-making responsibilities while considering multiple relevant factors, including the public interest and the goals of an applicant. Thus, the Forest Service should address whether there are other practicable alternatives that would meet the purported purpose and need for the Project that are protective of tribal treaty rights and are less environmentally damaging. The Forest Service should also include and analyze other alternatives, both nationally and globally for meeting gold, silver, and antimony demand and evaluate these alternatives in an SEIS. Such alternatives would include other proposed or developed projects or efforts throughout the world that would produce gold, silver, or antimony.</p> <p>Consideration of global purpose and need is particularly appropriate considering the natural and human resources that will be adversely affected if the proposed Project is permitted, constructed, and operated.</p>	NEPA	<p>The Forest Service's Purpose and Need meets the intent of the purpose and need as outlined in 40 CFR 1502.13 because the agency is responding to a plan of operations submitted by an external proponent. The Forest Service must comply with regulations governing the use of surface resources for operations authorized by the United States mining laws on National Forest System lands under 36 CFR 228, subpart A. These regulations require that the Forest Service respond to parties who submit a proposed plan of operations for approval to conduct operations authorized by the United States mining laws on National Forest System lands for part or all of their planned actions including mining, mineral processing, and uses reasonably incident thereto. In accordance with 36 CFR 228.5, the submittal of Perpetua's proposed mining plan of operations requires the Forest Service to consider whether to approve the proposed mining plan of operations or to require changes or additions necessary to meet the purpose of the regulations for locatable mineral operations. The Mineral Resources subsection of Section 4.2.2.2 of the SDEIS describes the markets for the products of the proposed operations and how these products would help meet the domestic and international demand for these products.</p>

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			<p>The EFSFSR has culturally-significant resources, and important fisheries and wildlife resources, all of which are critical to the Tribe and its treaty-reserved rights. The Tribe's way of life is intrinsically place-based, so adversely impacting or destroying a place also damages or destroys the cultural lifeways associated with it. Mining projects are an intense land use and are intrinsically destructive; therefore, the Project in the proposed location will cause substantial and irreparable multi-generational adverse impacts on the Tribe and its members that cannot be mitigated or restored. Avoidance of these impacts through careful consideration of the need for this Project is therefore essential.</p> <p>The Forest and Corps should address in the purpose and need section of the SDEIS the potential conflict between current and future uses of natural resources, including the harm the Project will do to the Tribe's treaty-reserved rights and resources and include mitigation measures.</p>		
Samuel Penney (Chairman)	19396	63	<p>SDEIS Section 2.4.6 Surface and Underground Exploration proposes that exploration and development drilling would occur to evaluate potential mineralized areas outside of the proposed mining areas. Five acres of new temporary road disturbance and eight acres of drill site disturbance on Forest lands at the mine site at any one-time during construction and operations. Exploration sites would be reclaimed after completion of drilling. Reclaimed acres would become available for future exploration, never exceeding 13 acres of disturbance at any one time. Disturbance resulting from surface exploration would total approximately 25 acres of roads and 40 acres of drill pads.</p> <p>The proposed exploration program to evaluate areas outside the proposed mining areas should be a separate proposal and include a detailed plan and environmental analysis of those actions on a stand-alone basis. The Golden Meadows Exploration Project EA serves as a starting point for the type of analysis that should be done for the additional exploration proposed in the SDEIS. The SDEIS should be supplemented to either remove this proposal or alternatively to provide additional details such as RCPs for the exploration areas.</p>	NEPA	It is not unusual to include within a mine plan of operations the reasonably foreseeable development and exploration work that would occur simultaneously with the mine construction and operations. The SDEIS and Final EIS include a resource-by-resource analysis of the effects of the development and exploration. If the future exploration or development drilling activities exceeded what is included in the mine plan of operations, the Forest Service would evaluate what additional NEPA analysis may be needed.

Mine Features, Mine Design, Mine Components (MIN)

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Elizabeth Barnes	6652	19	4-207 What measures are in place to prevent or mitigate the event of a mass failure of the TSF buttress and embankment wall?	MIN	The TSF embankment is designed to the regulatory standard required to minimize risk of a mass failure event. The TSF Buttress has been added downstream of the TSF Embankment to increase the dam performance beyond regulatory requirements. As such, the TSF Buttress is the design feature applied to mitigate mass failure risk.
Elizabeth Barnes	6652	29	4-230 Where is the pit backfill coming from and what is the composition and toxicity of this material?	MIN	SDEIS Table 3.9-2 describes the sourcing of pit backfill material and SDEIS Section 3.9.4.2 describes the geochemical characteristics of the rock material.
Elizabeth Barnes	6652	38	4-285 Where will material from the SODA and Bradley pits be relocated or remediated?	MIN	Section 2.4.5 describes how material from the SODA and the Bradley Mill would be re-processed or placed in the TSF embankment.
Conway Ivey (Executive Chairman, Ivy Minerals, Inc.)	13274	7	As for the larger project envisioned by the MMP, it is clear that both Perpetua and the USFS have put enormous thought and effort into identifying approaches to minimize the potential adverse environmental and human impacts. The USFS includes 117 separate items that must be instituted by the project based on existing regulatory and Forest Plan Requirements (Table 2.4-12). In addition, Perpetua has 155 individual Project Design Features (Table 2.4-13), which as the SDEIS notes, are uproject-specific measures intended by a proponent to inherently reduce and/or avoid potential environmental impacts of a proposed action. N In other words, design features and actions that will avoid, minimize or mitigate environmental impacts of the SGP. Collectively, the range of these requirements and commitments is vast, from fugitive dust capture (first of the two lists) to vegetation maintenance for safety (last). Reading through the list it seems first that anything and everything that could be thought of	MIN	Comment noted. Statement of position.

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			to avoid, reduce or mitigate impacts of the project are somewhere in the list. And second, what project can anyone think of that has had such a vast "laundry list" of must dos, can dos, and will dos?		
Hendrickson, Emily (President, Women's Mining Coalition)	17429	19	<p>Table 2.4-13 of the SDEIS entitled "Proponent Proposed Design Features" lists the numerous voluntary measures called "Environmental Design Features (EDFs)" that Perpetua has committed to implementing to provide an extra level of environmental protection and stewardship. The EDFs go beyond the extensive federal and Idaho State regulatory requirements that are listed in Table 2.4-12. The voluntary EDFs are intended to further avoid impacts or minimize them as much as possible. As described in Section 2.4-9, "the EDF's may have the effect of reducing and/or eliminating potential environmental impacts of the SGP." Perpetua has committed to so many EDFs that Table 2.4-13 is 11 pages long.</p> <p>Perpetua's EDFs augment and enhance the comprehensive and effective Forest Service and state regulatory requirements, best management practices, and likely permit conditions listed in Table 2.4-12. These regulatory requirements plus Perpetua's voluntary EDFs, will ensure a high level of environmental protection at the SGP. It is clear from Tables 2.4-12 and 2.4-13 that the Forest Service, the Idaho State regulatory agencies, and Perpetua have worked constructively together to develop an environmentally sound project that will minimize adverse environmental impacts, achieve numerous environmental and socioeconomic benefits, and supply the U.S. with a critically important domestic source of antimony.</p>	MIN	Comment noted. Statement of position.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	9	<p>The Preferred Alternative evaluated by the Forest Service relies on SGP assertions that Perpetua, or subsequent operators, will adhere to the 2021 MMP. Perpetua has a PTC to construct a facility capable of operating at 180,000 tons/day capacity and an amendable permit condition limiting production to 135,000 ton/day (75% of capacity). The Forest Service relies on Perpetua's assertion in the 2021 MMP that the SGP will operate at 29% of capacity. There are no provisions in the PTC permit conditions to limit SGP to the Forest Service assumed production level. IDEQ permit conditions allow production up to the 75% of capacity TRACT limit, and is amendable without federal oversight.</p> <p>The Forest Service only has Perpetua's unbound assurance that the SGP will operate according to the 2021 MMP. Table SD4 compares the Forest Service 2021 MMP, Maximum Design Capacity, and TRACT permitted emissions for Mining Fugitive Dust emissions. Table SD4 demonstrates the SGP is permitted by IDEQ to increase production, emissions and environmental releases by 2.5 times, and has the design capacity to increase emissions by 3 times. The Preferred Alternative is only constrained by amendable IDEQ Minor Source Permit conditions. Forest Service should consider the probability of SGP expansion, and evaluate potential impacts at the permitted and design capacity of the facility.</p> <p>Alarming, Perpetua's 2021 Technical Feasibility Study disclosure to Investors indicates that substantial additional resources are available for exploitation, including expansion of the current Pits, and several other on-property and nearby reserves. Other mining companies are actively exploring similar ore bodies nearby that could utilize the SGP mineral processing excess capacity. The SDEIS does not address these nearby reserves, or the lack of constraints on the SGP to exploit the excess capacity,</p>	MIN	The Forest Service decision on the Project extends only to the alternative selected as described by its plan. Modifications to that plan would require permit modification through additional NEPA analysis.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	13	<p>Concurrent review of the serial Alternatives and support documents submitted to the Forest Service demonstrates that the Preferred Alternative is more than a refinement. As noted, it should be considered a new Alternative substituted for earlier DEIS Alternatives that were clearly insufficient.</p> <p>In comparing MoDPRO and MoDPRO2, mined material is decreased by 44 MT in the SDEIS Alternative. This is achieved by decreasing Development Rock (DR) by 61 MT and increasing Ore production by 17MT. This significantly changes the production, sources, concentrations, and toxicity of COCs from mining operations, and the disposition of COCs downstream in metallurgical processes and environmental media (Tables SD1b and SD1c).</p> <p>Most of the gold at SGP is refractory, i.e., chemically bound as small particles in arseno-pyrites. Massive amounts of these ores and Development Rock (DR) are mined to access this gold. The SDEIS Preferred Alternative mines nearly 400 million tons of material. Approximately 290 – 866 pounds of arsenic, 0.2 -</p>	MIN	The SDEIS analyzed the 2021 MMP as proposed by Perpetua to assess its environmental effects and to determine mitigation requirements. Geological, air quality, and water quality effects are described in Sections 4.2.2.2, 4.3.2.2, and 4.9.2.2, respectively.

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			<p>0.63 pounds of mercury, and 71 - 304 pounds of antimony will be disturbed for each ounce of gold produced (average - 95th%tile) (Table SD2).</p> <p>Overall, arsenic, mercury, and antimony mined are reduced by 15%, 25% and 40%, respectively, from totals estimated in the DEIS. The decreases are due to reduced DR from Hangar Flats Pit (HFP) offset by decreases in the DR/Ore strip ratio, and increasing Ore production in the West End Pit (WEP). About 17MT, or 18%, more Ore will be produced in the SDEIS Alternative than in the DEIS.</p> <p>COCs in ores decrease by 5% overall, with 20% and 224% increases in Yellow Pine Pit (YPP) and WEP Ore arsenic, respectively, and a 75% decrease in HFP Ore arsenic (Table SD1c).</p> <p>Estimated gold recovery increased by 5% from 4040 - 4238 koz. Antimony product increased from 16% from 98.9M to 115M pounds, despite the 40% decrease in antimony ore production. This accomplished by a 32% increase in recovered YPP antimony offsetting a 31% decrease in antimony recovered from HFP. Antimony ores will be mined in years 1-6, and 64% of product will be recovered in years 1-4. There is no appreciable antimony ore in the WEP, and no antimony ores will be produced after Year 7. Table SD2 shows gold production and Table SD5 shows antimony production for the DEIS and SDEIS.</p> <p>The purported remediation of historic wastes and tailings represents about 3% of total disturbed arsenic and 5% of disturbed mercury and antimony on site. All of the remediated arsenic, and >75% of remediated mercury and antimony will be redistributed on site. Undetermined percentages of mercury will leave the site as high-level waste, be disposed in DR or discharged to the TSF. About 22% of remediated antimony and 47% of ore antimony will be recovered as antimony concentrate for off-site sale. The remainder will be disposed on-site.</p> <p>Approximately 36% of disturbed antimony will be recovered and 64% wasted. About 16% of disturbed antimony will be disposed of in DR repositories in about equal amounts above and below ground. About 47% of disturbed antimony will be discharged to the TSF, largely as flotation tailings.</p> <p>Table SD3 shows SDEIS COC production and disposal.</p> <p>Regarding arsenic, an estimated 616,000 - 1,856,000 tons (average - 95th%tile) of arsenic is mined in the SDEIS configuration. Approximately 36% of site-wide arsenic (102,560 - 827,600 tons) is in Development Rock (DR) and historic overburden, and 64% (309,580 - 1,028,400 tons) in ore. Practically all of this arsenic will be disposed of on-site or released to the immediate environment. Three principal concerns are arsenic in air from mining dust, DR disposed in locations subject to groundwater and meteoric waters, and in ores disposed in the Tailings Storage Facility (TSF) after gold extraction. Over time, all three sources will release arsenic to the local environment (Table SD3).</p> <p>The SDEIS Preferred Alternative effected large changes at the WEP, the fugitive dust source most affecting the compliance point for arsenic exposures. COC production in WEP Ores increases by more than 3.2 times, and WEP DR COCs increase 14%. The WEP is expected to yield 175,320 - 597,200 tons of arsenic (average - 95th %tile), nearly doubling (1.97X) the estimate for the DEIS. The change in strip ratio increases weighted arsenic concentrations for mined material in the WEP by 1.5 times, from 569 - 2079 ppm to 887 - 3021ppm (average -95th%tile). Weighted concentrations remain similar to the DEIS, at 2240 - 6350 ppm in the YPP and 3436 - 10,170 ppm in the HFP (Tables SD1a, SD1b and SD6).</p>		
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	27	<p>The Arsenic Stability Investigation (2020) was the genesis of the HAC assurances provided in the SDEIS. The 2021 Feasibility Study, MoDPRO2 and SDEIS documents confuse the HAC acronym, with the Feasibility Study distinguishing Hot Acid Cure (HAC) and Hot Arsenic Cure as (HC), in contrast to the MoDPRO2 and SDEIS documents using only Hot Arsenic Cure (HAC). Regardless of the confusion, it is most important to note that the supposed process indicated in the MoDPRO2 refinements, and the four SDEIS sentences, are based on 3 tests of a single concentrate, representing “years 1-4 production consisting of 85% Yellow Pine and 15% Hangar Flats (Con 10).” The 2021 Feasibility Study also indicates the HAC system would be installed in Year 6 to be operational in Year 7, when arsenic levels in the mill feed are expected to increase. This corresponds with the completion of YPP and HFP ores and the introduction of WEP ores for which there were no reported HAC tests. This indicates the HAC will</p>	MIN	<p>The SDEIS applies the acronym for hot arsenic cure consistently with its use in the proposed mine plan description.</p> <p>As stated in the Project description, the hot arsenic cure treatment would be applied if soluble arsenic levels were higher than anticipated. Further, processing residuals containing arsenic would be placed in lined facilities that inhibit exposure of those materials to the environment.</p>

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			<p>not be installed in time to treat the majority of concentrates that were tested, and was never tested on the concentrates it is intended to treat.</p> <p>It is also important to note that the amorphous arsenic concern is with the final discharge in a six step detoxification flowchart. This occurs after the supposed HAC stabilization of thermally treated arsenic in the POX in an earlier step. The supposed stabilized CN/Detox slurry was then blended with concentrator tailings thickener underflow, and the blend was examined for arsenic stability. The blend ratio was 75.2% rougher tailings, 12.0% cleaner tailings, and 12.8% cyanide detox residue. As a result, it is unclear if the alleged stabilization in the final discharge is due to dilution from rougher and cleaner tailings, or from the alleged effectiveness of the HAC.</p> <p>Considering the complex arsenical geochemical differences in ores processed, and the shift in the 2021 MMP toward WEP Ores (that demonstrated significantly different arsenic recovery chemistry due to unique combinations of sulfide, oxidized and transitional ores), the Forest Service should have little confidence in Perpetua's ability to manage arsenic stability through the Life of the Mine (LOM).</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	35	<p>I. Failure to include necessary information on the tailings dam</p> <p>Another serious flaw in the technical analysis is the failure to include technical reference documents containing technical specifications and analysis of the tailings dam. The SDEIS refers to calculated factors of safety for both static and seismic considerations, and provides the updated seismic risk analysis necessary to make these calculations, but is still lacking the basic engineering specifications for the dam itself. For example, there is no discussion of the specifications for the fill for the different sections of the dam, and how the quality assurance for dam construction will be performed. Developing this information is standard procedure for an EIS, and since the fundamental dam design does not appear to have changed since at least 2017, there should have been more than sufficient time to develop this information.</p>	MIN	The IDWR is the proper authority in Idaho to regulate design, construction and operation of dams, including tailings disposal facilities. These requirements are cited in Section 3.2.3 of the EIS. Perpetua would need to comply with the IDWR regulations and requirements for its TSF. The monitoring requirements for the TSF would be established by the IDWR permitting process and the Forest Service recognizes the primacy of the IDWR in these matters, so has therefore not specified monitoring of the TSF in the EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	36	<p>J. Insufficient information about the autoclave</p> <p>The autoclave is a major component of the ore processing system. It operates at very high temperatures, and requires pure oxygen as a continual input. Any mercury in the ore processed in the autoclave will be volatilized into the autoclave exhaust, along with other potential contaminants, like arsenic. There is no detailed discussion of this system, its emission controls, or how its fuel and oxygen needs will be met. Because the mercury emission control systems must operate at a very high efficiency in order to conform to air quality requirements, monitoring their performance is very important. There is no discussion of the efficiency at which these control systems must operate, or how and when the mercury emission control systems will be monitored. Autoclave operation needs to be given more importance in the SDEIS, and a thorough discussion of the monitoring for air emissions from the autoclave, for mercury and any other potential contaminants, needs to be provided.</p>	MIN	The IDEQ is the proper authority in Idaho to regulate design, construction and operation of ore processing facilities and their environmental controls. These requirements are cited in Section 3.3.3 of the EIS. Perpetua would need to comply with the IDEQ regulations and requirements for its TSF. The monitoring requirements for the autoclave system would be established by the IDEQ permitting process and the Forest Service recognizes the primacy of the IDEQ in these matters, so has therefore not specified monitoring of the autoclave system in the EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	37	<p>K. Additional information needed about underground exploration</p> <p>A mile-long exploration tunnel is being authorized as part of the SDEIS. Underground exploration could potentially impact water quality and quantity. Drilling this exploration tunnel involves the surface disposal of rock with undefined geochemical properties, which could affect the type and level of contaminants that leach from this rock. The only information provided about this project is limited to 10 sentences. The lack of information, data, and analysis in the SDEIS is blatantly insufficient to authorize an activity of this scope.</p> <p>In addition to the development rock sources included in Table 3.9-2, advancement of the Scout Exploration Decline is expected to produce 25,000 tons of development rock, approximately 0.01 percent of the project's total mined material. The development rock from the Scout Exploration Decline would consist of the metasedimentary lithologies of the Stibnite roof pendant most prevalent in the West End area including quartzite, carbonate and schists with diorite and quartz monzonite intrusives (SRK 2021a). The development rock from the decline would be destined for the buttress and backfill locations along with the West End pit development rock. Hence, the characterizations of the open pit mined</p>	MIN	<p>SDEIS Section 3.9.4.2 describes the geochemical characteristics of proposed mined materials. These characteristics are associable with lithology as determined from testing drill hole samples.</p> <p>Because the Scout Decline was included in the proposed mine plan, it was analyzed in the EIS. Activity beyond the currently proposed decline installation and exploration drilling would require additional permitting through NEPA.</p>

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			<p>lithologies (Table 3.9-3) are applied to the limited amount of those lithologies present in the development rock from the Scout Exploration Decline. SDEIS 3-151. (Emphasis added.)</p> <p>Inferring characteristics from other locations and limited drill samples of the underground area is not sufficient analysis to permit underground mining. Stand alone exploration tunnels such as this have warranted their own NEPA analyses, including the decline for exploration for the Idaho Cobalt Project as well as the EIS for underground development of the Idaho Cobalt Project in which the Forest Service disclosed the geochemical properties of the underground material, discussed how this material was going to be segregated, handled, stored or backfilled, and included extensive information on water quality monitoring and water treatment related to underground mining.</p> <p>In 1994, the Boise National Forest permitted underground exploration of the Talache Level 900 adit through a Categorical Exclusion without taking a hard look at water treatment needs. The Forest Service did not require a bond for water treatment and has been entirely reliant on the absentee operator to deal with this discharge. Under a court ordered settlement, the operator obtained an NPDES permit for this discharge in 2009 but has been unable to effectively treat this water since, leading to frequent arsenic and iron discharge concentration violations. The operator was subsequently penalized \$2 million dollars for Clean Water Act violations and ordered to come into compliance. More recently, since the spring of 2020, arsenic concentrations within discharge from the 900 adit have significantly increased exceeding modern permitted arsenic standards by as much as 12,000%. Despite court order and recent letters from the Boise National Forest to the mining company, the site continues to violate the Clean Water Act to this day. The Payette National Forest needs to fully address all aspects of the underground exploration for the SGP.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	81	<p>2. Management plans for waste are poorly developed or completely undeveloped.</p> <p>Management plans for waste rock and tailings are poorly developed or completely undeveloped and will need more supporting information and detail in the Final SEIS. According to the Development Rock Management Plan (DRMP), active segregation of PAG/metal leaching material is not required, presumably because this material will be placed in the pit as backfill or in the TSF buttress. Such an assumption relies on the performance of engineered measures to limit the transport of mine-influenced leachate from the pits and the TSF buttress to downgradient water bodies. Cutoff values for rock with low ARD/ML potential (which could be used for facility construction materials) are defined in the DRMP as ≤ 500 mg/kg total arsenic and NPR values >1.5. However, a substantial number of HCT samples with NPR values >1.5 had elevated arsenic release rates, and samples with total arsenic values <500 mg/kg leached arsenic in excess of the federal drinking water standard of 10 mg/L. The adaptive management plan (AMP) or plans are not developed. These and other management plans should be developed and available for public review in a revised SDEIS.</p>	MIN	<p>The segregation of mined material for use is associated with the implementation of Project design features that control leaching and runoff from development rock. Project approval would require implementation of both measures.</p> <p>Few existing waters on site have arsenic concentrations below the federal drinking water standard. The cutoff values are applied to segregate materials with arsenic leaching potential beyond existing conditions.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	123	<p>E. Perpetual water treatment</p> <p>The assumption for the SDEIS appears to be that there will be no seepage, or de minimis seepage, from the tailings after initial seepage drain down. Until an actual post-closure seepage rate can be established, for both tailings drain down and buttress seepage, it is not reasonable to assume seepage from the waste rock in the buttress will be low enough so that long-term water treatment will not be required. Given the uncertainties in the water quality modeling, the SDEIS should assume that perpetual water treatment will be required, and calculate financial assurance to cover long-term water treatment costs, until post-closure monitoring proves otherwise.</p>	MIN	Comment noted. Statement of position.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	124	<p>1. The lack of technical information and supporting data on the design of the proposed construction approach of the tailings dam precludes review of its adequacy (citing David Chambers technical report)</p> <p>The design, construction, operation, and closure of a tailings facility, primarily the tailings dam itself, is the most important mine-related structure to be analyzed in an EIS because of the potential environmental, economic, and public safety liabilities associated with a structure that must function properly for millennia"... "Normally the references for an EIS would include a technical report from an engineering company experienced in the design, construction, operation, and closure of tailings dams.</p>	MIN	The IDWR is the proper authority in Idaho to regulate design, construction and operation of dams, including tailings disposal facilities. These requirements are cited in Section 3.2.3 of the EIS. Perpetua would need to comply with the IDWR regulations and requirements for its TSF. The monitoring requirements for the TSF would be established by the IDWR permitting process and the Forest Service recognizes the primacy of the IDWR in these matters, so has therefore not specified monitoring of the TSF in the EIS.

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			<p>The SDEIS references do not include such a report. The SDEIS refers to the Feasibility Study (M3 2021) for many of its technically related comments on the tailings storage facility, but the feasibility study itself does not contain technical information on the tailings dam. The figures presented in the SDEIS, Figures 2.4-10 and 2.4-11, suggest that at least some preliminary engineering work has been performed, but there is no reference given for the source of these figures, which by themselves are wholly inadequate to permit the construction of a tailings dam.</p> <p>Technical information and supporting data on the design and construction of the tailings dam are particularly important for review in the SDEIS because recent research examining all serious tailing failures since 1915 demonstrates that the rate of serious and very serious tailings dam failures has increased globally:</p> <p>[T]he 100 years of TSF failures shows an emerging and pronounced trend since 1960 toward a higher incidence of "Serious" and "Very Serious" failures. That is, the consequence of loss is becoming increasingly greater. 49% (33/67) of all recorded Serious and Very Serious failures from 1940-2010 have occurred since 1990. Of all 52 recorded incidents cited, 1990-2010, 17 (33%) were Serious failures, i.e. large enough to cause significant impacts or involved loss of life. Another 16 (31%), were Very Serious failures, i.e. catastrophic dam failures that released more than 1 million cubic meters of tailings and in some instances resulted in multiple loss of life. 63% of all incidents and failures since 1990 were Serious or Very Serious. The total costs for just 7 of these 16 large failures was \$3.8 billion, at an average cost of \$543 million per failure. These losses, according to dam committee reports and government accounts, are almost all the result of failure to follow accepted practice. 168</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	127	<p>4. Autoclave details are lacking</p> <p>As noted in Chambers (2022), the Forest Service needs to describe autoclave operation in more detail than it presently receives in the SDEIS, and a thorough discussion of the monitoring for air emissions from the autoclave, mercury and any other potential contaminants, needs to be provided. Mercury emission control systems must operate at a very high efficiency in order to conform to air quality requirements but there is no discussion of the efficiency at which these control systems must operate, or how and when they will be monitored.</p>	MIN	<p>Section 2.4.5.7 summarizes the autoclave system operations. Additional details can be located in the cited references regarding the Project design.</p> <p>SDEIS Section 4.3.2 describes the air emissions associated with the Project including the autoclave system and the predicted effects of those emissions on air quality and mercury deposition. The autoclave system emissions are subject to regulation by IDEQ under their air quality permit to construct.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	136	<p>9. The SDEIS should provide a detailed plan for temporary closure</p> <p>The SDEIS states that the Cyanidation Facility Permanent Closure Plan will provide details on how water will be managed during a temporary closure (RCP, p. 5-1), but that plan is not provided in the SDEIS. Without that plan, the SDEIS fails to provide adequate information to demonstrate that plans and mitigation measures are in place to prevent significant harm during a period of temporary closure.</p>	MIN	<p>The requirements for temporary closure or emergency shutdown are described in the Reclamation Closure Plan and the Water Management Plan and are summarized in the EIS. The incorporation of a plan fulfilling those requirements would be required as part of the Project decision.</p>
Idaho Regulatory Agencies	17718	153	<p>Current text: "Any contact water beneficially used in the ore processing or for dust control or stored for more than 24 hours then treated and discharged would require water rights permitting through the IDWR prior to use." For clarification, add: "...would require water rights permitting, including mitigation as outlined in the water right permit, through the IDWR prior to use"</p>	MIN	<p>Revision made per comment.</p>
Idaho Regulatory Agencies	17718	23	<p>"An autoclave system would be used to oxidize the sulfide minerals comprising the gold and silver concentrate to liberate the gold and silver for subsequent leaching." This is not correct, due to misuse of terms. Suggest: <i>An autoclave pressure-oxidation system would be used to oxidize the gold- and silver-bearing sulfide minerals. Once oxidized, the gold and silver can then be liberated from the sulfide minerals by subsequent cyanide leaching.</i></p>	MIN	<p>Revision made per comment.</p>
Idaho Regulatory Agencies	17718	24	<p>"operated consistent with the International Cyanide Management Code for the Manufacture, Transport, and" Question: Is Perpetua a signatory of the Cyanide Management Code or will they be operating consistently with it?</p>	MIN	<p>Perpetua or any other future operator would be operating consistently with the International Cyanide Management Code.</p>
Idaho Regulatory Agencies	17718	26	<p>Is this a carbon-in-pulp circuit as described above and shown on process diagrams? Where is the CIL circuit?</p>	MIN	<p>The mention of CIL has been replaced with CIP.</p>

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Idaho Regulatory Agencies	17718	27	What is the large white area in the figure? It's a cutaway projection drawn parallel to the proposed fish passage tunnel. Please provide a label or explanation on the figure or within the caption.	MIN	The white area has been identified in the figure legend.
Idaho Regulatory Agencies	17718	28	(3) Contact water..... and roads therein. Please note that all water will need to be tested before use.	MIN	Contact water collected within open pits may be used for dust control on roads with the pits. Dust control on roads outside the active mining area would be derived from water supply wells or non-contact water collected.
Idaho Regulatory Agencies	17718	29	The project's water treatment requirements, objectives and methods are described in detail in the Stibnite Gold Project Water Management Plan (Brown and Caldwell 2021b) and summarized in this section. Three water types would require treatment over the life of the SGP: contact water from mine facilities, which includes dewatering water (construction through closure); process water from the TSF (closure); and sanitary wastewater (construction through early closure). Please note that all water must be tested before use.	MIN	Contact water would be used for process make up water or dust control within active mining areas. Water use and dust control outside of the active mining areas would be derived from non-contact sources. Water testing requirements for produced and treated waters would be proscribed by the operating permits issued by IDEQ with additional environmental monitoring requirements for surface water and groundwater included in the Water Resources Monitoring Plan which would be required by the ROD.
Idaho Regulatory Agencies	17718	30	paragraph 1, line 4: During construction and early in operations, a modular, mobile, <u>two-stage iron coprecipitation system</u> would be utilized. But then, paragraph 2 line 1: This is met with a staged water treatment strategy. The construction time period is paired with 300 gpm of peak capacity from <u>package iron coprecipitation plants</u> . Comment: This is confusing. Is <u>system</u> and <u>plant</u> the same thing? If so, please use only one name. If not, please explain.	MIN	The term "plant" has been replaced with "system" for consistency.
Idaho Regulatory Agencies	17718	31	States: At closure, the closure water treatment plant would be constructed to accommodate treatment of water from the TSF which would include iron coprecipitation and the application of reverse osmosis membrane treatment. Comment: It was understood the existing water treatment plant in Meadow Creek would be moved to the TSF. This statement says a new plant will be constructed. Also, use of the term "closure" is being used for different meanings in different places of the document. Terms should be used consistently throughout.	MIN	The text has been revised to clarify that a new water treatment plant would be constructed at a new location prior to the closure period.
Idaho Regulatory Agencies	17718	32	Native earth materials would be required for some applications. Specific areas within the SGP that have large quantities of high quality native alluvial and glacial granular borrow materials for use include: • The alluvial and glacial soils in the Meadow Creek valley floor within the footprint of the TSF, TSF Buttress, Hangar Flats pit, and Yellow Pine pit; • Sand, gravel, and cobbles in the lower Blowout Creek alluvial fan; and • Glacial soils in the Fiddle Creek valley walls within the footprint of the Fiddle GMS. Comment: "Large quantities of high quality native alluvial and glacial materials" is a relative term. This statement is a bit misleading. There may be some areas with high-quality material; however, it will be used in the most critical areas for the hopes of re-vegetation success. It doesn't say anything about the poor to fair quality of GM material as noted on pages 11 and 12 of the Executive Summary. It also doesn't mention the deficit on GM material	MIN	The statement describes the plan to collect seed bank materials or high-quality materials for Project use. General soil conditions are described in Section 3.5 and limitations on the availability and quality of growth material are described in Section 4.5.2.2.
Idaho Regulatory Agencies	17718	33	1. The State of Idaho defines Reclamation as the process of restoring an area affected by a mining operation or cyanidation facility to its original or another beneficial use, considering previous uses, possible future uses, and surrounding topography. The objective is to re-establish a diverse, self-perpetuating plant community, and to minimize erosion, remove hazards, and maintain water quality (IDAPA 20.03.02.010.20). 2. The State of Idaho defines Closure as the decommissioning and reclamation of the cyanidation facilities and all materials treated with cyanide (IDAPA20.03.02.071, .080, .091, .111, .112, .120., .140., and .150). Please see additions in Glossary. It appears that as written, closure and reclamation are used interchangeably. 3. The general concept of concurrent reclamation is to reclaim areas no longer needed for continued mine operations. Please consider how to clarify. For each of the following primary areas that would undergo concurrent reclamation or simply reclamation, the topic sentence to each discussed feature should state when reclamation will occur. Also, please note that the referenced Reclamation and Closure Plan (Tetra Tech, 2021a) has not been submitted to IDL for	MIN	A definition of concurrent reclamation has been added to Section 2.4.7.1 to clarify its use in the description.

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			review as part of the mine plan reclamation application, and may not meet all requirements of IDAPA 20.03.02		
Idaho Regulatory Agencies	17718	35	"ASAOC activities as described under the No Action Alternative would occur concurrent with 2021 MMP activities." This sentence placement and usage is confusing. Please spell out ASAOC, then explain why this is being discussed here, and then how can ASAOC activities occur concurrent with 2021 MMP activities? Haven't ASAOC activities already started? The 2021 Modified Plan activities have not started. Please note that MMP is not defined in Abbreviations.	MIN	The sentence has been removed and acronym use has been checked.
Idaho Regulatory Agencies	17718	36	As written: "minimum of 2 feet of a combination of 1.5 feet of backfill and 0.5 feet growth media..." Which means that it is a mixture of 1.5 feet and 0.5 feet. Is this what is meant? Or are you wanting to state that, a minimum of 1.5 feet of backfill (consisting of what?) and then 0.5 feet of growth medium on top of the placed backfill? But Tetra Tech, 2021a details the thicknesses of Growth Medium and Seed Bank Material to be used at the various sites. These are not consistent. Please make consistent and clarify.	MIN	The text has been revised to clarify that the minimum 2 feet consists of a minimum 1.5 feet of backfill and minimum 0.5 feet of growth media.
Idaho Regulatory Agencies	17718	37	First sentence: Perpetua would decommission and close underground facilities and underground support facilities, <u>including</u> the portals of the East Fork SFSR tunnel and Scout decline. Comment: "including" means there are others? Please clarify. While this section is about "decommission and close" of the Scout decline and fishway tunnel -- where will the mined material from the fishway tunnel be placed during construction? Is it processed or is it stockpiled? IDL has a call into Perpetua for this answer (12/30/2022). Please note: If the material is processed through the mill, then the fishway tunnel will need to be permitted under IDAPA 20.03.02.070.	MIN	The two portals mentioned represent the underground facilities. In addition, there would be support facilities located near the portals that would also be closed. Mined material from the tunnel would be commingled with development rock from the Yellow Pine Pit and managed per the Development Rock Management Plan, i.e., utilized as construction material or placed in the TSF Embankment/Buttress.
Idaho Regulatory Agencies	17718	38	A sinuous channel would be constructed through the backfilled area for the reconstructed East Fork SFSR with an average valley gradient approximating the historical, pre-disturbance river gradient (Tetra Tech 2021b). Note: reference could not be located on Payette National Forest website. Also please state what the gradient is here.	MIN	Comment noted. The precise historical gradient is not known because it was removed by the pit excavation. The typical gradient in that area is approximately 4%.
Idaho Regulatory Agencies	17718	39	Need a topic sentence. When would reclamation begin and end? Would this be concurrent reclamation, or final reclamation? Here's a potential example to help answer: <i>Concurrent Reclamation of the Yellow Pine Pit would occur during Mine Years X and Y. Concurrent Reclamation would consist of completely (?) backfilling the pit using the following material and their percentages of the total fill: West End pit Development Rock (90%); Hangars Flat pit Development Rock (5 percent); and Yellow Pine pit Development Rock (5 percent).</i> But not all of the pit is reclaimed, correct? What portions of the highwalls would remain above backfill? AND - are you stating that the highwalls would not be reclaimed? But, benches should be reclaimed by ripping and placing Growth Medium, then seeded. Please include that, after the Yellow Pine pit is partially backfilled to, at minimum, the valley floor level, it will still have highwalls ~500 to ~ 600 feet high.	MIN	The text has been revised to clarify that highwalls would be present above the backfill.
Idaho Regulatory Agencies	17718	40	Need a topic sentence. See comment for Yellow Pine Pit. As written, the West End Pit would not be reclaimed. That should be included in the topic sentence. Here's an example: <i>The West End pit area includes the West End pit, the Midnight pit, the sidehill pit, and the Development Rock from legacy mining activity. Reclamation would occur (when?). The West End pit would not be reclaimed. Instead, a pit lake about 400 feet deep would be allowed to form in the main portion (what is the main portion? 80% of the pit outline to valley level?) by routing West End Creek into the pit via a rock-filled chute on the west or east or north or south (?) highwall. The highwall, which would be about 900 feet above the pit lake surface.</i> Then, discuss detail, plus what reclamation would occur on the highwall = on the benches.	MIN	The text has been revised to clarify that the West End pit would not be reclaimed but would become a pit lake post-closure.
Idaho Regulatory Agencies	17718	41	This paragraph states that there is modeling uncertainty regarding the West End Pit Lake fill rate. "If water levels approach the threshold, either or both surface water diversion and water treatment could be implemented to prevent the lake from spilling. If needed, a temporary treatment unit would be mobilized to the site to treat and discharge the pit lake water until the lake level falls below the threshold discharge level, thus preventing untreated discharge in potential subsequent wet weather years and enabling gradual and predictable water treatment rather than treatment at higher but variable and uncertain peak	MIN	Sections 4.8.2.4 and 4.9.2.4 describe uncertainty regarding water quantity model predictions and Sections 4.8.3 and 4.9.3 describe mitigation measures to address model uncertainty. At present, overflow from the West End pit lake is not anticipated. If data collection and model updates do not resolve this prediction uncertainty or if overflow is subsequently predicted, the Reclamation Closure Plan would be modified to incorporate monitoring and management of pit lake outflow prior to Project closure.

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			spring runoff rates". Comment: How will this potential problem be monitored? Where would the pit lake diversion water be discharged, either untreated or treated? Where would this temporary treatment unit reside prior to mobilization? How long would it take to mobilize the equipment? What kind of treatment unit is this?		
Idaho Regulatory Agencies	17718	42	Topic sentence states that reclamation will be completed 9 years after mining. When would reclamation begin? Example topic sentences: <i>Concurrent Reclamation on portions of the Tailings Storage Facility (TSF) would begin 3 to 5 years after end of tailings deposition. Additional Reclamation would begin on the Tailings Storage Facility (TSF), its Buttress, and the water treatment plant about 9 years.....</i>	MIN	The text has been revised to clarify reclamation timing.
Idaho Regulatory Agencies	17718	43	These time frames should be stated as crude estimates, especially for consolidation of tailings "beginning within 3-5 years from the end of deposition." As written, it will be 3-5 years. This is highly optimistic.	MIN	The text has been revised to indicate that timeframes are predicted timeframes.
Idaho Regulatory Agencies	17718	44	Topic sentence needed. When does reclamation begin? What all would be reclaimed? What features are not reclaimed? Please include that the Hangar Flats pit will have a highwall about 700 feet high. The highwall itself will not be reclaimed; however, the benches will be ripped as needed, covered with adequate Growth Medium, seeded, etc.	MIN	The text has been revised to clarify reclamation timing and that highwalls would be present above the backfill.
Idaho Regulatory Agencies	17718	45	This section is out of place. It is important, and relates to all of the reclamation because Perpetua's estimates predict a deficit of 800,000 CY. Each of the previous subheadings all use Growth Medium. Therefore, consider moving up, maybe to end of 2.4.7.1 - Overview? First sentence: need topic sentence for this section. Then, discuss and summarize what is presented in Tetra Tech, 2021a. Please note that this is NOT how Tetra Tech, 2021a represents the data. They contend that their proposed thickness are <u>consistent</u> with the thicknesses of Growth Medium <u>prescribed</u> at mines in Montana. Then, another paragraph is needed to summarize the Growth Medium deficit.	MIN	Sections 3.5 and 4.5.2.2 provide a more detailed description of the proposed reclamation, criteria, and monitoring.
Idaho Regulatory Agencies	17718	46	"Except for the Hangar Flats pit highwall above the valley bottom, the West End pit, and a portion of the Yellow Pine pit highwall, Perpetua would contour and grade disturbed areas to blend into the surrounding topography and terrain. Compacted areas such as roads, ore stockpile areas, parking lots, fuel storage areas, and building sites would be prepared prior to placement of growth media and revegetation. Haul routes and access roads would be re-contoured to establish natural drainage patterns." However, this is in contrast to what is stated on page 4-78 of this report: "The 2021 MMP consists of a 3-year construction period, approximately 12-year production period, 5-year closure period, and 5-year plus post-closure period. All the SGP-related disturbance at the mine site would be subject to reclamation activities, with the exception of approximately 278 acres associated with the Hangar Flats high walls, the West End pit lake and high walls, Yellow Pine pit high walls, the Stibnite Lake feature, plus the Midnight, West End, and Plant Site ponds. These areas would remain a permanent commitment of soil resources (a large portion of which would occur on private patented mining claims). For all other areas in the activity area, disturbance would be subject to the reclamation activities detailed in the Reclamation and Closure Plan (Tetra Tech 2019a, 2021a)." And please note that just because this occurs on private land does not mean that this is somehow acceptable. Disturbance on private land is under the purview of the Idaho Department of Lands, and anything not reclaimed would have to be agreed to before mining can begin.	MIN	The text has been revised per the comment with the Stibnite Lake Feature and the three ponds noted in Section 2.4.7.12. "Except for the Hangar Flats pit highwall above the valley bottom, the West End pit, a portion of the Yellow Pine pit highwall, the Stibnite Lake feature, and the Midnight, West End, and Plant site ponds. Perpetua would ..." As indicated in the comment, reclamation plans are subject to approval by IDL.
Idaho Regulatory Agencies	17718	47	"Post Closure Water Treatment." Closure refers specifically to the decommissioning and reclamation of the cyanidation facilities and all materials treated with cyanide (IDAPA20.03.02.071, .080, .091, .111, .112, .120., .140., and .150). Then, the topic sentence of the first paragraph states that treatment is during closure and reclamation..... Please consider a new heading that reflects what this section covers: <i>Tailings Storage Facility and West End Pit Water Treatment</i>	MIN	The section header is appropriate with the descriptions of the TSF and West End pit water management stated in the section text.
Idaho Regulatory Agencies	17718	48	Corrections needed as follows. <i>Evaluation of water treatment for the Tailings Storage Facility (TSF) is ongoing, and will be documented in the Closure of Cyanidation Facilities and Reclamation Plan. Water sources that will require treatment during Closure and Reclamation include the TSF Facility runoff, TSF consolidation water, TSF Buttress toe seepage, and, potentially, West End pit lake water.</i> [Buttress is capitalized, so it is assumed this means it is formal and has been defined in the Glossary. Buttress is	MIN	Sections 4.8.2.4 and 4.9.2.4 describe uncertainty regarding water quantity model predictions and Sections 4.8.3 and 4.9.3 describe mitigation measures to address model uncertainty. At present, overflow from the West End pit lake is not anticipated. If data collection and model updates do not resolve this prediction uncertainty or if overflow is subsequently predicted, the

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			missing. Suggested definition is included in Glossary]. Paragraph 3: How will West End pit lake be accessed by personnel, and who will continue to monitor water levels and for how long? Into perpetuity?		Reclamation Closure Plan would be modified to incorporate monitoring and management of pit lake outflow prior to Project closure.
Idaho Regulatory Agencies	17718	49	This needs clarification. AADT is only used once. Please spell it out. Here's a suggested rewrite: <i>Most Closure and Reclamation traffic would occur during May through November, as weather permits. Annual average daily traffic counts are estimated at 27 total vehicles (15 heavy vehicles and 12 light vehicles).</i> Is there definitions somewhere that differentiates heavy from light? If so, please include here, or in Glossary.	MIN	The acronym AADT is used 11 times throughout SDEIS Chapter 2 and is spelled out after its initial used. Definitions of heavy vehicle and light vehicle have been added to the glossary in Chapter 7.
Idaho Regulatory Agencies	17718	50	Entire section needs work. It needs an intro paragraph on monitoring, or is it monitoring and mitigation?	MIN	The section refers to monitoring as described in the section text, no revisions made.
Idaho Regulatory Agencies	17718	51	Edit first and second sentences for clarity and spell out EMMP, as this is not a common initialism.	MIN	Revision not accepted. Text is appropriate as written. EMMP was spelled out previously in the Chapter.
Idaho Regulatory Agencies	17718	52	The topic sentence conflicts with Table 2.4-12.	MIN	Text revised to "The SGP must comply with all laws and regulations that apply to the proposed activities with the most prominent requirements relating to the affects analysis appearing in Chapter 4 summarized in Table 2.4-12."
Idaho Regulatory Agencies	17718	53	Where did these percentages come from? They are used elsewhere in the text, but no reference is given. Please note that no regulatory agency has approved these estimates. Also it should be stated as " <i>concurrent with mining....</i> " Also, it would be accomplished during Closure and Reclamation.	MIN	These percentages come from the Reclamation Closure Plan. Text revised to clarify that the percent of concurrent reclamation is proposed.
Idaho Regulatory Agencies	17718	54	The heading is "Stibnite Gold Mitigation Plan," but topic sentence of first paragraph is about the basis of proposed Environmental Design Features (please spell out, especially when first used in a section). 1. There is more than one Mitigation Plan, correct? If so, then heading should be "Plans". 2. topic sentence should introduce the concept of environmental mitigation . As written, this section is about proposed EDFs.	MIN	The sub-components of the Stibnite Gold Mitigation Plan are described within the Section 2.4.9.2 text.
Idaho Regulatory Agencies	17718	58	This paragraph is difficult to understand, please consider a rewrite. [For reference section: Hall, B., 2014. Cut-off Grades and Optimizing the Strategic Mine Plan. Australasian Institute of Mining and Metallurgy, Print Book, English, 300 pages.]	MIN	Comment noted, no revisions made.
Idaho Regulatory Agencies	17718	59	This paragraph is difficult to understand; please consider a rewrite.	MIN	Comment noted, no revisions made.
Idaho Regulatory Agencies	17718	62	This paragraph is difficult to understand, please consider a rewrite.	MIN	Comment noted, no revisions made.
Idaho Regulatory Agencies	17718	64	Should be <i>Off-site Gold Processing Alternative</i> . However, later, the statement is made that there is no mill in the western US that can economically process the Project ore. This is correct, because there is no mill to deal with the Antimony. There exists a number of mills that can process refractory gold in northern Nevada, which is what Barrick looked into many years ago. Therefore, the topic sentence should be: <i>The off-site ore processing alternative was examined and eliminated.</i>	MIN	Revision made per comment.
Idaho Regulatory Agencies	17718	65	Should be <i>Filtered and Paste Tailings Alternative</i> - because the term Dry stack tailings is a misnomer and should not be used : they typically contain moisture contents of 20% or more. They are not dry.	MIN	Text revised to clarify that the term Dry Stack tailings is used synonymously with filtered tailings.
Idaho Regulatory Agencies	17718	154	Current text: "Runoff from haul roads and access roads outside of pits... the protection of surface water quality". If storm water control measures includes storage of water in excess of 24 hours a water right would be required, including mitigation.	MIN	The water right requirement associated with storage of water for more than 24 hours was incorporated in a previous section. This is also covered in Section 3.8.4.2.
Idaho Regulatory Agencies	17718	155	Current text: "An additional total of 0.28 cfs of groundwater rights needed..." Our records indicate that Perpetua applied for four ground water rights totaling 0.34 cfs. Explain the discrepancy.	MIN	Revision made per comment.
Idaho Regulatory Agencies	17718	160	Provide a brief narrative why/how the 24-hour Probable Maximum Precipitation was selected/determined. Was snowpack considered?	MIN	Snowmelt was considered in developing the Probable Maximum Precipitation (PMP) event. However, the greatest PMP was determined to occur during non-snowmelt months based on use of standard method HMR-57.

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Idaho Regulatory Agencies	17718	163	Current text: "...payable to IDWR to ensure the TSF is placed in a safe and maintenance-free condition upon decommissioning." Add: or if abandoned by the owner (see comment below)	MIN	Revision made per comment.
Idaho Regulatory Agencies	17718	164	Current text: IDWR also would require a bond so that the TSF can be placed in a safe maintenance-free condition if abandoned by the owner. Change to something like: IDWR also would require a bond so that the TSF is placed in a safe maintenance-free condition upon decommissioning or if abandoned by the owner.	MIN	Revision made per comment.
Idaho Regulatory Agencies	17718	166	Current text: "Perpetua would restore appropriately designed meandering stream channels (Meadow Creek and tributaries) within a stream and floodplain corridor across the top of the lined TSF surface (Rio Applied Science and Engineering [Rio ASE] 2021). Pools and riffles would be constructed within the channel. As previously commented (previous DEIS versions/technical reports and to the Project Proponent directly), IDWR is not categorically opposed to this concept, but clarified that routing a perennial stream over a TSF is unusual. Ultimately the TSF needs to be in a safe maintenance-free condition in the long term.	MIN	Comment noted.
Idaho Regulatory Agencies	17718	167	General comment regarding the TSF: IDWR will conduct a detailed review of the TSF once an application is submitted. Some of the SDEIS includes some general aspects of the design, but not in sufficient detail to provide technical comments.	MIN	Comment noted.
Idaho Regulatory Agencies	17718	161	Add a paragraph how the PMP/PMF was considered in terms of designing the TSF to contain the volume of water from the storm event including freeboard.	MIN	The incorporation of the PMP into the TSF capacity was described in SDEIS Section 2.4.5.8.
Idaho Regulatory Agencies	17718	162	Based on information provided on page 2-62 the diversions around the TSF will be designed to convey flows from a minimum 100-year storm event with 1 foot of freeboard. Is the assumption that during the PMP/PMF event these diversions fail and do not diminish flows on top of the TSF? Include a brief discussion to clarify.	MIN	The description of the Meadow Creek diversion channel around the TSF and TSF Buttress indicates its design size but makes no assumptions regarding failures during PMP/PMF events. As a description of the Project as proposed, no clarification has been added.
Idaho Regulatory Agencies	17718	165	IDWR also would require a bond so that the TSF can be placed in a safe maintenance-free condition if abandoned by the owner.	MIN	Comment noted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	18649	4	<p>I have personally managed the evolution of the original proposed action to the Preferred Alternative now appearing in the SDEIS for public review. The resources and expertise dedicated by Perpetua to making the 2021 MMP the quality action alternative speaks for itself but does not, alone, provide the full picture of Perpetua's dedication to make the Stibnite Gold Project the best it can be economically and environmentally.</p> <p>To be clear, the SGP is a mining project lawfully anchored in the 1872 Mining Law. Just as the Clean Air Act, Clean Water Act and Endangered Species Act are longstanding expressions of legal authority set forth by Congress, so too is the 1872 Mining Law. But the Stibnite Gold Project is not proposed to be constructed in a National Park or in the heart of Idaho wilderness. Rather, it is proposed to operate squarely in a contaminated, legacy area of Idaho left abandoned and neglected by the Federal government.</p> <p>The Project designers inherited an environmental underpinning to build an operating mine that at best can be described as dreadful. The SDEIS at E-5 so concedes the challenge: "Currently, there are ongoing releases of hazardous substances, pollutants, and contaminants to surface water and groundwater at the site including elevated concentrations of antimony, arsenic, copper, lead, mercury, and cyanide. Most notable are elevated concentrations of arsenic and antimony." From the start, the Project had to address these legacy conditions with the full understanding that the magnitude of legal permitting and subsequent compliance would have to be accounted for in the development of the NEPA proposed action.</p> <p>As the data was collected and analyzed, no one on my Permitting Team ever deferred diligently working through what we were understanding from the modeling and then translating the results into a better Project design. The comments we reviewed from the DEIS only spurred us to double down on our efforts. Perpetua will be separately providing comments on the particulars of the environmental improvements and Project efficiencies in the Preferred Alternative, but the Company was relentless in</p>	MIN	Comment noted.

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			searching for and crafting solutions to the environmental problems we encountered beginning from the original Plan of Restoration and Operation to the 2021 MMP.		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	43	Existing Versus New Stream Crossings from Mine Access Roads Throughout the DSEIS, the number of estimated stream crossings for mine access roads are compared between the alternatives, but the context of these stream crossings (i.e., existing versus new) is not generally included in these analyses. For example, new stream crossings where a road did not previously exist has a different impact than reconstruction of current road stream crossings to higher environmental protection standards which may result in an improvement of aquatic conditions/upstream access. Where appropriate to meaningfully distinguish impacts between alternatives, in addition to estimated number of stream crossings, EPA recommends the FEIS evaluates the potential impacts from stream crossings that considers potential different responses associated with existing stream crossings and new stream crossings.	MIN	Effects associated with road crossings (e.g., runoff, sedimentation, spills) would occur as a result of Project road usage regardless of whether these crossings were existing or new because the nature and extent of new traffic. Further, many existing crossings would be upgraded to accommodate that traffic. Therefore, the effects analysis does not differentiate between new and existing crossings because of the effects associated with increased usage.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	66	Ore Processing <ul style="list-style-type: none"> The DSEIS indicates grinding will occur within an enclosed building to reduce noise levels and facilitate maintenance of the milling equipment. EPA recommends the FEIS confirm if the ore processing building will be enclosed, and if not, correct its description throughout the FEIS. EPA notes a similar statement regarding an enclosed ore processing facility building is included in the Environmental Design Features on page 2-112. The DSEIS indicates the limestone crusher, screens, conveyors, and feed bins would not be enclosed. Dust would be controlled in a similar manner to the ore crushing and conveying process using water sprays and/or bag house dust collectors. EPA recommends FEIS confirm if the limestone processing would be controlled like the ore processing operation, and if so, correct its description throughout the FEIS. 	MIN	The Project description regarding enclosures of the ore processing activities is based on the Project proposal. The Final EIS continues to specify the enclosed or unenclosed location of these activities.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	67	Tailings Storage Facility <ul style="list-style-type: none"> Regarding “[t]he TSF would be designed and operated as a closed-circuit, zero-discharge facility meaning no tailings water would be discharged to the surface water or groundwater except in compliance with applicable permits and regulations” and “[w]ater from the TSF and TSF Buttress underdrains may be discharged from two outfalls shown on Figure 2.4-15,…” <p>The first sentence implies that there will be no discharge from the TSF. Based on the other two sentences, this appears to be accurate for operational conditions, but not for closure. Therefore, for the FEIS, EPA recommends revising the first sentence as follows: “… no tailings water would be discharged during mining operations,…”</p>	MIN	Revision made per comment.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	34	All synthetic liners or lining material should be 80 ml HDPE and not LDPE. LDPE will not withstand the weight and usage common at a mining operation. 80 ml HDPE liner should be seam heat welded. Even though the Idaho regulations for cyanide processing do not require this, please raise the bar for mining practices in the US by foreign companies.	MIN	The Project proposal specifies the use of HDPE for liners except for the TSF liner which uses 60-mil linear low-density polyethylene over a geosynthetic clay liner per IDEQ requirements.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	50	Process flow diagram(s). Please show and label the cyanidation component of the ore processing.	MIN	Cyanide would be present in the ore processing where process water would be in use, i.e., all locations from the SAG Mill through the remainder of the process.
Michael Spicher (Engineering)	19040	3	The updated mine plan in the 2020 feasibility study, on which the 2021 MMP is based, included extensive modifications to the mine schedule, dump and open pit configurations which offer a number of environmental and operational advantages. The USFS has appropriately identified that the stockpiling strategy would "increase utilization of the mineral resource" (SDEIS 4.2.2.2). The stockpiling strategy	MIN	Comment noted. Statement of Position.

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Manager, Integra Delamar)			also has the effect of keeping lowgrade mineralized material out of the waste rock dumps resulting in reduced metals leaching potential and an overall reduction of waste rock volume, as lower grade material mined early in the project is ultimately processed rather than wasted. This, coupled with the plan to reduce the size of the Hangar Flats open pit, allowed for elimination of the Fiddle waste rock storage facility. The reconfiguration of the TSF buttress waste rock dump, in which waste rock is placed along the northeast side of the valley, allows for a longer length of stream habitat below the buttress relative to prior configurations. These key project modifications allowed the USFS and Perpetua to address stakeholder comments regarding project footprint while improving project economics and operational feasibility through increased gold production and reduced water management requirements.		
Michael Spicher (Engineering Manager, Integra Delamar)	19040	4	The current mineral process circuit flowsheet and operating conditions, have been tailored to reduce potential environmental project impacts while achieving high gold and antimony recoveries, as detailed extensively in the feasibility study metallurgical testwork and summarized in the SDEIS. The addition of limestone to the process circuit has three advantages; first, it achieves desired pH and rheology conditions for gold deportment; second, it avoids the need to truck lime to site decreasing haulage traffic; and third, it reduces the formation of soluble arsenic compounds through formation of crystalline compounds. Furthermore, pH-temperature stability testing conducted for the feasibility study showed that POX discharge neutralization carried out in two stages better preserves the stability of the ferric arsenate precipitate. This recognition spurred Perpetua to propose the hot arsenic cure process if needed. Arsenic stability was not identified as an issue in the DEIS, or by project opponents; the company undertook the additional metallurgical testing on its own volition in recognition that it could be problematic environmentally. Overall, the extensive testing conducted by Perpetua to improve the overall geochemical stability of the tailings in the TSF, and use of locally sourced limestone, is representative of the company's commitment to environmentally responsible mining practices and common sense design principals. The Supplemental DEIS should appropriately recognize and acknowledge the overall geochemical and traffic-related benefits of the updated mineral process flowsheet.	MIN	Comment noted. Statement of Position.
Joseph Pietri	19062	19	TSF- In attending the USFS/Perpetua presentation at the Best Western McCall this past Fall I was astonished how many questions Perpetua was unable to answer. Most disturbing was the question of thickness of membrane for the Tailings pit. The person that to me would be Knowledgeable could not answer that simple question nor could anyone else. Is a 60 Mil membrane is that sufficient	MIN	The Project proposal specifies the use of HDPE for liners except for the TSF liner which uses 60-mil linear low-density polyethylene over a geosynthetic clay liner per IDEQ requirements.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	67	*** <i>The East Fork South Fork Salmon River Tunnel would only be utilized as a contingency to manage high flows upon completion of the restoration of the East Fork SFSR across the backfill in the Yellow Pine Pit.</i> " The annotation on the EFSFSR Tunnel is incorrect. While true for a specific period of time during reclamation of the YPP, it is not an applicable notation to this figure which includes the mine site layout. Please remove.	MIN	The annotation has been removed from the legend.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	29	" <i>Under the 2021 MMP there would be approximately 278 acres of unreclaimed pits/highwalls.</i> " This total appears to include 13 acres of project -related surface disturbance reclaimed as ponds (Stibnite Lake and Midnight Pond). Please revise or clarify, if applicable.	MIN	The acreage does include those areas that have not been reclaimed but remain as new features post-closure.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	31	" <i>Dewatering of the pits would lower groundwater levels in the alluvial and bedrock formations during the mining and post closure periods and would reduce flows in local surface water streams that receive groundwater discharge.</i> " There will be no post-closure pit dewatering; therefore, groundwater levels in proximity to the pits will recover during closure. Please replace " mining and post closure periods " with " mining period "	MIN	No revision made. The dewatering of pits would reduce water levels into the post closure period until water levels recover.
Ruth Lewinski	19378	10	4.0 Further Exploration	MIN	Exploration activities are a component of the 2021 MMP for its proposed duration.

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			Several sites at the Stibnite Mine are discussed to be available for further exploration. While the initial project and permitting process is published in the context of a 40-year operation, the proposal for further exploration does not have a clear outline. This discussion is vague and communication about the potential time [auto-markup:Request for Comment Extension]extension[auto-markup end] of mining in the area is not appropriately disclosed.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	164	<p>5. Arsenic in ore</p> <p>The largest component of total on-site arsenic (64%) is in ore. Under the SDEIS preferred alternative, a projected 112 million tons of pit ore will be produced, containing 396,246 to 1,028,406 tons of arsenic (average - 95th percentile). Ores will be crushed and ground and subjected to flotation concentration. About 85% of arsenic in ore will go to concentrates and 15% to tailings. Neither the DEIS nor SDEIS addresses the arsenic content, geochemistry or chemical constituency in relation to these proposed metallurgic processes or waste characteristics. This omission is of considerable concern, as arsenic chemistry and toxicity are complex and species (valence) dependent. Solubility, bioavailability and toxicity are highly variable among mineral processing applications depending on other metal concentrations, pH, and oxidation-reduction status, among other factors. There are additional issues regarding the soluble arsenic in the TSF discharge, uncertainties and lack of reliability in arsenic stabilization, reliance on inappropriate leachate tests, and TSF leak detection and treatment (described further in von Lindern/TIFO, 2023). The Forest Service should not accept Perpetua's assertions that arsenic in the TSF discharges can be stabilized, and consider an Alternative that does not require on-site treatment and disposal of thermally treated arsenic.</p> <p>In summary, the SDEIS does not do a sufficient job of characterizing how toxics such as arsenic will be managed under the preferred alternative and mitigating for the expected effects. We urge the Forest Service to rectify these issues in a revised SDEIS.</p>	MIN	Arsenic in ore would be managed by placement in the lined TSF facility. The environmental effects of this placement are described in SDEIS Section 4.9.2.2.
David Chambers	17634-A	3	The second serious flaw in the technical analysis is failure to include technical reference documents containing preliminary technical specifications and analysis of the tailings dam. The SDEIS refers to calculated factors of safety for both static and seismic considerations, provides the updated seismic risk analysis necessary to make these calculations, but is still lacking the basic engineering specifications for the dam itself. For example, there is no discussion of the fundamental type of dam construction (downstream or centerline?), the specifications for the fill for the different sections of the dam, and how the quality assurance for dam construction will be performed. Developing this information is standard procedure for an EIS, and since the fundamental dam design does not appear to have changed since at least 2017, there should have been more than sufficient time to develop this information.	MIN	The IDWR is the proper authority in Idaho to regulate design, construction and operation of dams, including tailings disposal facilities. These requirements are cited in Section 3.2.3 of the EIS. Perpetua would need to comply with the IDWR regulations and requirements for its TSF. The monitoring requirements for the TSF would be established by the IDWR permitting process and the Forest Service recognizes the primacy of the IDWR in these matters, so therefore has not specified monitoring of the TSF in the EIS. USFS monitoring of the TSF structure would be limited to reclamation.
David Chambers	17634-A	6	<p>2.4.5.8 Tailings Storage Facility</p> <p>The design, construction, operation, and closure of a tailings facility, primarily the tailings dam itself, is the most important mine-related structure to be analyzed in an EIS because of the potential environmental, economic, and public safety liabilities associated with a structure that must function properly for millennia. In a worst-case accident, tailings would be released causing environmental harm, the loss of property, and the loss of life.</p> <p>Normally the references for an EIS would include a technical report from an engineering company experienced in the design, construction, operation, and closure of tailings dams. The SDEIS references do not include such a report. The SDEIS refers to the Feasibility Study (M3 2021) for many of its technically related comments on the tailings storage facility, but the feasibility study1 itself does not contain technical information on the tailings dam.</p> <p>The figures presented in the SDEIS, Figures 2.4-10 and 2.4-11, suggest that at least some preliminary engineering work has been performed, but there is no reference given for the source of these figures, which by themselves are wholly inadequate to permit the construction of a tailings dam. These figures also appear in the Feasibility Study (M3 2021), which contains a figure not included in the SDEIS, Figure 18-11 (M3 2021). Figure 18-11 is a cross section of the dam showing Zone B Fill and Zone C</p>	MIN	<p>The IDWR is the proper authority in Idaho to regulate design, construction and operation of dams, including tailings disposal facilities. These requirements are cited in Section 3.2.3 of the EIS. Perpetua would need to comply with the IDWR regulations and requirements for its TSF. The monitoring requirements for the TSF would be established by the IDWR permitting process and the Forest Service recognizes the primacy of the IDWR in these matters, so therefore has not specified monitoring of the TSF in the EIS.</p> <p>As depicted in SDEIS Figure 2.4-10, TSF embankment construction would be classified as downstream construction.</p>

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			<p>Fill, which constitute the major structural zones of the dam – but there is no explanation of how these zones will be constructed.</p> <p>We do not know whether this dam would be classified as a downstream or centerline construction type. We do not know what type of stability analysis has been done on the dam, if any. Golder (2021) provides some of the information needed to perform this stability analysis, but does not discuss the stability analysis itself. This is critically important information, and should be included in the SEIS.</p>		
Samuel Penney (Chairman)	19396	53	<p>2.7 Agency Preferred Alternative</p> <p>Where is the engineering design plan for the tailings storage facility? There should be more details disclosed for the design and building of the large buttress and storage facility in upper Meadow Creek.</p>	MIN	The IDWR is the proper authority in Idaho to regulate design, construction and operation of dams, including tailings disposal facilities. These requirements are cited in Section 3.2.3 of the EIS. Perpetua would need to comply with the IDWR regulations and requirements for its TSF. The monitoring requirements for the TSF would be established by the IDWR permitting process and the Forest Service recognizes the primacy of the IDWR in these matters, so therefore has not specified monitoring of the TSF in the EIS.
Samuel Penney (Chairman)	19396	56	<p>Inadequate Description and Environmental Analysis of Mining Process, Storage, Closure, and Reclamation</p> <p>According to SDEIS Section 2.4.5.7 Ore Processing, “[t]he gold and silver concentrations of the tailings would be regularly monitored and, if the concentrations are high enough to warrant further processing, they would be sent to the leaching circuit; otherwise, the tailings would be thickened and neutralized then routed to the TSF as described below.” This statement suggests that the pressure oxidation and cyanide leaching circuit will be sized to handle the full ore stream; also, that the tailings, if not pressure oxidized and cyanide leached, would be neutralized, assumedly with respect to cyanide. It would be unusual if the process facility, primarily designed for pressure oxidation and cyanide leaching of flotation concentrates, would also have the option of pressure oxidation and cyanide leaching of the full ore feed stream as well. This might also be expected to alter the geochemistry of the tailings depending on the option used. It would be unusual for a flotation tailings to undergo neutralization for cyanide; this infers that the flotation circuit will include cyanide. The SDEIS should clarify the statement with regards to tailings processing and neutralization and if the option to process the full stream is planned, then the SDEIS should address to what extent it might impact tailings geochemistry.</p>	MIN	Process water would be primarily recycled from other locations in the process and would have the potential to require neutralization for cyanide prior to conveyance to the TSF. Characterization of tailings geochemistry incorporates the effects of cyanide in solution.
Samuel Penney (Chairman)	19396	57	<p>The potential for mercury to be collected by gold and silver cyanide leach carbon adsorption facilities in addition to its potential to become an environmental issue as a result in electrowinning and refining facilities is well established but should be further discussed in SDEIS Section 2.4.5.7.</p> <p>The SDEIS should discuss how the proposed process for the Project differs from that where the intermediate product from electrowinning has typically been treated in a low-temperature/negative pressure retort furnace for removal and capture of the majority of the mercury prior to refining. The proposed method appears to do this in one step. The SDEIS should identify the pros and cons of this approach with respect to removal and sequestration of mercury.</p>	MIN	Section 2.4.5.7 describes how ore processing utilizes electrowinning followed by a heated retort to collect mercury similar to the process described by the commenter.
Samuel Penney (Chairman)	19396	58	<p>SDEIS Section 2.4.5.7, Ore Processing is confusing and unclear as to whether additional treatment for residual cyanide, in addition to neutralizing within the ore processing plant to less than approximately 10 milligrams weak acid dissociable cyanide, will occur before the tailings slurry is placed in the TSF. The SDEIS should clarify that the thickener “underflow” after neutralization would have less than 10 milligrams cyanide as it is pumped/placed in the TSF. The potential for, and impacts from, a tailings spill containing up to 10 milligrams Weak Acid Dissociable cyanide should be included and analyzed as a real and foreseeable event in the SDEIS.</p>	MIN	<p>Section 2.4.5.7 describes the neutralization for cyanide. There would not be further neutralization aside from this description.</p> <p>Effects from spills of hazardous materials including process solution are described in SDEIS Section 4.7.2.2 along with spill response activities.</p>
Samuel Penney (Chairman)	19396	59	<p>The SDEIS provides limited information in Section 2.4.5.8 on the TSF with respect to the technical facets of the facility. No basis for the information is provided or referenced. In order to provide the necessary information for a NEPA-level analysis, it is necessary in the case of TSFs, and waste rock piles as well, to bring their detailed design to at least a 30% completion level, consistent with the American Society of Civil Engineers levels identified in the Reclamation and Closure Plan (“RCP”) and for TSFs a 90% completion level should have been performed if third-party review is intended. This information should have been provided as the basis for the mine application prior to initiation of the</p>	MIN	The IDWR is the proper authority in Idaho to regulate design, construction and operation of dams, including tailings disposal facilities. These requirements are cited in Section 3.2.3 of the EIS. Perpetua would need to comply with the IDWR regulations and requirements for its TSF. The monitoring requirements for the TSF would be established by the IDWR permitting process and the Forest Service recognizes the primacy of the IDWR in these matters, so therefore has not specified monitoring of the TSF in the EIS.

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			<p>NEPA process. The Forest Service should consult other Regions as to the normal provisions in this regard, including for the Resolution Copper Mine in Arizona (Tonto National Forest) and East Boulder Mine Stage 6 TSF in Montana (Custer Gallatin National Forest), as well as other NEPA analysis where TSFs and waste rock piles are involved. A new SDEIS should provide the following for the TSF:</p> <ul style="list-style-type: none"> ● A probabilistic and deterministic seismic evaluation for the area (included but references labeled confidential). ● A dam breach analysis, a failure modes and effects analysis or other appropriate detailed risk assessment, and an observational method plan addressing residual risk. ● A description of the chemical and physical properties of the materials and process solutions to be stored in the TSF. ● A list of the assumptions used during the analysis and design of the facility and a description justifying the validity of each assumption. ● A description of proposed risk management measures for each facility life-cycle stage, including construction, operation and closure. ● A detailed description of how water, seepage, and process solutions are to be routed or managed during construction, operation and closure. ● A detailed description of stormwater controls, including diversions, storage, freeboard, and how extreme storm events will be managed. ● A flood event design criterion less than the probable maximum flood but greater than the 1-in-500 year, 24-hour event. ● Utilization of an Independent Review Panel to ensure the TSF design plans satisfy Best Available Technology. <p>The SDEIS descriptions of the TSF in terms of design basis, geotechnical conditions, geohazard conditions, liner, cover, reclamation and closure, anticipated construction and third-party oversight, and other facets typical and necessary to understanding a proposed project and evaluating its potential environmental impacts are inadequate. Other than with respect to reclamation and closure no basis for the information is provided or could be identified by searching the public available references. The SDEIS should be supplemented and reissued for public comment with a more complete description of the TSF (and waste rock piles) and provide the basis for, and public access to, the technical documentation that supports the description and any analysis in the SDEIS.</p>		<p>Dam breach and failure mode analyses are not required to satisfy NEPA requirements because they represent a worst-case scenario that is not reasonably foreseeable.</p>
Samuel Penney (Chairman)	19396	62	<p>According to SDEIS Section 2.4.5.15 Temporary Closure of Operations, during any temporary shutdown, the operator would continue to implement operational and environmental maintenance and monitoring activities to meet permit stipulations and requirements for environmental protection. If ore processing is not occurring, excess water collected from the various facilities would need to be discharged to the TSF for storage. In the case of a longer-term closure, water treatment could be necessary to allow discharge to the area streams and prevent filling of the TSF.</p> <p>A plan would need to be developed, reviewed and approved by the appropriate regulatory authorities, and implemented at the time of any longer-term temporary closure. In the event of temporary closure, particularly if as a consequence of bankruptcy of the operator, a plan to implement ongoing operations so as to continue to meet environmental protection measures should be required and included with the reclamation plan. Once a temporary closure occurs measures must be implemented immediately - it is too late to implement a plan that has not even been developed, including for long-term measures. Temporary closure should be considered as a part of the design, and not in reaction to circumstances when it is too late or difficult to easily implement mitigation measures.</p> <p>The temporary closure of operations is typically described in an Interim Emergency Water Management Plan that provides information to the regulatory agencies on how process water systems, interceptor wells, seepage collection systems and stormwater management systems are operated and maintained to prevent discharges in the event the department assumes management of the mine facility. The plan typically includes process water flow charts showing electrical system requirements, pump operations, seepage collection and interceptor well operations and applicable operation and maintenance requirements. Temporary Closure of Operations should be</p>	MIN	<p>Water management under emergency shutdown conditions is described in the Project's Water Management Plan.</p>

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			addressed and detailed information provided in an Interim Emergency Water Management Plan and referenced in the SDEIS.		
Samuel Penney (Chairman)	19396	64	<p>According to SDEIS Section 2.4.7.4 “A low permeability geosynthetic liner would be incorporated into the cover over the entire surface of the backfilled Yellow Pine pit, including the re-constructed channel floodplain corridor to reduce the infiltration of meteoric water into backfill material, which could dewater the restored stream channel and result in additional metal leaching from the underlying backfill. Above the geosynthetic liner in the stream corridor, a layer of relatively fine material would be placed to protect the stream liner from puncture, followed by coarse rock armor to protect from exposure via stream scour, followed by floodplain alluvium at a minimum thickness equal to the maximum estimated scour depth of the proposed stream channel. Growth media would then be placed and the area revegetated. The lined corridor would be wide enough to accommodate future channel migration, evolution, and over-bank flooding.” The use of a low permeability geosynthetic liner is also described in Section 2.4.7.6 for the TSF and in Section 2.4.7.7 for the Hangar Flats Pit.</p> <ul style="list-style-type: none"> • The SDEIS and ModPRO2 do not provide additional details on the proposed liner system, the extent and nature of which appears to be entirely if not highly untested. The SDEIS should have taken a hard look at the proposal, including the extent to which a similar system has similarly been applied and used in what will be an geomorphologically active stream channel. As a result, the liner system will have to withstand the test of time, including as the cover materials wear away, revegetation with rooting trees takes place, and ultimately when catastrophic storm events such as those which took place this past early summer in Montana occur resulting in areas of major river channel changes, other areas of deep incisions, and ultimately destruction of the natural river channel. The SDEIS must analyze and address what will be certain future natural events that will most likely result in severe compromise of the proposed cover systems. The Payette National Forest should consult with the Custer-Gallatin National Forest to learn more about what occurred in 2022 and get their input as to the necessity of the SDEIS to consider a similar event occurring at the proposed Stibnite Project. • The SDEIS should describe the details of the cover system in order that its effectiveness and other characteristics can be assessed. The SDEIS should address the expected efficiency and longevity with respect to maintenance and replacement of the cover system given it will be required to continue to operate as per design in perpetuity, and address/include mitigation in the event of the failure of the cover system. The DEIS should address the potential impacts to the cover system such as long-term consolidation of the waste rock piles leading to differential settling, tree roots, and other potential causes of compromise of the proposed cover system. 	MIN	<p>The expected performance and longevity of the restored stream channels are included in the Compensatory Mitigation Plan for stream restoration.</p> <p>A mitigation measure associated with funding for long-term maintenance of restored and reclaimed areas has been included in the Final EIS.</p>
Samuel Penney (Chairman)	19396	198	<p>The SDEIS states that “[t]he TSF would be designed and operated as a closed-circuit, zero discharge facility meaning no tailings water would be discharged to the surface water or groundwater except in compliance with applicable permits and regulations.” However, the bottom liner is modeled to leak consolidation water due to minor defects in the liner from 34.3 m3/year in Mine Year 1 to 402 m3/year in Mine Year 14387 from the TSF with elevated concentrations sometimes orders of magnitude in exceedance of the strictest water quality criteria concentrations of arsenic, antimony, mercury, and residual cyanide. It is unclear in the SDEIS whether the seepage rate is projected to continue increasing from Mine Year 15 to 22 prior to cover placement.</p>	MIN	<p>Discharges are not part of the TSF design. The effects analysis for water quality in SDEIS Section 4.9.2.2 accounts for potential leakage from the tailings facility and the potential effects of leakage on water chemistry.</p>
Samuel Penney (Chairman)	19396	203	<p>The SDEIS does not explain how the bentonite layer will stay hydrated after being unrolled while exposed and not subject to a confining load, even while covered with a layer of High-density Polyethylene (“HDPE”). In addition, while HDPE does have good UV resistance, how is it determined whether the HDPE remains flexible and sturdy enough before filling with tailings to support a confining load after tens of years exposed to adverse environmental conditions on the perimeter of the TSF where tailings have not yet been deposited? It is required that HDPE be used in the cyanidation process,³⁹⁴ but sturdier products such as reinforced polyethylene have been developed which are a better choice for chemical and ultraviolet resistance, and flexibility to prevent cracking from the weight of tailings.</p>	MIN	<p>The Project proposal specifies the use of HDPE for liners except for the TSF liner which uses 60-mil linear low-density polyethylene over a geosynthetic clay liner per IDEQ requirements.</p>

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Samuel Penney (Chairman)	19396	331	The SDEIS inadequately details maintenance work that will occur on roads associated with the Project. General discussions on graveling, grading and routine road maintenance are discussed throughout the document, however a detailed road maintenance plan describing specific activities and frequency of these actions was not found in the SDEIS. A maintenance plan is critical to understand resource impacts related to roads. The improvement work that will occur to existing roads needs to be quantified, and maintenance plans for all roads associated with the Project need to be established and included in the FEIS.	MIN	Road maintenance activities are described in the Transportation Management Plan which would be adopted as part of the Project upon the Forest Service's Project decision.
Samuel Penney (Chairman)	19396	442	Stibnite Gold Project Site-Wide Water Balance ("SWWB") Model Refined Modified Proposed Action (ModPRO2) Report The SWWB report states "forced evaporation only operates in the summer months . . ." yet later in the paragraph it states, "evaporators turn on in March and run...". This appears to be inconsistent.	MIN	Comment noted. The description of the usage period for evaporators does not affect the impact analysis presented in the EIS.
Samuel Penney (Chairman)	19396	443	The SWWB states, "Water needed for ore processing above the water available from reclaim is termed additional water. Additional water needs are a direct result or prediction of the SWWB, and makeup water is sourced from stored MIW, dewatering, or freshwater supply." Figure 6-18 is the Additional Water Needs Boxplot, which based on the definition above would include the three sources. However, later in the next paragraph, it appears to discuss the freshwater supply shown for groundwater (Figure 6-19) and surface water (Figure 6-20). It is unclear if Figure 6-18 includes only the freshwater additional water supply or all the additional water supplies (ex. stored MIW, dewatering). It would be helpful to have similar plots as the groundwater and surface water plots for stored MIW and dewatering sources.	MIN	Comment noted. SDEIS Figure 4.8-3 describes the process water components including water supplied from wells and surface water diversion.
Samuel Penney (Chairman)	19396	444	Figure 6-24 shows Process Makeup Water Required660 (all sources) and Figure 6-25 shows TSF Reclaim to Process. It appears there is generally more than sufficient supply by the TSF Reclaim. Is this correct? Would the data from Figure 6-24 equal the sum of the data from Figures 6-18 (additional water needs) and 6-25 (TSF reclaim)?	MIN	As depicted in SDEIS Figure 4.8-3, there are periods of time where TSF reclaim, contact water, and dewatering production are sufficient to meet mill demand and other times when these sources need to be supplemented by wells and surface water diversion.
R. Skipper Brandt, Ted Linsely, Denis Duman		1	The National Environmental Policy Act (NEPA) helps ensure all proposed projects meet strict standards for environmental protection, Stakeholders, regulators and experts have now reviewed the Stibnite Gold Project proposal for six years and local, state and federal agencies have analyzed the project. In our experience, Perpetua Resources has been transparent and cooperative, providing information to us on a regular basis. We have been provided with detailed technical information on the tailings storage facility, water quality, restoration, safety and other project aspects when requested.	MIN	Comment noted.
Samuel Cousins		10	4. Net Effects of Over-Optimistic Mitigation Success. The Regulatory Requirements and the Forest Plan Requirements listed on Page 2.4.9 and Table 2.4-12 list numerous "Could Do" measures, "Should Do" measures, in addition to the more mandatory "Shall Do" measures. The reality is that only the "Shall Do" measures are likely to be implemented. The "Would Do" would only be implemented if certain conditions are met or not met. The "Should Do" items are basically wishes, and therefore optional. Therefore, Chapter 4 Consequences cannot assume that all Measures in all three categories will actually be implemented. It has to disclose which it assumes will occur, which it assumes will not, and which it is uncertain about. Otherwise, the Consequences analysis will be heavily slanted toward minimization of adverse effects. Therefore, the suite of mitigation measures proposed have a very high risk of very low success. The consequences to aquatic and fisheries will be at high risk of being catastrophic. The DSEIS analysis needs to better reflect probability of success in estimation of effects of mitigations.	MIN	Prior to a Forest Service decision on the Project, design features and mitigation measures are not described as "shall do" because the decision regarding these proposed activities is pending. Upon a decision, design features and mitigation measures become requirements associated with Project approval. Uncertainties associated with water quality are described in SDEIS Section 4.9.2.4 with mitigation measures designed to reduce uncertainties described in SDEIS Section 4.9.3.
Samuel Cousins		13	7. Electrical Transmission Line. The Perpetua Alternative 2 will add Water Treatment Plants that will require a new and upgraded transmission line into the mine complex from the Johnson Creek substation. The line will require maintenance in a remote, mountainous, high elevation area of burned and falling snags. Winter snowpack in harsh conditions will exacerbate the problem and its costs. Who will patrol and monitor the new line? Who will pay the predictable costs of maintenance and repair? For future replacement?	MIN	The costs associated with maintaining water treatment plans into the post-closure period to the point where water treatment is no longer required would be incorporated into the reclamation cost estimate and closure bond for the Project.
Marilyn Olson		2	Where is the Burntlog Maintenance Facility site going to be located? Will it be near this fen adjacent to Mud Lake and decimated the rare plants at this location. Since this area along Burnt Log Road has	MIN	SDEIS Figures 2.4-5 and 2.4-8 depict the location of the Burntlog Maintenance Facility.

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			unique wetland habitats, is it worth decimating a population of rare plantes to reconstruct a road through this area.		EIS Sections 3.10 and 3.11 describe the location of Project related disturbance outside of the Mud Lake areas and their associated vegetation.

Reclamation and Restoration

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Wasley, Dustin (Principal P.E., Haley Aldrich)	17633	2	<p>The reclamation and restoration projects inherent in the Stibnite Gold Project, especially addressing legacy AML issues are what really sets this project apart. Perpetua’s overarching goal in design of the project has been focused on restoration of the Stibnite mining district, and the company has planned and designed the mining operations and site closure with this goal in mind from the inception.</p> <p>Comprehensive cleanup of legacy mine wastes on the site achieved through private investment is the most notable aspect of the project. The extensive mining wastes present on the site exceed 10 million tons of materials and include tailings and waste rock, all of which currently contribute impaired water quality conditions, as appropriately noted in the SDEIS. Prior cleanup activities by various agencies have really only employed “band-aid” solutions. Perpetua’s plan to relocate historical mine waste materials to engineered waste rock facilities and reprocess historical tailings is the mining-scale solution required for the site and will successfully mitigate many of the current issues. Placement of spent ore materials in the tailings starter dam beneath the liner and use of engineered geosynthetic cover systems into the closure plan are solutions which have been shown effective in reducing infiltration and associated impacts to groundwater and surface water systems. Surface water and contact water management and treatment actions proposed during operations will effectively prevent additional contamination prior to facility closure. The proposed closure and reclamation plans have been successfully implemented at other site on FS-administered lands.</p> <p>Specifically, the Azurite Mine and the Monte Cristo Mining Area in Region 6 are two examples of successful closure that I have personally worked closely with the FS.</p>	RES	Comment noted. Statement of position.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	26	<p>This is particularly important when it comes to the SDEIS’s failure to provide a financial assurance calculation, which is necessary to ensure that sufficient funds are available for reclamation in the event that the company files for bankruptcy or is otherwise unable to complete reclamation. It is important to disclose and analyze the assumptions that will be made in establishing the financial assurance, the amount of post-closure financial assurance needed to protect the public if water treatment is required beyond Mine Year 40.</p> <p>The Forest Service defers the financial assurance calculation until after the ROD, yet the information that is available at this stage of the mine design, and for the SDEIS analysis, is more than sufficient to analyze the reclamation and closure costs. In fact, those calculations have already been made in the Feasibility Study (M3 2021). The Forest Service has decided not to include them in the SDEIS. By doing so, the SDEIS fails to take a hard look at the financial assurance calculations for reclamation and closure costs at the proposed SGP, including those water treatment liabilities that may continue for an undetermined time.</p> <p>Geographical and temporal limitations in the effects analyses can result in both underestimated and unrealized significant impacts that will not be disclosed in the SDEIS. The Forest Service must expand the geographic and temporal scales of the analyses and disclose the potential impacts in a supplemental or revised SDEIS for public review.</p>	RES	Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope. This process coordinates with Idaho State regulatory agencies and their financial assurance requirements.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	33	<p>H. Failure to calculate the financial assurance for reclamation and closure</p> <p>The SDEIS fails to include an analysis of the financial assurance associated with reclamation and closure. The public is ultimately liable for this cost if the company cannot pay it, and it is liable for any difference between the amount established by the Forest Service for the financial assurance, and cost overruns of reclamation and closure that may occur. Cost estimates must be made conservatively in</p>	RES	Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope.

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			<p>order to protect the public.</p> <p>In the 2019 Prefeasibility Analysis, the cost estimate for the financial surety was \$66.5 million. In the 2021 Feasibility Study that cost estimate increased to \$100 million. This cost calculation is not included in the EIS analysis, only in the feasibility analyses, but it has potential significant financial impact on taxpayers and the public. There is no technical justification for delaying the analysis of these calculations, since the calculations have already been done. The public deserves to be able to comment on these calculations as a part of the EIS.</p> <p>In his Technical Report from the Center for Science in Public Participation (Chambers 2022), Dr. David Chambers provides an important perspective on bonding, starting with a citation from SDEIS 2-91:</p> <p>The SDEIS notes that, “Perpetua would be required to post financial assurance to ... provide adequate funding to allow the Forest Service to complete reclamation and post-closure operation, including continuation of any post-closure water treatment, maintenance activities, and necessary monitoring for as long as required to return the site to a stable and acceptable condition in the event Perpetua was unable to do so.”</p> <p>When mines are developed, financial assurance is required by federal land managers and many state regulatory agencies. Financial assurance is necessary to cover the cost of reclaiming the disturbed surfaces of the mine, and to pay for all post-closure requirements. In this case, a significant part of the financial assurance will be for the cost of water treatment.</p> <p>It is also important to note that the financial assurance does not cover the cost of a potential mine accident. The financial assurance only covers planned closure. The financial assurance requirement is important for several reasons. First, there have been numerous instances in virtually every state of mining companies filing for bankruptcy without sufficient financial resources to complete their reclamation and closure obligations. In these instances, the government regulatory agencies did not require enough financial assurance to cover the actual costs of mine closure. In British Columbia, it is estimated that the province holds over \$1 billion less than the full value for financial assurance required to reclaim BC mines. If the mining company cannot clean up and close the mine, then the public becomes liable either for the cost of cleanup, or for the environmental consequences of the damaged mine site.</p> <p>There is significant political pressure to keep the costs of these financial assurances as low as possible in order to enhance the economic viability of the mine. This has led to significant underestimations of the amount of financial assurance required to close a mine after a bankruptcy. Alaska, Montana, Nevada, South Dakota, and other states have been victims of this problem. In each instance, taxpayer dollars were required to augment inadequate financial sureties.</p> <p>Second, the amount of money required to close the mine and to perform post-closure water treatment can be enormous. The present financial assurance for closure of the Red Dog mine in Alaska is \$563 million, most of which is related to water treatment in perpetuity. At closure, the Red Dog Mine plans to treat approximately 1.8 billion gallon/year, which drives the majority of the financial assurance requirement. Perpetual water treatment at Stibnite would add hundreds of millions of dollars to the closure cost, which must be covered by the financial assurance.</p> <p>The method the agency uses to calculate financial assurance is an important issue that is not covered in the EIS. Public disclosure, and an opportunity to review the cost calculations, is not only appropriate, but the potential financial and/environmental impact on the public is also significant.</p> <p>The National Environmental Policy Act requires federal agencies to undertake a pre-action analysis in the form of an Environmental Impact Statement (EIS) of potential environmental impacts for “major Federal Actions” that may “significantly affect” the quality of the human environment. 42 U.S.C. § 4332(2)(C).</p>		
Bonnie Gestring (Northwest)	17634	34	The applicable version of the Code of Federal Regulations, Title 40: Protection of Environment defines “human environment” as: §1508.14 Human environment	RES	Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope.

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Program Director, Earthworks) and seven others			<p>Human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment.(See the definition of “effects” (§1508.8).) This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment. (emphasis in original) If a financial guarantee is required to protect environmental values, like clean water and fish, then 40 CFR1508.14 clearly suggests that the significant financial assurance required by agency regulations should be evaluated in an EIS. When a federal agency intentionally decides to ignore analyzing the requirement for a financial assurance to protect the environment, the message it clearly sends is that it is not confident in its ability to defend its financial assurance calculations to the public. Deferring the analysis of the financial assurance requirement until later in the permitting process expedites the permitting process, as well as make it more difficult, if not impossible, for the public to review and comment on the adequacy of the financial assurance requirement.</p> <p>Reclamation and Closure costs are not only a significant factor for calculating the capital costs of a mine, but are also a potential major liability to the public if they are not properly calculated and managed. This means reclamation and closure costs could have a major potential impact on the economic environment of both the community hosting the mine, and the taxpayers who would be liable to pay the costs of reclamation and closure if the mining company becomes financially insolvent. Under the NEPA definition of “significant environmental impact,” the potential impacts of an inadequately calculated financial assurance for the reclamation and closure of this mining project could have significant economic, social, and environmental impacts. The financial assurance should be analyzed as a part of this SDEIS.</p> <p>In the SDEIS, it is important to disclose and analyze the assumptions that will be made in establishing the financial assurance, the amount of post-closure financial assurance needed to protect the public if water treatment is required beyond Mine Year 40. At a minimum, tens of millions of dollars are at issue.</p> <p>However, in the SDEIS it is noted: “Calculation of the initial bond amount would be completed following the Record of Decision (ROD) when enough information is available to adequately and accurately perform the calculation.” (SDEIS2022).</p> <p>The information available at this stage of the mine design, and for the SDEIS analysis, is more than sufficient to analyze the Reclamation and Closure costs. In fact, those calculations have already been made in the Feasibility Study (M3 2021). The Forest Service has decided not to include them in the SDEIS. By doing so, the Forest Service is playing a classic game of “hide the ball.”</p> <p>The DEIS for the Idaho Cobalt Project on the Salmon-Challis National Forest included a draft bond calculation of \$44 million dollars.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	125	<p>2. Water treatment in perpetuity will likely be needed unless proven otherwise</p> <p>As noted elsewhere, the Forest Service should assume that long-term water treatment will be needed beyond Mine Year 40 unless the actual post-closure seepage rates for both tailings drain down and buttress seepage are low enough and/or contain only low levels of contaminants that there is no possibility it will require long-term treatment. See technical reports from Dr. David Chambers of CSP2 and Dr. Ann Maest of Buka Environmental.</p> <p>We note that the Forest Service required a bond for 100+ years of water treatment for the Idaho Cobalt Project out of an abundance of caution even though the mine was designed to avoid the need for water treatment in perpetuity. The Boise National Forest erroneously assumed that the expansion of the Level 900 adit near Atlanta would be managed without long term water treatment. Now we have a situation where elevated arsenic levels require water treatment in perpetuity but the operator has been unable to comply with their Plan of Operations and NPDES permit and there is no bonding for water treatment in place. The Forest Service must avoid a similar situation here.</p>	RES	<p>Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope.</p> <p>Uncertainties regarding the duration of water treatment requirements would be incorporated into the reclamation cost estimate.</p>

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	126	<p>3. Reclamation cover materials are insufficient</p> <p>As noted elsewhere, we are concerned that the amount of cover/growth material available for reclamation is only 48% of the amount of material that will be needed (p. 4-87), assuming that the identified material will function as intended. As part of this analysis, a source for the additional required growth material is required. Delaying this commitment until a later time may result in a failure to find this material and a lowering of reclamation standards.</p>	RES	<p>The current Reclamation Closure Plan utilizes unconsolidated till materials mined from the Yellow Pine pit to meet the Project needs for growth material.</p> <p>The suitability of the Yellow Pine pit material as growth material would need to be verified and enhanced as necessary.</p> <p>Uncertainties regarding the sourcing of reclamation cover material would be incorporated into the reclamation cost estimate.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	128	<p>1. The SDEIS lacks detailed information about the reclamation and closure plan to analyze impacts</p> <p>According to Reclamation and Closure Plan (RCP) submitted by Tetra Tech (2021(b)) on behalf of Perpetua Resources “mining and reclamation plans are approximately 10 to 40 percent complete and have been established based on reasonable assumptions of technical, engineering, legal, operating, economic, social, and environmental factors.” (p. 1-23, emphasis added).</p> <p>The SDEIS must include a detailed reclamation and closure plan to demonstrate compliance with state and federal regulations and to provide sufficient information for decision-makers and the public to understand the potential impacts of the proposed project. This must include detailed engineering plans to describe all</p>	RES	<p>Sections 3.5 and 4.5 summarize the proposed reclamation plan and its effects. Detailed engineering plans are not required until facilities are closer to final closure.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	129	<p>2. The SDEIS identifies a vast deficiency in available reclamation materials and fails to demonstrate that timely reclamation can be achieved. The discussion in section 4.5.2.2 (SDEIS, p. 4-87) notes that the amount of cover/ growth material available for reclamation is only 48% of the amount of material that will be needed. Pages 4-85 identify the three primary challenges associated with the quality and suitability of available Reclamation Cover Materials (RCM) for the SGP: (1) the overall relatively poor existing quality of the upland soils that make up approximately 62 percent of the salvageable volume at the SGP and Burntlog Route; (2) the long-term stockpiling of material; and (3) the high background concentrations of metals in the soil. The SDEIS, on pages 4-85 notes that “options are being considered” to locate a source for the deficient material, yet no specific requirements have been incorporated in the SDEIS. Further, the Soils and Reclamation Cover Materials Specialist Report (p. 74) states that coarse woody debris would be scattered over reclaimed land, but offers no estimate of the total volume required or where it would be sourced.</p> <p>To address the deficit in reclamation materials, Perpetua proposes a number of potential options. Perpetua Resources anticipates that compost (and potentially other soil amendments) will be imported to the project site and applied to GM and YPP Till to improve their suitability. It proposes to import 13,850 tons of compost (RCP, p. 352) from dairy or feedlot operations (composted manure), which would be temporarily placed in stockpiles around the facility. The SDEIS fails to analyze the potential impacts of transporting and introducing large volumes of manure to the site, including the potential for the proliferation of weeds, and increases of nitrates and other nutrients in surface or groundwater. Further, the Soils and Reclamation Cover Materials Specialist Report (p. 74) dismisses the viability of this idea, stating:</p> <p>“The RCP identifies 10 tons per acre of compost would be incorporated into the top 3 to 6 inches of GM; however, the volume specified is minimal, translating to less than 0.25 inch of compost to be mixed into 6 inches of GM. This small amount of compost is not expected to provide sufficient long-term benefits to the GM that would be important for revegetation.” (Emphasis added)</p> <p>Similarly, Perpetua proposes to address the deficit of salvageable soil by bulking up the salvaged soils with wood chips to create “growth media” (GM). Depending upon a multitude of factors, the incorporation of wood chips into soil (particularly in the volumes proposed) can deplete plant-available nitrogen. The effects of anaerobic conditions expected in stockpiled GM (SDEIS, p. 46) on nitrogen cycling, microbial activity, and overall soil health should be evaluated in the context of wood chip addition.</p> <p>Even after the potential addition of wood chips, a GM deficit of roughly 800,000 cubic yards remains. The Reclamation Closure Plan (TetraTech, 2021a) proposes to use glacial till and colluvium/alluvium</p>	RES	<p>The requirements for reclamation cover materials and the sources of those reclamation cover materials are described in the Reclamation Closure Plan and summarized in Sections 3.5 and 4.5. The limitations on the soil available for salvage are identified along with the methods proposed to develop suitable cover material from other sources, namely mined till from the Yellow Pine pit, that meet suitability criteria.</p> <p>Effects of stockpiling on soil productivity are identified as a potential effect along with the management practices to minimize the effect.</p> <p>Reclamation and revegetation monitoring is described and would be used to assess reclamation performance per Forest Service reclamation requirements.</p>

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			<p>from the Yellow Pine pit to make up the deficit. This solution does not appear to be analyzed in either the SDEIS or the Soils and Reclamation Cover Materials Specialist Report (U.S. Forest Service, 2022c). The Reclamation Closure Plan asserts that this material will be non-PAG/ML, but only provides average concentrations for arsenic, neglecting to mention antimony or mercury. Although the chemical suitability of this material is partially addressed, there is no mention of the other suitability criteria which likely rate it as fair to poor. This material would be stored separately from the other growth media, but it is unclear how it will be used. If it is blended with the other growth media when applied, this is likely to result in further decline in the suitability of already questionable quality growth media. There is no explanation why 1.5 million BCY would be stored in the Fiddle Growth Media stockpile when only 797,000 BCY are needed.</p> <p>To compound the soil quality and quantity deficits, the SDEIS identifies substantive impacts to soil viability from stockpiling soils for lengthy periods. According to the SDEIS (p. 4-86), these stockpiles would be up to 200 feet tall, and the time between GM salvage and placement would vary greatly between different SGP facilities but could remain in stockpiles for up to 42 years. The RCP (P. 3-55) states that soil productivity within the majority of the GM/SBM mass stored with stockpiles is expected to decline during the time of residence within stockpiles because, “Anaerobic conditions approximately 2 to 3 feet below the surface of the GMSs are anticipated to predominate and will likely lead to a decline in microbial respiration and a shift from an aerobic respiration endpoint of carbon dioxide to an anaerobic endpoint of anhydrous ammonia (NH3) or, depending on the soil moisture content, nitrogen gas or nitrous oxide.” The RCP proposes various mitigation measures to offset those impacts, but fails to demonstrate that these will be viable. In fact, the SDEIS (p. 4-87) concludes that, “Despite these measures, the storage of GM within deep stockpiles for years would still result in the loss of soil productivity, which would affect the overall quality of this material at the time of placement.” (emphasis added)</p> <p>The SDEIS must take a hard look at the potential impacts of stockpiling these materials and quantify the potential loss of viable soils for reclamation purposes and the adverse effects on reclamation efforts.</p> <p>The Executive Summary of the SDEIS (p. ES 11-12) identifies the uncertainty associated with sufficient quality and quantity of materials necessary for reclamation. “The overall relatively poor quality of the soils at the SGP mine site (outside of valley bottom soils), the long-term stockpiling of growth media (GM) or soil bank material, and the high background concentrations of metals in soils would affect the quality and suitability of available reclamation cover materials. GM used for upland reclamation sites would mostly come from relatively poor upland soils. Overall, the majority of GM used would rate as poor or fair (per suitability criteria), due primarily to texture and coarse fragment content (Tetra Tech 2019). These challenges, coupled with the harsh winter climate (short growing season) and generally steep slopes of the area, would compound the present difficulties in growing and/or maintaining persistent vegetation cover over reclaimed areas. This is consistent with the mixed vegetative cover success of nearby reclaimed mining areas and the previous efforts by Perpetua and others at the mine site to establish self-sustaining cover on previously mined lands that have had some limited success. Additionally, there would be a 797,702 bank cubic yards GM deficit at the mine site according to the balance calculations in the Reclamation Closure Plan. This deficit may be partially met with the surplus of material obtained from the Burntlog Route or could be met through additional composting of both on- and off-site soil amendments. Thus, there is presently some uncertainty regarding the specific source of material to meet the identified GM deficits under either action alternative. (SDEIS, p. ES-11)(emphasis added).</p> <p>Although the SDEIS states that Perpetua has committed to salvage the appropriate volume of GM and to create the volume of compost necessary as an amendment to provide suitable quality and quantity of the GM to cover the areas to be reclaimed, there is no data or analysis to demonstrate that this will be achieved. As noted in this and other sections, the proposed plan does not demonstrate that suitable soils will be available, mitigation measures will successfully offset the impacts of stockpiling soils, or that measures are in place to adequately address the high metal concentrations in soils. Furthermore, the SDEIS fails to take a hard look at the potential impacts to soils from climate change.</p>		

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			<p>The SDEIS (p. 4-79-80) highlights the long-term harm to soil resources, stating that “this analysis assumes recovery of greater than 40 percent soil productivity of natural background within a 50-year timeframe would not occur (due to the nature of disturbance and the conditions at the site) and, therefore, the duration of impacts would be longer-term, well beyond the 50-year threshold.” And “For the TSF and TSF Buttress, where selected development rock would serve as the rooting zone for reclamation-related planting instead of native regolith, recovery of soil productivity to 40 percent of natural background would be on a much longer timescale (e.g., likely centuries to millennia) such that they would be considered permanent TSRC.” (emphasis added).</p> <p>According to the SDEIS (p. ES-11) Total Soil Resource Commitment (TSRC) is the conversion of a productive site to an essentially non-productive site for a period of more than 50 years. Productivity of these areas range from 0 to 40 percent of natural background.</p> <p>According to the SDEIS (p. 4-78-79), “Reclamation challenges associated with mine facilities are consistent with observations of nearby, previously reclaimed mining areas having mixed vegetative cover success (e.g., Dewey Mine/Thunder Mountain Mining District), as well as previous efforts by Perpetua and others at the SGP to establish a self-sustaining cover of vegetation on previously mined lands that were met with limited success (Greystone 1994). To conservatively address uncertainty in reclamation success, this analysis of Total Soils Resource Commitment (TSRC) assumes that all SGP-related disturbances in the PNF activity area would be considered TSRC due to the site-specific challenges and the duration and nature of soil disturbance to support the mining activities.” (Emphasis added)</p> <p>Section 4.5.2.2 identifies that the TSRC guidelines in the Payette National Forest Plan to limit TSRC to 5% of the activity area will be violated with the project-related impacts leading to a TSRC of 17% (approximately 1,457 acres). (SDEIS Table 4.5-1 and Figure 4.5-1). Rather than requiring the project to comply with the Forest Plan, the Forest Service is proposing a Forest Plan Amendment (FPA) which would waive the TSRC guidelines. By waiving the TSRC guidelines, and thereby authorizing a 17% loss of TSRC, approximately 1,457 acres of the project area will be converted from a productive site to an essentially non-productive site for more than 50 years. The SDEIS must specify how the loss of 17% of TSRC in the project area (approximately 1,457 acres) - resulting in the conversion from a productive site to an essentially non-productive site for more than 50 years — is consistent with reclamation goals, objectives, and requirements. The proposed plan, which includes a predicted 17% loss of TSRC, appears to treat the area as a sacrifice zone, without regard for reclamation requirements. Further, the SDEIS fails to take a hard look at the direct, indirect, and cumulative effects of the 17% TSRC loss on revegetation efforts, erosion, and other potential impacts. It also fails to consider the cumulative effects of these impacts, coupled with climate change.</p> <p>The proposed mine plan fails to demonstrate that available RCM will be of sufficient quantity or quality to achieve the reclamation objectives defined in the Reclamation and Closure Plan (Tetra Tech 2021a, p.1-1) of returning disturbed areas to productive conditions that sustain long-term wildlife, fisheries, land, and water resources. The proposed mine plan must demonstrate that suitable materials are available to complete reclamation. The SDEIS must specify where the reclamation materials will be sourced, including the quantity and quality of additional materials necessary for reclamation, and it must demonstrate that these soils can be stored and managed to meet reclamation requirements. The SDEIS must demonstrate that the proposed mine plan will comply with applicable state and federal requirements for reclamation and adequate protections of public health and environmental resources.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	130	<p>3. The SDEIS fails to take a hard look at the consequences of inadequate soil covers and reclamation materials, and provides inappropriate references to support cover depths</p> <p>The SDEIS fails to demonstrate that the proposed cover depths are adequate for reclamation purposes. The Reclamation and Closure Plan (p. 3-33) references a 2018 database of cover depths at Montana mines from the Montana Department of Environmental Quality to support potential soil depths for reclamation at SGP. However, two of the mines cited (Rock Creek and Montanore) have not been constructed, so reclamation success cannot be determined. Hecla withdrew its plan of operations for</p>	RES	Proposed soil cover thicknesses are described in the Reclamation Closure Plan and summarized in Section 4.5. Thicknesses are associated with proposed revegetation and are consistent with existing soil conditions in the Project area.

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			<p>those two proposed mines. The Montana Tunnels Mine, which is also cited, has not been successfully reclaimed. The mining company filed for bankruptcy in 2022, with substantive reclamation obligations unfulfilled and extensive erosion issues.169 The Graymont Mine is a limestone quarry, not a hardrock mine. These cited mines should not be considered suitable references for reclamation purposes at SGP.</p> <p>One consequence of the shortfall in growth media (GM) and seed bank material (SBM) volume is that the reclaimed areas have much less depth of GM spread over them than the depth of native material that is salvaged. For example, comparing numbers in Tables 3-5 and 3-7 in the Reclamation Closure Plan one can note that although salvageable SBM in wetlands extends to depths of up to two feet with another foot of suitable GM below that, the proposed application depth in all but one constructed wetland is a mere 2 inches of SBM over 4 inches of GM. It seems likely that the productivity and functionality of these thinly veneered wetlands would be significantly reduced from the existing areas, yet no analysis of the influence of soil depth on wetlands function is included.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	132	<p>5. The use of fertilizers may result in arsenic solubility in soils, and has not been adequately analyzed</p> <p>Fertilizer is considered another option for improving GM quality. However, there is disagreement as to how the addition of phosphate fertilizer might affect plant uptake of phytotoxic arsenic. The Reclamation Closure Plan (p. 3-57) suggests bioavailable arsenic could be reduced, while the Soils and Reclamation Cover Materials Specialist Report (p. 77) states that arsenic solubility could be increased. The SDEIS must address this inconsistency. Statistically robust greenhouse testing of the performance of the main reclamation plant species in phosphate amended GM should be required prior to field application of these fertilizers.</p> <p>As noted above, the Specialist Report (p. 77) finds that the use of chemical fertilizers is known to induce arsenic solubility in soils, and points to the use of fertilizers as one of the potential options identified by Perpetua in its RCP. The Specialist Report states that “Perpetua has identified some measures to limit the transport and exposure to soil-borne arsenic (e.g., surface water runoff routed to sediment basins, erosion-, sediment-, and dust-control best management practices, etc.)” However, there is no analysis to demonstrate that these measures would adequately limit the transport of soil-borne arsenic. The SDEIS must analyze the potential impacts of increased solubility, soil-borne arsenic, the potential mitigation measures, and the viability of these mitigation measures.</p>	RES	<p>SDEIS Section 4.5.2.2 describes the potential effects of fertilizers on arsenic solubility. However, the effects of arsenic solubility on plant uptake vary with plant tolerance observed in addition to phytotoxicity.</p> <p>The Final EIS describes a mitigation measure requiring the testing of fertilizers to assess their effects on metal mobilization prior to their use.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	133	<p>6. The suitability criteria for root zone materials fail to demonstrate that reclamation can be successfully completed or that public and ecological health will be protected It appears from the SDEIS (p. 87-88), that the reclamation plan proposes to use soils with up to 3,000 ppm arsenic as suitable root zone material (RTZ) for reclamation, and apply more restrictive, but not yet specified, criteria for growth media.</p> <p>The proposed concentrations for RTZ of up to 3,000 ppm are much higher than the existing concentrations for mercury within the project area that will be salvaged for reclamation (442 ppm arsenic, 0.82 ppm mercury, and 137 ppm antimony) or those from the SMUs (651 ppm arsenic, 0.96 and 379). (RCP p. 3-27 to 3-28). Thus, the SDEIS appears to authorize the use of soils for reclamation materials that will increase arsenic levels in soils within the area (i.e., worsen soil conditions).</p> <p>The Reclamation and Closure Plan (Tetrattech 2021) justifies the use of much higher arsenic concentration for Perpetua’s proposed suitability criteria based on Hecla reclamation effort from 1992. However, Hecla’s reclamation effort, analyzed in Appendix B, should not be used as the basis for developing suitability criteria because:</p> <ul style="list-style-type: none"> ● It relies on uncertain and unsubstantiated information: “Records, descriptions, or as-builts of the Hecla Reclamation are not available; however, based on communications with the exploration manager for Perpetua Resources, waste rock was nominally covered with one to two feet of “soil” of unknown origin and properties. Following this, seed was sown that included alfalfa (Medicago sativa), and two-to three-year old tree seedlings were planted. It is not known if amendments, fertilizers, or other cultural practices were applied to the site.” (RCP p. B-20) 	RES	<p>The suitability criteria for root zone material are based on the range of existing conditions for root zone material on site. As such these criteria are not reflective of average site conditions but rather the end of the range at which root zone materials are supporting vegetation. Previous reclamation results inform the criteria through observations of root zone materials that were revegetated and root zone materials that did not support vegetation.</p> <p>The Reclamation Closure Plan does propose suitability criteria for growth media in addition to root zone material.</p> <p>These suitability criteria for metals in growth media are based on current metal concentrations in Project area soils. A 2003 human health risk assessment concluded that existing site conditions did not represent a human health risk based on the likely exposure scenarios.</p>

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			<ul style="list-style-type: none"> ● The conclusions of the HECLA Reclamation Area analysis concede that “In addition, intervening variables that were not quantified nor analyzed during this study may strongly influence or constitute the underlying causes for the correlations presented below and therefore the analysis should be understood as limited in these terms.” (p. B 3-5) ● It has not been peer-reviewed. ● It doesn’t provide data, or analyze potential public or ecological health issues associated with elevated arsenic concentrations. <p>Furthermore, the conclusions rest on the data from just three soil pits located in one of the oldest reclamation sites in the project area. Why weren't any of the other previously reclaimed sites such as the Spent Ore Disposal Area, the Garnet Pit, or any of the exploration phase test plots analyzed as well? Most of these sites are not doing very well as far as vegetation establishment (Soils and Reclamation Cover Materials Specialist Report, p. 77) Absent any rationale for site choice, this approach suggests a strong bias in site selection and sample number.</p> <p>The RCP describes the soils, with concentrations from 1,000-3,000 ppm arsenic as “poor,” with “severe limitations that make use questionable.” however it indicates that these soils could still be used in reclamation efforts. (RCP p. 3-25)</p> <p>Suitability criteria for reclamation cover material should be established, and identified in the SDEIS, including phytotoxicity concentrations that are based on well-established and conservative scientific analysis. These criteria should be focused on concentrations that facilitate reclamation objectives (e.g., prompt revegetation), not the upper bounds of what a plant might be able to tolerate. The suitability criteria must also take into account concentrations that are safe for public and ecological health. As stated in the EPA comments on the DEIS, “we are concerned that these values may not be protective of risks to surface waters and ecological receptors. The risk-based screening level (RBSL) values for mercury are 240 mg/kg. While this value was developed for soil ingestion RBSLs, impacts to proximate waterbodies at concentrations in this general range could be a significant issue. A mercury concentration of 240 mg/kg in reclamation cover material would be similar to the average concentration of mercury in tailings at the Cinnabar Mercury Mine (259 ±101 mg/kg), which is a significant source of mercury to downstream waterbodies. In addition, surface emissions to the air at concentrations in this range could become a significant source to the atmosphere that would need to be included in the emission estimates. The proposed cover material concentration of 240 mg/kg is three to four orders of magnitude above typical background soil concentrations presented in the draft EIS, which identifies a mean mercury concentration in soil samples collected from undisturbed areas surrounding the mine site of 0.94 mg/kg.”</p> <p>According to the SDEIS (p. 4-523), “Soils used for reclamation would be screened based on their concentrations of arsenic, antimony, and mercury to exclude materials with metal concentrations outside the range of natural baseline conditions or with metal leaching potential.” However, it doesn’t specify the concentrations that will be applied, and there doesn’t appear to be any metal leaching potential included in the SDEIS to support the criteria. The SDEIS should provide the metals leaching analysis, and demonstrate how this analysis is incorporated into the screening criteria.</p> <p>According to the SDEIS (P. 4-522), Idaho Department of Health and Welfare (IDHW) reviewed available information from the proposed Reclamation and Closure Plan for the SGP to consider whether potential health risks from metals in soils exist for future site users. The IDHW letter points to the suitability criteria proposed in the RCP, and finds that this range of arsenic concentrations exceeds human health screening values for metals in soils (Table 1). (IDHW, p. 2) It also finds that “Information on distribution of expected concentrations in metals or metal bioavailability across the reclaimed site is not provided.”</p> <p>According to the SDEIS, “The IDHW included recommendations for additional characterization to adequately assess risks to public health and recommended that potential human exposure following closure and reclamation should be considered when identifying RCM to ensure protection of recreational</p>		

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			<p>receptors (IDHW 2019).” However, the SDEIS doesn’t indicate whether or how these recommendations will be included in the suitability assessment, or how they would be applied.</p> <p>The SDEIS fails to demonstrate that reclamation can be successfully achieved. The proposed suitability criteria are not supported by scientific literature, with arsenic concentrations that far surpass other phytotoxicity criteria established by the EPA, USGS and other governmental agencies. It proposes to use soils characterized under the suitability criteria as “poor” quality, without analyzing the effects on reclamation viability, and fails to consider the potential impacts to surface water or groundwater due to metals leaching.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	134	<p>7. Cumulative effects analysis of soils and reclamation is inadequate</p> <p>The cumulative effects analysis missed the following potential cumulative effects on soils and reclamation. It is reasonable to expect further soil disturbance from exploration activities subsequent to those permitted under the current Golden Meadows Exploration Project. Perpetua has stated their intent to continue exploration activities throughout the life of the mine and perhaps beyond. Once large mining projects are initiated, there is usually further development of ore targets (e.g., new or expanded pits and underground mining) identified through ongoing exploration activities. This would lead to further soil disturbance.</p> <p>One example of this is the fact that there is a high-grade ore target located below the currently proposed depth of the Hanger Flats pit (M3, 2021). If the price of gold increases, there are likely to be proposals to increase the pit size in order to access this ore. This would certainly cause further TSRC and DD impacts.</p> <p>Additional loss of soil will occur over the coming decades as the tops of the slopes above Blowout Creek (East Fork Meadow Creek) continue to erode backward. These slopes are currently at or beyond the angle of repose. Perpetua's planned treatment would not include laying them back to a stable angle, so the brows of the slope will continue to recede as erosion decreases the oversteepened slopes below.</p> <p>Further impacts to soil resources are reasonably foreseeable as a result of landslides and debris torrents. These disturbances are often triggered by rain-on-snow events which are expected to become more common as climate change increases the frequency and intensity of atmospheric river events (Espinoza et. al., 2018)</p> <p>The increased regulatory control on soil erosion cited as a mitigating factor (SDEIS 5.5.2) seems questionable given the possibility of reclamation failure due to the numerous post-closure revegetation challenges detailed above.</p> <p>Climate change presents yet another challenge to successful reestablishment of vegetation, and is only addressed in passing in the Climate Change Specialist Report (U.S. Forest Service (Forest Service), 2022b). Soil moisture and carbon content are expected to decline (p. 19). More frequent rain-on-snow events would increase erosion. Changes in precipitation, evaporation, and streamflow will affect vegetation growth. There is no discussion concerning the choice of revegetation species that could be more resilient to climate change. The SDEIS fails to take a hard look at the potential cumulative effects of climate change on revegetation success, soils and reclamation.</p>	RES	<p>Continued exploration in the Project area would be part of the SGP authorization. Therefore, it would be a direct effect of the Project rather than a cumulative effect. Other mining projects are considered in the cumulative effects analysis to the extent that they have been formerly proposed via submittal of a mine plan or otherwise publicized by their proponent. Additional mining would not be authorized via an SGP decision and would require further NEPA analysis and permitting.</p> <p>SDEIS Section 4.4.2.2 describes the effects of climate change on soils and vegetation. Vegetation species included in the reclamation plan are based on Forest Service requirements for revegetation and the revegetation goals associated with the Project.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	135	<p>8. The SDEIS lacks any discussion about financial assurance</p> <p>The SDEIS fails to include an analysis of the financial surety associated with reclamation and closure. The public is ultimately liable for this cost if the company cannot pay it, and it is liable for any difference between the amount established by the Forest Service for the financial assurance, and cost overruns of reclamation and closure that may occur. Cost estimates must be made conservatively in order to protect the public.</p> <p>In the 2019 Prefeasibility Analysis, the cost estimate for the financial surety was \$66.5 million. In the 2021 Feasibility Study that cost estimate increased to \$100 million. This cost calculation is not included in the EIS analysis, only in the feasibility analyses, but it has potential significant financial impact on</p>	RES	<p>Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope.</p>

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			taxpayers and the public. There is no technical justification for delaying the analysis of these calculations, since the calculations have already been done. The public deserves to be able to comment on these calculations as a part of the EIS.		
Idaho Regulatory Agencies	17718	15	Second paragraph - 1. What are the reclamation success criteria? 2. As written, it suggests that unconsolidated overburden will replace the growth media deficit, and will lead to reclamation success. This is not correct. 3. what are the "growth media deficit" amounts? How determined? Please reference other part of document.	RES	The text has been revised to replace "reclamation success criteria" with "reclamation suitability criteria". The reclamation suitability criteria are described in SDEIS Section 3.5.4.2. The comparison of available salvage soils versus growth media requirements is described in SDEIS Section 4.5.2.2 along with the utilization of unconsolidated overburden as growth media.
Amelia Weber	18155	4	Although Perpetua prefers to present the SGP as a 'restoration' project, it is a massive industrial mine that will leave the landscape unrecognizable and degraded for lifetimes to come through the creation of three open pits, the permanent storage of over 120 million tons of toxic mine tailings above previously undisturbed wetland habitat, and an expanded footprint that more than doubles the previous disturbance of the Stibnite mining district.	RES	No further response required. General in nature or position statement. It is acknowledged and understood that concerns regarding potential long-term environmental impacts, ecological integrity, and the well-being of potentially affected communities are valid and important to consider. During the decision-making process, the Forest Service will seek to identify the best possible balance between environmental protection, community needs, and sustainable forest management.
Brooke Dunnagan	18894	2	The reclamation efforts fail to meet the standards to repair the already extensive damage and plan to extend the range of damage from mining activities. I am asking that there be a more extensive and far reaching plan in order to reverse the damages already done at the site, and consequently downstream.	RES	The Project includes a Reclamation Closure Plan designed to return the site to post-mining land use. The Reclamation Closure Plan includes monitoring requirements to assess its effectiveness and trigger additional activity if reclamation standards are not met.
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	4	The SGP demonstrates the opportunity that exists at old mine sites to recover critical minerals from legacy mine wastes while concurrently remediating a site impacted by past, unregulated mining practices. ⁷ As a prototype re-mining project, putting the SGP into production would be an important milestone in validating the concept that redeveloping and remediating old mine sites by re-mining and reprocessing legacy mine wastes represent a significant win for both the environment and the security of the Nation's critical minerals supply chains. The SGP also illustrates another important principle about the technical and economic challenges encountered at legacy mine sites. At many sites, including the Stibnite Mine, it may not be feasible to address all of the problematic legacy features in a mine plan that passes economic scrutiny. The substantial but partial restoration of the SGP proposed in the MMP illustrates the merits in pursuing partial cleanup measures that may ultimately lead to a more comprehensive restoration plan. For more than two decades, unrealistic and unachievable cleanup requirements have stymied policy and legislative debates about cleaning up abandoned mines. This stalemate has largely prevented both the private and public sectors from getting involved with legacy sites. The phased remediation scenario envisioned for the Stibnite Mine (see Section VII below) shows how stepwise site restoration measures represent a viable path for cleaning up old mines. The MMP initiates a path towards a site-wide, comprehensive cleanup that is achieved incrementally. The phased cleanup envisioned for the Stibnite Mine could potentially be applicable to other legacy mine sites.	RES	No further response required. General in nature or position statement.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	29	"Fluctuating economic conditions" should not be allowed to influence the life of the mine and the remediation/restoration activities. Perpetua should be committed/obligated to mine regardless of metals prices. Because pit mining is the primary ore source and tailings reprocessing is the secondary and last effort during the mine life, there is concern that tailings reprocessing will not be done as promised.	RES	Comment noted. Statement of position.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association),	18871	27	A long standing mantra for Midas Gold/Perpetua has been to "Restore the Site." And while improvements are needed and necessary to repair historic mining impacts, the current SDEIS proposes to drastically increase the footprint of SGP with a project life span of 15-20 years. A full restoration of the site would leave behind a functioning hydrological system with groundwater connectivity. Studies show that groundwater upwelling and springs are an important attribute that helps anadromous fish key into spawning areas. The proposed reclamation of tributaries running through the site would entail building a	RES	The effects of restored stream channels on fish and fish habitat are described in Section 4.12.2.2. Assessment of the proposed restored conditions indicate that they would be suitable habitat based on a consideration of a number of factors.

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Garret Visser (Idaho Wildlife Federation)			large lined trench over the top of tailings piles and then building a stream bed on top of this trench. Without connectivity to groundwater, this channel would become nothing more than a migration corridor if repopulated by trout and salmon.		
Deantha Skibinski, Executive Director, Alaska Miners Association	18899	7	<p>The SGP could become a template for how remining and reprocessing some legacy mine sites could recover critical minerals while concurrently remediating the impacts from past, unregulated mining practices.³ As a prototype remining/reprocessing project, putting the SGP into production would help validate the concept that redeveloping and remediating old mine sites by remining and reprocessing legacy mine wastes represents a significant win for both the environment and the security of the Nation's critical minerals supply chains.</p> <p>The SGP also illustrates the complexity of the technical and economic issues encountered at legacy mine sites. At the SGP, it is not economically feasible to include all of the problematic legacy features in a mine plan. This is the likely the case for many other legacy sites. Although the MMP includes substantial environmental restoration measures, some problematic legacy mine waste piles will not be remediated because they are located outside of the project boundary for the MMP.</p> <p>The substantial but partial restoration of the SGP proposed in the MMP illustrates three important principles with potential applications at other legacy sites:</p> <ol style="list-style-type: none"> 1. There is considerable merit in pursuing partial cleanup measures because some environmental restoration and improvement is better than no improvement; 2. A partial cleanup effort will get the ball rolling, which may stimulate and enable future more comprehensive cleanup measures; and 3. Addressing the range of environmental problems at a legacy site is complex and expensive. <p>Recognizing the urgency to eliminate selected mine waste piles that are outside of the MMP project boundary as ongoing sources of contaminated leachate, Perpetua entered into an Administrative Settlement and Order on Consent (ASAOC) with the Forest Service and the U.S. Environmental Protection Agency (EPA) in January 2021. As described in Section 1.3 of the SDEIS, the ASAOC is a phased plan designed to remediate the legacy features outside of the MMP project boundary. Perpetua initiated Phase 1 of the ASAOC in July 2022. In the future, Perpetua may be able to pursue the conceptual site restoration measures in Phases 2 and 3 of the ASAOC if and when Perpetua is producing gold and antimony from the Stibnite Mine.</p> <p>Under Phase I of the ASAOC, Perpetua is voluntarily addressing several areas identified as being time-critical by implementing restoration measures that will eliminate or reduce contaminant sources from these areas as quickly as possible. The Forest Service and the EPA are directing and supervising the ASAOC Phase I remediation activities, which will cost Perpetua \$12 million to complete. In addition to these direct, on-the-ground remediation costs, Perpetua provided the agencies with a \$7.5 million performance bond to guarantee this work.</p> <p>The ASAOC Phase I water quality improvements are anticipated to be completed by 2025 and include constructing stream diversion ditches to divert water away from legacy mine wastes that are contaminating area streams, removing approximately 325,000 tons of legacy development rock and tailings from locations in Meadow Creek and the East Fork that are currently adversely impacting water quality. Phase I also entails conducting baseline studies at five historic mine adits that are discharging mine drainage.</p> <p>Once the SGP has all of its operating permits and production is underway, Phases 2 and 3 of the ASAOC give Perpetua the option to remediate additional legacy mine features located outside the MMP project boundary. These phases will require additional baseline data and engineering studies. They will also require funding using a portion of the revenue derived from mine production.</p> <p>The sequential combination of the ASAOC Phase 1, the MMP, and the future ASAOC Phases 2 and 3 would ultimately achieve a comprehensive, site-wide restoration and cleanup of the Stibnite Mine site. It</p>	RES	No further response required. General in nature or position statement.

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			<p>is therefore imperative that the Forest Service, the U.S. Army Corps of Engineers, and the Idaho State regulatory agencies take immediate steps to set this remediation sequence in motion.</p> <p>The opportunity to achieve a complete cleanup of the Stibnite Mine site that Perpetua will subsidize is both unique and important. There may not be a similar opportunity in the future if the SGP is not built and operated. If this occurs, the lost opportunity costs would be enormous and the <i>status quo</i> environmental problems would adversely affect water quality, fish habitat, and ultimately people and communities for many years.</p>		
Deantha Skibinski, Executive Director, Alaska Miners Association	18899	8	<p>As described in Section 4.21.2.2 of the SDEIS, Perpetua is proposing to invest \$1.1 billion to construct the SGP. It does not appear that there are any other companies, communities, Tribes, conservation groups, or ENGOs that are ready to make this extraordinary investment to restore the Stibnite Mine site. It is thus obvious that the most certain path to cleaning up the Stibnite Mine site is for the Forest Service to publish a Final EIS and issue a Record of Decision (ROD) to approve the SGP as soon as possible.</p> <p>In evaluating the MMP, the Forest Service must carefully consider whether Congress is likely to appropriate the money necessary to remediate the Stibnite Mine site. In the past, the Forest Service and other federal agencies conducted some very limited remediation activities at the Stibnite Mine that consisted of partial remedies that were ineffective in stemming the flow of contaminants that continue to leach from this site.</p> <p>According to the November 8, 2021 letter from the Intermountain Region Regional Forester, Mary Farnsworth, to Idaho Congressmen Russ Fulcher and Mike Simpson, the Forest Service spent \$5.2 million to remediate the Stibnite mine site between 1992 and 2013. The whopping difference between \$5.2 million and \$1.1 billion suggests that it is highly unlikely that Congress will appropriate the funds necessary to enable the Forest Service to perform a meaningful cleanup at Stibnite. Without Perpetua's proposed investment of \$1.1 billion to redevelop and remediate this site, the Stibnite Mine area will continue to create serious environmental and ecological problems in the Payette and Boise National Forests for the foreseeable future.</p>	RES	No further response required. General in nature or position statement.
Joseph Pietri	19062	4	Will Perpetua be there through the end of restorations if profits decline?	RES	A reclamation closure bond would be utilized to complete restoration activities in the event that the Project operator is unable to complete the activities.
Karen Balch (North Fork Veterinary Service)	19228	10	<p>At the heart of Stibnite Gold Project's public media campaign is a promise to heal the historic mining blight of the Stibnite area that occurred most recently 50 years ago and beginning well over a century ago. That damage is adjacent to and intrudes on the largest Primitive Area in the lower 48 states – the joined Gospel-Hump Wilderness and Frank Church River of No Return Wilderness.</p> <p>Stibnite Gold Project's concept of restoration is to redisturb the current Stibnite mine site and excavate at the minimum an additional 800 acres of undisturbed wildlife and fish habitat. Two of three enormous mining pits projected to be left permanently on the landscape in perpetuity with single-layer liners that will eventually leak. All liners leak eventually due to the natural permeability of materials that also have defects. It is sobering that a 6.5 magnitude earthquake rolled through Idaho's Sawtooth mountain range on March 31 of this year. With an epicenter area 45 miles west of Challis, the center of this major earthquake was only a few dozen miles east of Stibnite. This was the second largest earthquake in Idaho history, and even 3 months later the area is experiencing a string of aftershocks, some registering as high as magnitude 4.8 (Idaho Statesman, June 25, 2020). Earthworks' 2013 U.S. Gold Mines Spills and Failures Report study that all 27 active U.S. gold mines had experienced at least one pipeline spill or other accidental release.</p>	RES	Comment noted. Statement of position.
Karen Balch (North Fork Veterinary Service)	19228	12	Obviously, mining companies are commercial enterprises which must generate monetary profits for their owners and stock holders or cease to exist. Restoring the Idaho landscape back to its pre-mining pristine habitat does not directly make money for mine owners or stock investors, but rather is simply a cost of doing business. All successful businesses regulate and minimize the cost of doing business. While Stibnite Gold Project website states, "Midas Gold is committed to following all of the modern regulation	RES	Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope.

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			<p>practices and financial assurance calculations so we can restore the site,” details specifying the actual particulars of bonding are not available.</p> <p>What is the monetary amount of the bond? What formula is used to calculate bonding and by whose calculations?</p> <p>What are the terms of the bond that the government is requiring for actual mining to begin?</p> <p>Historically, western United States is littered with abandoned mines – literally mined out with now-forgotten owners having declared bankruptcy to avoid additional costs. As an example, Montana’s Zortman and Landusky gold and silver mines, originally owned by the Canadian company Pegasus Gold Corp, went bankrupt and folded 20 years ago. As of March 2019, that abandoned mine continues to leave a legacy of water pollution and a cleanup bill nearing 100 million dollars that is expected to continue in perpetuity. Consider Colorado’s Summitville Mine that has cost American taxpayers over \$100 million in EPA cleanup and in 2021 Colorado state taxpayers were handed back a mine estimated to cost \$2 million annually in perpetuity or “forever” – it’s the mine that keeps on giving. In hindsight, how should a mining site that is permanently polluted, such as Summitville, be bonded so the public is not burdened by substantial costs forever?</p> <p>Given the past history of polluting exhausted gold mines abandoned in western United States, Stibnite Gold Project must provide robust financial evidence of fiscal bonding before permitting should even be allowed. And to appreciate the litany of devastation and death from cyanide gold mining see the list of gold mining disasters resulting from dam failure, cyanide leaking into the environment and inappropriate toxic waste discharge related to gold mining using gold cyanidation technique (https://en.wikipedia.org/wiki/List_of_gold_mining_disasters and the human loss of life).</p> <p>What assurances does the American Public have that Stibnite Gold Project (SGP) under one of Perpetua Resources Corp.’s subsidiaries will not simply declare bankruptcy or sell its mining interests to another company leaving a bigger colossal toxic mess. I don’t see that addressed.</p> <p>What assures that any mining company successors to SGP will be bound by any previous restoration agreements?</p> <p>What iron-clad incentives or agreements prevent SGP from simply abandoning its stated restoration plans after having gutted more pristine Idaho wilderness and profited from whatever gold was mined?</p>		
Olin Balch (North Fork Veterinary Service)	19234	6	<p>At the heart of Perpetua’s (previously Midas Gold’s) public campaign is a promise to heal the historic mining blight of the Stibnite area that occurred over decades and decades ago. That damage is adjacent to and intrudes on the largest Primitive Area in the lower 48 states – the joined Gospel-Hump Wilderness and Frank Church River of No Return Wilderness.</p> <p>However, Perpetua’s concept of restoration is to redisturb the current Stibnite mine site and excavate many, many more acres of previously undisturbed wildlife and fish habitat. As described the proposed SGP is a massive cyanide leach gold mining operation that doubles the area of land disturbance from 1,593 to 3,265 acres. This includes the excavation of three open pit mines. Two of three enormous mining pits are projected to be left on the landscape in perpetuity with liners that will eventually leak. All liners leak eventually. It is sobering that a 6.5 magnitude earthquake rolled through Idaho’s Sawtooth mountain range on March 31, 2020. With an epicenter area 45 miles west of Challis, the center of this major earthquake was only a few dozen miles east of Stibnite. This was the second largest earthquake in Idaho history, and even 3 months later the area is experiencing a string of aftershocks, some registering as high as magnitude 4.8 (Idaho Statesman, June 25, 2020). Earthworks’ 2013 U.S. Gold Mines Spills and Failures Report study that all 27 active U.S. gold mines had experienced at least one pipeline spill or other accidental release. Obviously, mining as a commercial enterprise must generate monetary profits for its owners and stock holders. Restoring the Idaho landscape back to its pre-mining pristine habitat does not directly make money for mining companies, mining subsidiaries, or stock holders, but rather is simply a cost of doing business. All successful businesses regulate and minimize the cost of doing business. While Midas Gold’s website states “Midas Gold is committed to following all of the modern regulation practices and financial assurance calculations so we can restore the site,” details specifying</p>	RES	A reclamation closure bond would be utilized to complete restoration activities in the event that the Project operator is unable to complete the activities.

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			<p>the actual particulars of bonding are missing. Restoration should mean more than just buried concrete tunnels substituting for previously pristine, meandering, fish-filled streams and leveled heaps of gravel replacing vegetation-lush meadows and wetlands. Environmental detoxification is not a substitute for true restoration.</p> <p>Who will monitor and clean up the East Fork South Fork Salmon River after Perpetua leaves at their stated finish, 40 years after beginning actual mining? Perpetua should be required to monitoring and cleaning up now and in perpetuity if so required. Additionally, Perpetua should be required to post a sufficient financial bond to cover the expected cost.</p> <p>What is the monetary amount of the bond?</p> <p>What are the terms of the bond that the government is requiring for actual mining to begin?</p> <p>Western United States is littered with abandoned mines – literally mined out with now-forgotten owners having declared bankruptcy to avoid additional costs. As an example, Pegasus Gold Corp, a Canadian company that owned the Zortman-Landusky mine and others in Montana, went bankrupt and folded in 1997. As of March 2019, that abandoned mine continues to leave a legacy of water pollution and a cleanup bill nearing 100 million dollars that is expected to continue in perpetuity.</p> <p>Given the past history of polluting exhausted gold mines abandoned in western United States, Perpetua must provide robust, real financial deposits of adequate bonding before permitting should even be authorized.</p> <p>What assurances does the American public have that Perpetua will not simply declare bankruptcy or sell its mining interests to another gold mining company avoiding responsibility for cleanup?</p> <p>What assures that any mining company successors to Perpetua will be bound by any previous restoration agreements?</p> <p>What iron-clad incentives or agreements prevent Perpetua from simply abandoning its stated restoration plans after gutting more pristine Idaho wilderness and profiting from whatever gold was mined? Invariably the history of foreign and domestic companies who have mined US public lands for centuries is simply to leave without “cleaning up” once the ore is out of the ground and mining is no longer profitable.</p>		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	26	"Each of these pits would also be backfilled with development rock to a certain degree which would bury certain portions of the open pits and their highwalls. " Please note the West End Pit would not be backfilled.	RES	The text has been revised to clarify that the West End pit would not be backfilled.
Ruth Lewinski	19378	11	<p>5.0 Allocated Cleanup Costs and Timeline</p> <p>For several decades, the Stibnite site has had different rehabilitation efforts. Thousands of tax-payer dollars have already been spent in attempts to 'clean' this site. Contaminants, particularly arsenic, in this region are above recommended environmental exposure thresholds CDC. While it is incredibly hopeful that Perpetua will clean this site in its efforts, it is not guaranteed. Under current Idaho policy, mining companies are able to claim credit for potential respiration costs. Due to the complexity and extensive history at this site, this is inappropriate. At least 50% of the potential respiration costs for this operation should be in capital bonds. In addition, the site (as previously proposed) should be an official CERCLA site with federal funding and efforts to have an adequate, appropriate, and long-lasting reclamation.</p>	RES	Comment noted. Statement of position.
David Chambers	17634-A	2	There are two very serious flaws with the technical analysis in the SDEIS. The first is the failure to include an analysis of the financial surety associated with reclamation and closure. The public is ultimately liable for this cost if the company cannot pay it, and it is liable for any difference between the amount eventually established by the Forest Service and the actual cost of reclamation and closure.	RES	Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope.

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			<p>In the 2019 Prefeasibility Study, the cost estimate for the financial surety was \$66.5 million. In the 2021 Feasibility Study that cost estimate increased to \$100 million. These cost calculations are not included in the EIS analysis, only in the feasibility analyses, but they have potential significant financial impact on taxpayers and the public. There is no technical justification for delaying the analysis of these calculations, since the mining alternative has been determined, and the financial assurance calculations have already been done. The public deserves to be able to comment on these calculations as a part of the EIS.</p>		
David Chambers	17634-A	9	<p>2.4.7.14 Closure and Reclamation Financial Assurance</p> <p>It is noted in this section, “Perpetua would be required to post financial assurance to ... provide adequate funding to allow the Forest Service to complete reclamation and post-closure operation, including continuation of any post-closure water treatment, maintenance activities, and necessary monitoring for as long as required to return the site to a stable and acceptable condition in the event Perpetua was unable to do so.”</p> <p>When mines are developed on their lands, a financial assurance is required by federal land managers and many state regulatory agencies. The financial assurance is to cover the cost of reclaiming the disturbed surfaces of the mine, and to pay for all post-closure requirements. In this case, a significant part of the financial assurance will be for the cost of water treatment.</p> <p>It is also important to note that the financial assurance does not cover the cost of a potential mine accident. The financial assurance only covers planned closure.</p> <p>The financial assurance requirement is important for several reasons.</p> <p>First, there have been numerous instances in virtually every state of mining companies going bankrupt and not having the financial resources to complete their closure obligations– for example, the Illinois Creek mine in Alaska, and the Zortman-Landusky mine in Montana. In these instances, the government regulatory agencies did not require enough financial assurance to cover the actual costs of mine closure.</p> <p>In British Columbia, it is estimated that the Province holds over \$1 billion less than the full value for financial assurance required to reclaim BC mines. If the mining company cannot clean up and close the mine, then the public becomes liable either for the cost of cleanup, or for the environmental consequences of the damaged minesite.</p> <p>There is significant political pressure to keep the costs of these financial assurances as low as possible in order to enhance the economic viability of the mine. In the past, this has led to significant underestimations of the amount of financial assurance required to close a mine after a bankruptcy.</p> <p>Alaska, Montana, Nevada, South Dakota, and other states have been victims of this problem. In each instance, taxpayer dollars were required to augment inadequate financial sureties.</p> <p>Second, the amount of money required to close the mine and to perform post-closure water treatment can be enormous. The present financial assurance for closure of the Red Dog mine in Alaska is \$563 million, most of which is related to water treatment in perpetuity. At closure, the Red Dog mine is projecting to treat approximately 1.8 billion gallon/year, which drives the majority of the financial assurance requirement. Perpetual water treatment at Stibnite would add hundreds of millions of dollars to the closure cost, which must be covered by the financial assurance.</p> <p>How the agency responsible for calculating the financial assurance to insure that public will not be saddled with these costs is an important issue that is being avoided in the EIS. Public disclosure, and an opportunity to review the cost calculations, is not only appropriate, but the potential financial and/or environmental impact on the public is also significant.</p> <p>The National Environmental Policy Act requires federal agencies to undertake a pre-action analysis in the form of an Environmental Impact Statement (EIS) of potential environmental impacts for “major</p>	RES	<p>Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope.</p>

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			<p>Federal actions” that may “significantly affect” the quality of the human environment. 42 U.S.C. § 4332(2)(C).</p> <p>The Code of Federal Regulations, Title 40: Protection of Environment defines “human environment” as: §1508.14 Human environment.</p> <p>Human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. (See the definition of “effects” (§1508.8).) This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment. (emphasis in original) If a financial guarantee is required to protect environmental values, like clean water and fish, then 40 CFR1508.14 clearly suggests that the significant financial assurance required by agency regulations should be evaluated in an EIS. When a federal agency intentionally decides to ignore analyzing the requirement for a financial assurance to protect the environment, the message it clearly sends is that it is not confident in its ability to defend its financial assurance calculations to the public. Deferring the analysis of the financial assurance requirement until later in the permitting process expedites the permitting process, as well as make it more difficult, if not impossible, for the public to review and comment on the adequacy of the financial assurance requirement.</p> <p>Reclamation and Closure costs are not only a significant factor for calculating the capital costs of a mine, but are also a potential major liability to the public if they are not properly calculated and managed. This means Reclamation and Closure costs could have a major potential impact on the economic environment of both the community hosting the mine, and the taxpayers who would be liable to pay the costs of reclamation and closure if the mining company becomes financially insolvent. Under the NEPA definition of “significant environmental impact”, the potential impacts of an inadequately calculated financial assurance for the reclamation and closure of this mining project could have significant economic, social, and environmental impacts. The financial assurance should be analyzed as a part of this SDEIS.</p> <p>In the SDEIS, it is important to disclose and analyze the assumptions that will be made in establishing the financial assurance the amount of post-closure financial assurance needed to protect the public if water treatment is required beyond Mine Year 40. At a minimum, tens of millions of dollars are at issue.</p> <p>However, in the SDEIS it is noted: “Calculation of the initial bond amount would be completed following the Record of Decision (ROD) when enough information is available to adequately and accurately perform the calculation.” (SDEIS 2022).</p> <p>The information available at this stage of the mine design, and for the SDEIS analysis, is more than sufficient to analyze the Reclamation and Closure costs. In fact, those calculations have already been made in the Feasibility Study (M3 2021). The Forest Service has decided not to include them in the SDEIS. By doing so, the Forest Service is playing a classic game of “hide the ball”.</p> <p>In its 2021 Feasibility Study, M3 notes: “Anticipated costs for closure and reclamation of the Stibnite Gold Project were developed utilizing the Standardized Reclamation Cost Estimator (SRCE) model currently used and developed in Nevada for mining specific projects, supplemented by site-specific costs and quantity estimates from the FS designs. This model has been utilized for mining projects on public and private land in Nevada and other western states for many years and is publicly available online through the Nevada Division of Environmental Protection.” (M3 2021)</p> <p>As M3 notes, the Nevada Standardized Reclamation Cost Estimator is probably the most widely used spreadsheet model used to calculate the costs of reclamation and closure. I have used this model, and it contains of all of the sections necessary to calculate cost estimates for reclamation, closure, and postclosure activities, including perpetual water treatment, and the additional costs that would be incurred should a regulator be forced to conduct reclamation and closure activities if the mining company were to become financially insolvent.</p>		

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			<p>M3 included the calculation of these costs in the Prefeasibility Study (2019) because they constitute a significant line item in the capital requirements for the proposed project. In its 2019 Prefeasibility Study, M3 calculated this cost at \$66.5 million (M3 2019). This estimate included the cost of the financial surety/bond from a financial institution.</p> <p>For the 2021 Feasibility Study, as noted above, M3 stated the reclamation and closure cost calculation would be finalized after the Forest Service issued a record of decision. However, M3 did calculate a reclamation and closure cost, but listed it only as cost per ounce of gold produced. That cost was \$24/oz produced. Using \$24/oz produced, and the total life of mine production is 4,819,000 ounces of gold, I can calculate the total reclamation and closure cost of \$100 million.³ This is almost double the 2019 cost estimate of \$66.5 million (M3 2019). The public is ultimately liable for this cost if the company cannot pay it, and it is liable for any difference between this amount and the actual cost of reclamation and closure, if the actual cost should be greater than the \$100 million.</p> <p>Why is there such a significant difference between the 2019 cost of \$66.5 million and the 2021 cost of \$100 million? Did the cost calculation assume water treatment for 40 years, or for treatment in perpetuity, which would be protective of the taxpayers? What assumptions were made for the Indirect Costs associated with a government agency assuming the responsibility for reclamation and closure? Indirect Costs typically vary between 25% and 45% of the direct reclamation and closure costs. What assumptions were used for the present value calculations to pay for post-closure water treatment, and for monitoring and maintenance? Who will manage the post-closure fund? What rate of return for the investment was assumed?</p> <p>These are all questions that can be answered now, and those answers will not change between the present time and the issuance of the record of decision and permits for the mine. The financial assurance calculation is an issue that can, and should, be discussed now. The public deserves to know these answers, and deserves to be able to comment on them, as a part of the EIS. There is no reason to hide the ball.</p>		
Samuel Penney (Chairman)	19396	46	<p>2.4.7 Closure and Reclamation</p> <p>The SDEIS states, "[c]losure and reclamation activities would be intended to achieve post-mining land uses of wildlife and fisheries habitat and dispersed recreation at the SGP."⁹³ The SDEIS needs to expressly identify, fully evaluate and disclose impacts to the Tribe's 1855 Treaty-reserved rights and access to Tribal cultural resources as post-mining land uses. Vague references to "wildlife and fisheries habitat" or "dispersed recreation" are inadequate and do not address the unique treaty rights and other interests the Tribe has at the mine site and within the affected area.</p>	RES	SDEIS Section 4.24.2.2 describes potential effects on tribal treaty rights and interests.
Samuel Penney (Chairman)	19396	60	<p>According to SDEIS Section 2.4.5.13 "Mine Site Borrow Sources various types of earth and rock material would be used from borrow sources for construction, maintenance, closure and reclamation activities. Most of these materials can be sourced at the mine site from existing development rock dumps, legacy spent heap leach ore in the spent ore disposal area and legacy heap leach facilities, and from development rock removed as part of proposed surface mining and underground exploration activities. These materials would be subject to physical and chemical testing to determine suitability for use." This description does not identify the actual quantities of borrow materials for reclamation and closure that would be required. According to SDEIS Section 4.5.2.2 Reclamation Cover Materials, "[a] total of approximately 1,658,075 bank cubic yards ("BCY") of suitable soils (Growth Media ("GM") and seed bank material ("SBM")) would need to be salvaged from the SGP for reclamation. A total of approximately 860,373 BCY of GM, chipped wood blend, and SBM are available for salvage at the SGP. The GM deficit is thus estimated at approximately 797,702 BCY."¹⁰⁵ "Options being considered by Perpetua for developing additional GM for the SGP include: utilizing materials from off-site borrow areas and supplementing additional salvage of GM through composting." The SDEIS does appear to recognize the challenges associated with reclamation materials in SDEIS Section 4.5.2.2 Reclamation Cover Materials despite summarizing that the overall relatively poor quality of the soils at the mine site (outside of valley bottom soils), the long-term stockpiling of growth media/seed bank materials, and the high background concentrations of metals in soils would affect the quality and suitability of available</p>	RES	The Reclamation Closure Plan is summarized in the EIS document. Reclamation includes performance monitoring to assess the effectiveness of revegetation and allows for modifications in the event that reclamation and revegetation goals are not achieved.

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			reclamation cover materials. These challenges, coupled with the harsh winter climate (short growing season) and generally steep slopes of the area, would compound to present difficulties in growing and/or maintaining persistent vegetation cover over reclaimed areas. This is consistent with the mixed vegetative cover success of nearby reclaimed mining areas and the previous efforts by Perpetua and others at the mine site to establish self-sustaining cover on previously mined lands that have had some limited success. However, the suggestion in the DEIS, that adding a marginal amount of organic material as suggested, will somehow provide the answer is unsupported. Particularly given the expectations of infiltration reduction that have been attributed to the reclamation covers, the matter of borrow materials suitability and availability is of more significant concern and challenge than suggested by the SDEIS.		
Samuel Penney (Chairman)	19396	61	There is a well-established history of inadequate borrow material characterization leading to environmental impacts as a result of using unsuitable material for foundations and other needs. For this reason, the borrow sources should be identified and physically and chemically characterized and analyzed in the SDEIS rather than this subject being deferred to a later time. In addition, it is important to establish whether adequate quantities of materials for reclamation and closure respective of each Alternative analyzed in the SDEIS are actually available as otherwise additional borrow sources, not addressed in the SDEIS, could be required. Finally, the overall approach to reclamation cover materials should be further assessed including the practicality of construction of cover layers in 6 – 12 inch thicknesses, particularly where an engineered cover including a geomembrane liner is concerned, combined with revegetation challenges, and expectations that performance must be ensured over a very long time in the future.	RES	Chapter 2 describes the number, location, and criteria for proposed borrow sources. Installations of geosynthetic liners and soil covers are achievable by existing technologies and practices that are subject to technical specifications and quality controls.
Samuel Penney (Chairman)	19396	65	<p>The SDEIS describes the process of TSF closure in Section 2.4.7.6 TSF and TSF Buttress as follows, “After tailings consolidate sufficiently to use heavy equipment on top of the tailings, starting approximately 3 to 5 years after the end of deposition, Perpetua would begin with placement of cover material, then construct wetlands and restore Meadow Creek and its tributaries within appropriately sized lined floodplain corridors, place growth media, and revegetate the area.”</p> <p>Experience has shown that the consolidation of tailings is highly variable and site specific, and that final reclamation can require significant additional time than is inferred, since it is not described in detail. The Mount Polley Independent Expert Review Panel identified three principles for best available technology for existing TSFs as: no surface water; unsaturated conditions; and, achieve dilatant conditions by compaction. The Canadian Dam Association describes TSF closure in four phases related to the management of risk of TSF’s depending on their state of closure.</p> <ul style="list-style-type: none"> • The SDEIS should include an RCP that identifies, in reasonable detail, what stage of TSF closure is expected to be achieved, how closure is to be achieved, and when in accordance with Canadian Dam Association recommendations. • The SDEIS should also identify stable landform closure as an alternative for the TSF if it is not clear that the proposed action would result in that condition being achieved within a reasonable time-frame. <p>The SDEIS description in Section 2.4.7.12 Contouring, Grading, Growth Medium Placement, and Seeding is potentially the most minimal description of land reclamation activities ever provided in the history of NEPA documentation dealing with hardrock mines. The SDEIS only references an RCP in the context of not describing a reclamation seed mix and rates. No information is provided specific to the reclamation schedule.</p> <p>The SDEIS should have more completely described the RCPs and provided important details such as the proposed cover design. An additional level of detail for the plans is necessary to conform with Forest Service regulations and guidance¹⁰⁹ which is the subject of the SDEIS, and should not be delayed or deferred to the Idaho permitting processes. The applicant should have submitted its application to the Idaho agencies and advanced that process concurrently with the SDEIS, but if they did not then the Forest Service should have required it during the technical completeness review process prior to initiation of the NEPA process. The SDEIS should be supplemented to include this information, including as it pertains to the effects-analysis, and the SDEIS re-issued for public review.</p>	RES	<p>Section 2.4.7 summarizes the proposed TSF reclamation as detailed in the Reclamation Closure Plan. This summary describes the expected timing for the various closure activities which are generally related to management of the residual process solutions contained by the impoundment at the time of closure.</p> <p>Geotechnical analyses of the operational, closure, and post-closure TSF, embankment, and buttress conclude that the reclaimed TSF would be a stable facility.</p>

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Samuel Penney (Chairman)	19396	69	<p>Potential additional care and maintenance measures that should be considered by the Forest Service to minimize long-term liability of reclamation uncertainties include long-term settlement of the waste rock piles and TSF, functionality of stormwater drainage channels and sediment ponds, stability of the TSF and other constructed river channels, and effects from climate change.</p> <p>If a long-term trust fund will be established for the proposed project, the appropriate level of funding, types of financial instruments, and mechanics of the fund are critical to ensure that sufficient funds will be available when needed. In addition to the projected long-term engineering, maintenance, and monitoring costs of each activity, the SDEIS should discuss the financial assumptions used to estimate the funding levels, projected trust fund growth rate, and mechanics of the trust fund. The fund mechanics include: (a) requirements for timing of payments into the trust fund; (b) how the responsible agency ensures that the trust fund is bankruptcy remote; (c) acceptable financial instruments; (d) legal structure of the trust fund for tax purposes; (e) who will pay the taxes on trust fund earnings and trust fees and expenses; (f) how will taxes and fees be paid on the trust if the mining company goes out of business; (g) who will make investment decisions if the operator is no longer viable; (h) if the federal government controls the investment decisions, what legal and ethical issues arise from the responsible agency controlling investment decisions about investments in private companies, voting stock and similar issues if the trust owns stock; (i) the identity of the trust fund beneficiaries; and (j) the identity and corporate structure of the operator with responsibility and liability for financial assurance at this site.</p> <p>The Project includes measures and controls that would require long-term post-closure operations and maintenance to protect water quality. The need for long-term post-closure operations and maintenance, facilities replacement, and monitoring should be acknowledged in the SDEIS. The SDEIS should contain adequate details regarding financial assurance commitments (e.g., for reclamation and long-term operations and maintenance) as well as meaningful assurances that a proper financial instrument will be established to ensure that adequate funds are available as long as they may be needed for this purpose.</p>	RES	<p>SDEIS Section 4.2.2.2 describes the geotechnical risks associated with the Project facilities and the design features, requirements, and other measures that would be implemented to minimize these risks.</p> <p>The Final EIS includes information regarding a long-term trust for maintaining restoration and reclamation.</p>
Samuel Penney (Chairman)	19396	81	<p>The SDEIS states that total arsenic was identified as having the greatest potential for phytotoxicity in plants at the site, but does not provide any further information. The SDEIS needs to describe the affected environment which includes research and restoration efforts to date regarding soils and vegetation. It needs to include findings from the soil survey generated by Tetra Tech, including information from the root zone analysis, Hecla reclamation efforts, and evaluations of vegetated soil within and adjacent to the Project area.</p>	RES	<p>The Reclamation Closure Plan and associated soil surveys describe the Project areas current state with regard to soil quality, vegetation, and reclamation revegetation. These results are summarized in Section 3.5.</p>
Samuel Penney (Chairman)	19396	182	<p>The SDEIS discloses that the best salvaged materials will be reserved for wetland restoration while poor quality mediums will be used for upland reclamation. This is unacceptable considering (again) that soil quality will be further compromised from long-term storage in deep stockpiles (piles 200' tall stored for 1 to 42 years). Sacrificing uplands for the sake of wetlands does not comply with NFMA and Forest Plan direction. Lands should be treated equally.</p>	RES	<p>Comment noted. Statement of position.</p>
Samuel Penney (Chairman)	19396	184	<p>The Tribe has little faith that the Project area will be reclaimed to a condition that is better than existing conditions given the proposed impacts to soil quality, delays between initial disturbance and final reclamation (> 16y), and that past reclamation efforts have not been successful. The amount of suitable soil available as growth media is suspect given that soil horizons and suitability vary across the Project area. The Tribe is not optimistic that reclamation efforts will sustain Tribal resources in perpetuity. Because there are inadequate resources to reclaim all lands disturbed by the Project to a condition commensurate with pre-mining conditions and that the purpose and need of the Project does not align with NFMA and Forest Plan management direction (i.e., the Project will not move the landscape toward desired conditions, will create adverse impacts to Treaty resources and exercise of Treaty rights, and jeopardizes the trust responsibility that the Forest has to the Tribe), the Forest needs to reject the Project.</p>	RES	<p>Comment noted. Statement of position.</p>
Samuel Penney (Chairman)	19396	201	<p>The SDEIS should address the expected efficiency and longevity with respect to maintenance and replacement of the underdrain system given it will be required to continue to operate as per design in perpetuity, and address/include mitigation in the event of the failure of the underdrain system.</p>	RES	<p>The TSF is predicted to dewater over a period of 40 years. Leak detection systems would be able to detect leaks during the period when saturated conditions are present in the tailings which is not expected to persist in perpetuity.</p>

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			The SDEIS should also outline a plan for detecting leaks in all geosynthetic cover systems (both the bottom and top covers) in perpetuity.		The TSF underdrains would collect spring and seep flows beneath the TSF impoundment and embankment. Because they are separated from the TSF materials by a geosynthetic liner system, these flows would be handled as non-contact water and are expected to exhibit water chemistry consistent with existing conditions. In the event of an underdrain system failure, these waters would remain in the subsurface as groundwater flow.
Samuel Penney (Chairman)	19396	202	The SDEIS does not address methods to ensure that the geosynthetic bentonite clay cover at all covered sites will remain properly hydrated to prevent cracking and subsequent leaking. This is especially relevant to the covering of tailings to prevent further leakage. Studies using geosynthetic covers incorporating a layer of bentonite encased between nonwoven and woven geotextiles, laminated with a polyethylene geofilm and 769 mm (~30 inches) of sandy planting medium planted with perennial grasses did not prevent cracking of the laminated bentonite, subsequently increasing annual seepage rates. These findings suggested that plant roots were likely the cause of substrate dehydration and subsequent bentonite cracking. Based on these findings, the proposed 12 inches of planting medium above the geosynthetic covers is therefore insufficient to prevent drying of the bentonite layer after being planted leading to perpetual seepage while increasing annual seepage rates.	RES	The Reclamation Closure Plan proposes the use of geosynthetic liners installed over prepared subgrades. The current proposal does not include the use of bentonite clays as part of the liner installations.
Samuel Penney (Chairman)	19396	241	According to the RCP, post-mine conditions will not be conducive to whitebark pine growth, therefore it will not be included in the seed or planting mixes. This is unacceptable.	RES	Comment noted. Statement of position.
Samuel Penney (Chairman)	19396	299	The effectiveness of a post-mining, reestablished EFSFSR channel across the Yellow Pine pit is questionable due to a lack of groundwater interactions from the lined channel, riparian cover which will take decades to establish and provide shade, and an unknown timeframe for when mining will cease due to ongoing exploration.	RES	SDEIS Section 4.9.2.4 acknowledges uncertainties regarding the establishment and performance of the restored stream channels. Section 4.9.3 includes mitigation measures to address those uncertainties regarding the timing and effectiveness of the stream restoration.
Samuel Penney (Chairman)	19396	300	Touting adaptive management is only as good as the "clearly identified outcomes" which are difficult to predict in such a large and complex mining operation as the proposed Stibnite Gold mine. The timeframe of the project is directly tied to the ongoing exploration which is designed to prolong the mining. Although the stream "enhancements" and restoration, such as restoring passage at the box culvert are touted as positive habitat improvements, the timeframe for completion are uncertain if continued exploration extends the mine life. Efforts such as riparian restoration may take decades to become established due to a harsh growing environment. Some restored stream segments may not ever become suitable aquatic life habitat due to a number of factors.	RES	SDEIS Section 4.9.2.4 acknowledges uncertainties regarding the establishment and performance of the restored stream channel. Section 4.9.3 includes mitigation measures to address those uncertainties regarding the timing and effectiveness of the stream restoration.
Samuel Penney (Chairman)	19396	430	Financial Assurance Which agency will be taking charge of the financial assurance, the Forest Service or the Idaho Department of Lands? The Federal government will not accept corporate guarantee bonding. The development of financial assurance at this proposed mine site should include a transparent review process with consistent reporting listing how each variable adds up to the final amount.	RES	Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope. The Forest Service would hold the financial assurance for activities covered under its approval of the mine plan and its associated reclamation plan. State regulatory agencies such as the IDL hold the financial assurance for activities authorized under their permitting purview.
R. Skipper Brandt, Ted Linsely, Denis Duman		2	In communities throughout our country, we regularly see the scars left by historical mining on our landscape. It is important to us, and our local citizens, that before this project is approved it must first meet the strictest financial assurance requirements. We must be assured that the funding required to provide the required reclamation of Stibnite is set aside and protected through widely accepted financial tools rather than corporate guarantees.	RES	Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope. The Forest Service does not accept Corporate guarantees as a form of financial surety for reclamation costs.
Samuel Cousins		27	21. Monitoring Responsibility. The SEIS and FEIS must make it clear exactly what entities are responsible for each monitoring throughout the entire 35 year term of the project. In no cases should the Forest Service take on, or assign monitoring responsibility away from, Perpetua (or its successors) to the Forest Service or other Federal, State, or local agencies of individuals.	RES	Monitoring responsibilities will be assigned via the Forest Service decision on the Project that will specify that the permittee has the mining responsibility. Any modification of monitoring responsibilities would be subject to a permit modification approved by the Forest Service.
Samuel Cousins		28	22. Restoration Without Mining. Perpetua in its Proposed Project seems to believe "the "village must be destroyed to save it later." This assumption is false. Instead of the proposed action of superimposing a major new mining complex on top of a badly degraded but slowly recovering landscape, the better and	RES	Comment noted. Statement of position.

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			more logical alternative is to continue the present recovery underway and increase restoration actions to help nature take its course.		
Alan Prouty		3	<p>This Project Provides a Model on Addressing Abandoned Mine Sites</p> <p>It is well recognized that historical mining that occurred in the United States before the advancement of environmental law and environmental protection technology, has resulted in a large number of abandoned mine sites that release hazardous substances into the environment. The Stibnite site, as mentioned above, was mined before such laws and technologies existed, and is a legacy mine site that releases contaminants into the environment. The United States Congress has wrestled for a number of years with how to address such mine sites. One concept has been called a "Good Samaritan" approach: i.e., develop a legal mechanism for an entity/organization to address the contaminants/ environmental damage from such legacy mine sites. This project will accomplish such a purpose and provide an example of how a historical mining area can be "re-mined" to recover metals valuable (and critical) to the U.S. economy while addressing and resolving historical impacts from a legacy mine site. Such a "demonstration" project is invaluable to demonstrate a viable way to address (with many benefits) this very important natural resource issue.</p>	RES	Comment noted. Statement of position.
John Rygh		6	Climate change presents yet another challenge to successful reestablishment of vegetation and is only addressed in passing in the Climate Change Specialist Report (U.S. Forest Service {Forest Service}, 2022b). Soil moisture and carbon content are expected to decline (p. 19). More frequent rain-on-snow events would increase erosion. Changes in precipitation, evaporation, and streamflow will affect vegetation growth. There is no discussion concerning the choice of revegetation species that could be more resilient to climate change.	RES	SDEIS Section 4.4.2.2 describes the effects of climate change on soils and vegetation. Vegetation species included in the reclamation plan are based on Forest Service requirements for revegetation and the revegetation goals associated with the Project.
John Rygh		8	Given the numerous adverse factors and uncertainties noted above, the long-term success of the postmining reclamation of the site is very much in doubt, with the final outcome conceivably being essentially an ecological sacrifice zone.	RES	SDEIS Section 4.9.2.4 acknowledges uncertainties regarding the establishment and performance of the restored stream channels. Section 4.9.3 includes mitigation measures to address those uncertainties regarding the timing and effectiveness of the stream restoration.
John Rygh		9	Then there's reclamation bonding. The Forest Service needs to explicitly state that all financial assurance instruments for the bond meet federal guidelines that preclude the use of corporate guarantees. Perpetua successfully lobbied to get the State of Idaho to accept corporate guarantees which are expressly forbidden by the Forest Service after the spate of huge defaults in the 1990s. If the State of Idaho ends up setting the bond for the private parcels at Stibnite, the Forest Service needs to increase their bond to account for the potential for contaminated surface water and/or groundwater to travel onto Forest land in the event that Perpetua defaults on their State bond.	RES	<p>Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope.</p> <p>The Forest Service does not accept Corporate guarantees as a form of financial surety for reclamation costs.</p> <p>The Forest Service financial assurance decision would not include amounts conceived as deficiencies in bonds determined by other regulatory agencies.</p>
Doug Stowers		3	As multiple generational residents of central Idaho, my family has witnessed firsthand the suffrage caused by government officials that implemented broad sweeping environmental protection measures that were closed minded and failed to factor the economic impact of the people that live within. These measures decimated our small towns to a point where poverty was prevalent and the pursuit of the American dream often meant that the application for food stamps was successfully submitted. Today, although we understand that the measures taken were vitally important to the preservation of Central Idaho's landscape and wildlife, we realize that the "human element" can now be factored in while devising a plan for environmental protection because of the scientific discovery of ulterior methods that previously were nonexistent. Perpetua Resources has designed plans to overcome multiple environmental issues that have gone by the wayside for decades and many would be substantially beneficial to central Idaho's residents and its wildlife. One example is a plan to construct a fish bypass tunnel that would aid anadromous salmon and steelhead in returning to historic spawning grounds that have not been accessible to these creatures in over 80 years! Another example is a detailed plan to reprocess old mine tailings that currently contain hazardous amounts of mercury and other destructive elements, extracting amounts that would stop harming the areas fish, wildlife and residents.	RES	Comment noted. Statement of position.

Alternatives

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Elizabeth Barnes	6652	40	Why is underground mining not considered as an alternative? When an open pit mine has never been able to operate without severe environmental contamination in the history of the United States.	ALT	The reasons why underground mining was not considered as a reasonable alternative to the proposed open pit mining method is discussed in Section 2.6.1.1 of the SDEIS.
Elizabeth Barnes	6652	44	The alternative action option of "no mine" is not seriously considered in the EIS despite its clear benefits to human health, water quality, endangered species, aquatic food chains, and fish. Why is the EIS written without due attention to the no action alternative?	ALT	The No Action Alternative was evaluated in Section 2.3 of the SDEIS and in each of the resource sections of Chapter 4.
Bowen, Mike (Executive Director, New Mexico Mining Association)	16872	5	<p>The unacceptability of the No Action Alternative is equally clear. It is impossible to imagine any viable reason for the Forest Service to select the No Action Alternative as the Agency Preferred Alternative in the FEIS. Selecting the No Action Alternative would preserve and prolong the environmentally degraded status quo and forego this unique opportunity to use private-sector resources to clean up the Stibnite mine site.</p> <p>In our October 2020 comments on the DEIS, NMMA stated that the DEIS did not adequately describe the policy implications of the No Action Alternative. Unfortunately, this continues to be the case for the SDEIS, because the SDEIS does not fully describe the numerous environmental restoration measures that would not be built and the environmental improvements that would not materialize under the No Action Alternative. NMMA suggests the FEIS should include a more complete discussion of the adverse impacts to the environment and to national defense and military preparedness under the No Action Alternative. This discussion should disclose the enormous lost opportunity costs associated with the No Action Alternative.</p>	ALT	Consideration of a No Action Alternative is a requirement of all EISs. Each resource section of Chapter 4 of the EIS has a section discussing the effects of implementing the No Action Alternative on the subject resource. The differences between the socio-economic effects of the 2021 MMP vs. the No Action Alternative are described in Sections 4.21.2.1 and 4.21.2.2 of the SDEIS.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	7	The Preferred Alternative is New and Improperly Substituted in the SDEIS: The Forest Service has failed to evaluate appropriate Alternatives in both the DEIS and SDEIS. As noted, the Forest Service has abused the NEPA process, by extending extraordinary and inappropriate deference to Midas and Perpetua, and allowing new Alternatives to be substituted during the EIS period without Public Review. The SDEIS summarizes: "This SDEIS was prepared in response to a modified Plan of Restoration and Operations (Plan) for the SGP. The Forest Service received the original SGP Plan in 2016, (Midas Gold Idaho, Inc. [Midas Gold] 2016a) for review and approval in accordance with regulations at 36 Code of Federal Regulations (CFR) 228 Subpart A. A revised Plan, also known as MoDPRO(1), was submitted to the Forest Service in 2019 (Brown and Caldwell 2019a). A further modified Plan, also known as ModPRO2(2), was initially submitted in December 2020 with a revised submittal in October of 2021 (Perpetua 2021a)."	ALT	<p>Section 1.9 of the SDEIS states that the comments received on the 2020 DEIS were reviewed and considered as additional scoping input for the SDEIS preparation. These comments were analyzed in a content analysis process to develop public concern statements. Perpetua also reviewed the comments received on the 2020 DEIS and sought to respond to many of these comments by revising and resubmitting their Plan of Operations. This process produced the Modified Plan of Operations (ModPro2) submitted in October 2021, which then became the 2021 MMP which constituted a revised Proposed Action for Forest Service review. Sections 1 and 2 of the ModPro2 document explain how the changes in the modified plan of operations is partly in response to comments received on the 2020 DEIS. Appendix A of the ModPro2 document shows the comparison of the action alternatives reviewed in the 2020 DEIS and the ModPro2 plan. Because the 2021 MMP contained changes to the Proposed Action that are relevant to environmental concerns, the Forest Service decided to prepare a SDEIS. Also, based on comments received on the 2020 DEIS and the effects of the 2021 MMP, the Forest Service revised the action alternatives considered in the SDEIS. A major change in the format of the SDEIS and the 2020 DEIS was that technical supporting information was moved from the EIS to supporting specialist reports. The authors of these reports reviewed the public concern statements derived from the 2020 DEIS comments which advised the specialist report authors regarding content of those reports to be responsive to what was learned from the 2020 DEIS comments. Per 40 CFR § 1503.4(a) the Final EIS responds to individual comments or groups of comments. The Final EIS contains responses to both the comments received on the DEIS and SDEIS.</p> <p>The commenter submitted quantitative re-evaluation of the chemical characterization data in the 2020 DEIS to prepare elemental material balances for the different ore and waste materials of the operations. However, the elemental material balances are not solely indicative of potential environmental effects or how these effects compare to existing regulatory limits and guidance. These elemental material balances are not typically used in NEPA analyses of proposed mining operations. The impact analyses included in the SDEIS do utilize typically acceptable data and methods to predict chemical impacts to environmental media and then compares these projected impacts to existing regulatory requirements and guidance.</p>

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von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	8	<p>The evolution of these documents was also at issue in the IDEQ Permit to Construct (PTC). SGP has pursued and, although under Administrative Appeal, obtained a PTC for a facility capable of processing 180,000 tons/day of ore from the IDEQ. The initial PTC proposed by IDEQ did not address 99% of arsenic emissions from the proposed facility. Yielding to public scrutiny, IDEQ relented and required these emissions to be addressed in the PTC. The subsequent PTC application was also found to be insufficient. IDEQ accepted Perpetua's contention that there was no reasonably available control technology (RACT) addressing arsenic emissions from the proposed facility that could meet airborne carcinogenic risk criteria. IDEQ granted Perpetua TRACT relief from the carcinogenic criteria, allowing a ten-fold increase in cancer risk, and imposed production limits of 75% of capacity on operations. PTC Appellants argue these limitations are ineffective, as arsenic emissions and ambient concentrations are grossly under-predicted, the limits are not enforceable, and no monitoring is required to ensure compliance. (IDEQ 2022a,b).</p> <p>The Forest Service should recognize the initial configurations rejected by IDEQ are the Alternatives presented in the DEIS, and the alleged refinements are new Alternatives developed to comply with IDEQ requirements. The Forest Service SEIS Preferred Alternative (as noted in the SGP 2021 Modified Mine Plan (MMP) Alternatives Report (Forest Service 2022a)), is actually the 2021 MMP that includes the limits imposed by IDEQ. As a result, the Forest Service has selected a Preferred Alternative that differs significantly from the original scoping and the DEIS Alternatives.</p>	ALT	Most of this comment addresses the IDEQ permitting actions not the SDEIS. The SDEIS responds to a different Proposed Action (40 CFR. § 1502.9(c)(1)) than was considered for the DEIS, and also public input received on the DEIS, thus the action alternatives for the SDEIS can be different than those considered in the DEIS (40 CFR. § 1503.4 allows "[m]odifying alternatives including the proposed action" and "[d]eveloping and evaluating alternatives not previously given serious consideration by the agency"). The air impact analysis in the SDEIS is contained in Section 4.3 and is based on the description of the operations contained in the 2021 MMP submitted to the Forest Service for its permitting process. The Forest Service conducted its own, objective air quality impact analysis separate from IDEQ. However, it is recognized that the IDEQ is the regulatory authority in Idaho for air quality matters and any approval of the SGP permit application to the Forest Service would require compliance with IDEQ permit conditions.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	11	<p>Perpetua and the Forest Service allege MoDPRO2 is a refinement of the earlier MoDPRO and PRO Alternatives, and addresses the insufficiencies identified in the DEIS. However, there are substantial and definitive differences with respect to the sources, toxicity, treatment, and disposition of COCs. In the Preferred Alternative, the SGP is not constrained to the production rates assumed by the Forest Service, but is permitted to increase production, emissions and environmental releases by 2.5 times, and could increase emissions by more than 3 times by amending a Minor Source Permit not subject to federal review. The Forest Service has neglected to consider there are adjacent resources available to SGP to substantially increase production.</p> <p>Conversely, the Forest Service has refused to consider Alternatives suggested by Public Reviewers.</p> <p>Among the more protective Alternatives are process options considered by Midas in the same time period the serial MoDPRO Alternatives were developed to address arsenic instability and exposure problems. These potential Alternatives, as noted below, are both technically and economical viable, and could substantially reduce the environmental burden of COCs.</p>	ALT	With regards to production rates, the commenter appears to be referring to permitting by the IDEQ and not the Forest Service. The Forest Service intends to require Perpetua to comply with the descriptions of its proposed operations as described in the 2021 MMP. If significant changes are proposed in the future to the 2021 MMP, the Forest Service would consider what additional environmental analyses would be required as part of the review and subsequent decision process of these proposed changes. The commenter alleges that the Forest Service did not consider other action alternates including: processing changes to reduce arsenic availability, offsite processing of gold concentrates, and consideration of CERCLA under the No Action Alternative. Inclusion of steps to reduce the environmental availability of arsenic in mill tailings are discussed in the Oxidation and Neutralization subsection of Section 2.4.5.7 of the SDEIS. More technical information related to the process designs are available in the 2021 MMP and the Feasibility Study Technical Report (M3 2021). The consideration of off-site processing of the gold concentrate is discussed in Section 2.6.2.1 of the SDEIS. Consideration of CERCLA applicability for the No Action Alternative is discussed in Sections 1.3 and 2.3 of the SDEIS.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	12	<p>The Forest Service should reopen the Public Record and allow the same deference accorded the SGP to the Public. Appropriate alternatives should be identified in consultation with Public representatives, and addressed in a second, more objective, Supplemental DEIS. The Preferred Alternative should be re-evaluated on the basis of the design capacity of the facility, rather than on alleged production limitations.</p>	ALT	The Forest Service intends to require Perpetua to comply with the descriptions of its proposed operations as described in the 2021 MMP. If significant changes are proposed in the future to the 2021 MMP, the Forest Service would consider what additional environmental analyses would be required as part of the review and subsequent decision process of these proposed changes. The comment does not present significant new information relevant to the environmental concerns that have a bearing on the Proposed Action or its impacts.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	31	<p>Off-Site Processing of Gold Concentrates: The issues associated with disposal of massive amounts of potentially unstable arsenic were repeatedly pointed out in the DEIS public comments. The Forest Service did not respond to these comments, but inserted vague references to a supposed HAC treatment system. Midas and the Forest Service did not disclose these problems and neglected to inform the public of an Alternative that could reduce toxic metals burdens to the environment by 50% - 80%. The 2021 Technical Feasibility Study also reveals that, at the same time Midas was conducting the HAC treatment tests, off site gold processing was being evaluated. This option would eliminate the POX/CL/Detox circuit and the arsenic stability challenges and would reduce the arsenic disposal burden at the site by more than 50%.</p> <p>The Forest Service evaluated and rejected Off-Site Gold Processing in Section 2.6.2.1 of the SDEIS that states: "Under this alternative, raw ore would be processed off-site and would reduce the amount of</p>	ALT	<p>Section 2.6.2.1 of the SDEIS does address potential offsite shipment of raw ore from the SGP for milling. It states that the environmental effects of approximately 550 round trips by truck per day to an offsite mill would be added to the offsite impacts of building the offsite mill facility to process the ore. This would clearly be a higher level of environmental effect than building and operating the proposed onsite mill facilities.</p> <p>The commenter states that offsite shipment of concentrate produced at flotation mills has been widely practiced. This does not invalidate the conclusion in Section 2.6.2.1 because a concentrator mill would still need to be constructed at the SGP to produce the concentrates.</p> <p>The commenter then focuses on the potential for production of the gold/silver concentrate and shipping it offsite for further processing instead of processing the concentrate on site. The commenter states the reason for this would be elimination of the POX/CL/Detox circuits and</p>

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			<p>reagents transported and used at the SGP, and the number of employees traveling to the site. It would also eliminate the need to store mill tailings at the SGP site. Transporting approximately 22,000 tons per day by trucks to an offsite mill would require approximately 550 round trips daily during the 15 years of mine operations. This would greatly increase the air emissions and transportation impacts of the SGP and dramatically increase operational costs. The main problem with this alternative is that there currently is no commercial milling operation in the U.S. West that could economically process the SGP ore. So, a new mill, with all the same associated environmental impacts as the proposed SGP on-site mill would need to be constructed.” (Emphasis added)</p> <p>It is uncertain whether this statement is naïve, facetious, or intentionally misdirecting. Raw ores were first, and perhaps last, shipped from Central Idaho Territory to Utah from Bayhorse in 1864 by pack train. For the last century, ores have been concentrated before shipping, usually at flotation mills built near the mine. In fact, simultaneous with addressing the arsenic stabilization problem, the 2021 Technical Feasibility Study states: “The potential for cleaner flotation to produce a concentrate suitable for shipment off-site, as an alternative to on-site sulfide oxidation and gold leaching, was investigated during the FS.”</p> <p>The 2021 Technical Feasibility Study also disclosed that pilot tests indicated that the processes were potentially technically and economically feasible, developed process flowsheets, and made recommendations for additional testing, should the alternative be pursued. As opposed to the one concentrate tested for HAC, variability testing was conducted on 13 different samples from all Pits, representing some of the “best and worst acting samples from the feasibility study.” Gold grades in concentrates were 40-50 g/t. “Average estimated supplemental loss in gold recovery was 3.3%, compared with the flotation of an on-site POX-ready concentrate.” This indicates a 25-30 fold concentration of Life-of-Mine (LOM) gold grades, reducing trucking to 20 loads/day at concentrate metals values comparable to the antimony concentrate Perpetua intends to ship to Asia or the Middle East.</p> <p>The 2021 Technical Feasibility Report continues. “A preliminary market study for gold concentrate sales was completed by an independent leading industry participant. The participant’s name has been withheld for confidentiality. In the study, the assumption was that the gold flotation concentrate would be shipped offsite to a regional processing facility located in Nevada where several autoclave and roaster plants are located...On May 9, 2018, Barrick Gold, which owns and operates (through the Nevada Gold Mines joint venture with Newmont) several roasters and autoclaves in Nevada, was granted a right of first refusal regarding purchase of gold concentrates as part of a financing arrangement were such concentrates to be shipped off-site.”</p> <p>Midas Consultants noted this Alternative was, potentially, technically and economically feasible with a substantial reduction in capital costs. This alternative would minimize, or eliminate, the highly toxic POX/CN leaching processes at Stibnite. This would reduce the total TSF arsenic disposal burden by >85% or by >350,000 tons, that would be disposed of in Class 1 facilities in Nevada. This would result in a 55% decrease in on-site disposal of arsenic, and elimination of labile As downstream of the flotation circuits.</p> <p>These undisclosed findings certainly suggest that Off-site Sale of Gold Concentrates meet the Alternatives criteria noted by the SDEIS: i) does the alternative, including a combination of component options, meet the purpose and need of the SGP? ii) does the alternative or component option potentially reduce environmental effects to at least one resource? iii) is the alternative or component option technically feasible? iv) is the alternative or component option economically feasible?</p>		<p>the arsenic stability challenges. Section 13.13.2 of the Feasibility Study (M3 2021) discusses the potential for production of a gold concentrate that could be shipped off site for further processing. The report describes that production of said concentrate would require a more complex and expensive gold flotation circuit than is currently planned for the SGP. Offsite toll processing of a gold concentrate would also require production of a cleaner, higher-grade concentrate at the SGP than would be necessary for the planned onsite gold extraction circuit, which would result in some additional loss of precious metal in the process. The Feasibility Report stated that, compared to production of a gold concentrate for onsite processing, cleaning the concentrate to shippable grades would result in a supplemental 3.3 percent loss of gold. With an estimated 4,217 koz of total recovered gold and 852 koz of silver from the proposed operations (Table 22.2 in M3 2021), this supplemental loss would be about 139,161 ounces of gold. Using the Base Case metal prices of \$1,600/oz for gold, this supplemental loss of gold would cost the project about \$223 million. This would not be consistent with the Project Purpose and Need.</p> <p>The commenter's stated benefit of the offsite processing of the gold concentrate was to eliminate the cyanide leaching on site and reduce the disposal of arsenic contained in the mill tailings in the onsite TSF. This would not result in a significant change in the environmental effects of the TSF already analyzed in the SDEIS because the proposed TSF is designed to prevent release of tailings to the environment during operations and post-closure. The proposed tailings management system also includes a cyanide treatment circuit to detoxify the cyanide in the tailings before disposal in the TSF.</p> <p>Narrative addressing offsite processing of a gold concentrate has been added to Section 2.6.2.1 of the Final EIS.</p>
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	32	<p>No Action alternative should consider CERCLA: This site is also subject to CERCLA, although it has not risen to priority status by the State of Idaho at this time. CERCLA-related actions are ongoing and are more likely to proceed, based on the outcome of the DEIS, and USFS, State of Idaho and Nez Perce Tribe considerations. Based on preliminary investigations undertaken, and other sites involving PRPs for this site in adjacent States, it is probable this site will achieve active status in the foreseeable future. Imposition of CERCLA, would be among the first steps require a conceptual site model that includes an</p>	ALT	<p>Consideration of CERCLA applicability for the No Action Alternative is discussed in Sections 1.3 and 2.3 of the SDEIS. Consideration of off-site processing of gold concentrates is discussed in Section 2.6.2.1 of the SDEIS which was characterized as potentially having overall environmental impacts greater than the 2021 MMP and an increase in operating costs significantly impacting Project economics. There is no need to disregard Perpetua's purpose</p>

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			accurate and transparent material and contaminant balance for the site. Evaluation of such a model would be incumbent on the State, Tribal and federal trustees to resolve remedial requirements and CERCLA liabilities in, either Consent Decrees or implementation of voluntary cleanups, as part of mine development, reclamation, and closure. The Forest Service should include Off-site Processing of Gold Concentrates and CERCLA Cleanup as Alternatives in a more objective Supplemental DEIS.		and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	7	As a result of these serious deficiencies, we urge the Forest Service to select the “No Action” alternative, and pursue timely clean up of legacy pollution via ongoing CERCLA actions. This is the only option that protects the watershed from more expansive harm from large-scale cyanide leach gold mining. Should the Forest Service not endorse the “No Action” alternative, we urge the agency to complete a revised SDEIS, with stand-alone supporting documents, to address these substantive issues and provide a more realistic and thorough analysis of the potential impacts of the Stibnite Gold Project.	ALT	The specific comments included in this comment letter are responded to in other comment/response for this and other comment categories. No further response is required here. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	10	II. REVISED PLAN OF OPERATIONS The revised Plan submitted by Perpetua in October 2021 is considered to be the Proposed Action, also known as the 2021 Modified Mine Plan (MMP), and would consist of cyanide leach mine operations, including an open pit hard rock mine and associated processing facilities, located within Valley County in central Idaho on federal, state, and private lands (Figure ES-1). The SGP would have a projected life (construction, operation, closure, and reclamation), not including post-reclamation monitoring, of approximately 20 years, with active mining and ore processing occurring over approximately 15 years. The following mine components would be common to the revised plan and the two action alternatives: <ul style="list-style-type: none">● Mine pit locations, areal extents, and mining and backfilling methods● Transportation on existing and proposed roads● Pit dewatering, surface water management, and water treatment● Ore processing● Lime generation● Tailings storage facility (TSF) construction and operation methods● TSF buttress construction methods● Water supply needs and uses● Management of mine impacted water and stormwater runoff● Stibnite Gold Logistics Facility (SGLF)● A road maintenance facility● Surface and underground exploration● Worker housing facility	ALT	No further response is required here. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	11	The SDEIS analyzes just one action alternative for the mine plan and two alternatives regarding access from Landmark, Idaho to the mine site. The 2021 MMP alternative would utilize the Burntlog Route as the primary access during the last year of construction, mining and ore processing operations, and closure and reclamation. The Burntlog Route Alternative would be 38 miles long and would require improving 23 miles of existing roads and constructing 15 miles of new roads. The Johnson Creek Route Alternative would use the existing Johnson Creek road from Landmark to Yellow Pine and the existing Stibnite Road from Yellow Pine to the mine site at Stibnite. This alternative would require upgrading sections of these roads, would add two years of construction time and would not require any new road construction.	ALT	The Final EIS includes the No-Action Alternative, the Johnson Creek Route Alternative, and the 2021 MMP, which represent a reasonable range of alternatives. As described in Section 2.6, “Alternatives Considered but Eliminated from Detailed Study,” the Forest Service considered a broad range of alternatives that were ultimately dismissed from further detailed study for the reasons cited in Section 2.6. As described in Section 1.7, “Federal Decision Framework,” in the Final EIS, part of the Forest Service’s decision is to determine whether approval of an alternative would require any changes or additions to mitigate impacts or satisfy applicable authorities. As such, the Final EIS includes a variety of detailed monitoring and mitigation measures that would be applied to the selected alternative to mitigate potential adverse effects from implementing the alternatives.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	27	E. The SDEIS fails to include essential information and project designs. The SDEIS completely omits critical information for the evaluation of the impacts of the Stibnite Gold Project. Some of these items include:	ALT	In preparing an EIS, the Forest Service attempts to evaluate reasonably foreseeable environmental effects and seeks information from the proponent and other sources that allow these evaluations to reasonably be made. The Forest Service believes it has accomplished this for the SGP EIS. It is a usual process for projects such as this that more detailed design and state permitting documents are prepared during the same period that the EIS is being

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			<ul style="list-style-type: none"> ● An analysis under the CWA 404(b)(1) guidelines ● A detailed reclamation plan ● Plans and analysis of underground exploration (Scout Prospect Tunnel) ● A description of financial assurance calculations ● Designs of the transmission line upgrades and construction ● A fugitive dust control plan ● Sediment modeling ● Cyanidation facility permanent closure plan <p>This reliance on future studies and design plans violates NEPA, as NEPA’s entire purpose is to ensure that environmental considerations are taken into account before a decision is reached. The Forest Service should have obtained--and Perpetua should have provided--all this information before issuance of the SDEIS. Without the missing information, the Forest Service and the public cannot assess the full impacts of the project or meet the basic requirements of NEPA.</p>		completed. That is because the state permits often address exact design and operating descriptions whereas the EIS does not require this level of specificity to describe the reasonably foreseeable environmental effects of the entire Project.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	64	<p>IX. THE SDEIS VIOLATES NEPA</p> <p>A. The SDEIS fails to consider a reasonable range of alternatives Under NEPA, federal agencies are instructed to “inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. § 1502.1 (1978). NEPA requires an EIS to describe and analyze “every reasonable alternative within the range dedicated by the nature and scope of the proposal.” Alaska Survival v. Surface Transp. Bd., 705 F.3d 1073, 1087 (9th Cir. 2013). Consideration of alternatives “is the heart of the [EIS],” and agencies should “[r]igorously explore and objectively evaluate all reasonable alternatives” that relate to the purposes of the project and briefly discuss the reasons for eliminating any alternatives from detailed study. Id.; 40 C.F.R. § 1502.14 (1978).</p> <p>While an EIS “need not consider an infinite range of alternatives, only reasonable or feasible ones,” the failure to examine a reasonable range of alternatives renders an EIS inadequate. Id. See also Idaho Conservation League v. Lannom, 200 F. Supp. 3d 1077, 1090–91. (Payette National Forest violated NEPA by failing to discuss in the SDEIS any alternatives that reduced ground disturbing mining activities while still meeting purpose and need). In discussing alternatives, the Forest Service must state how the alternatives “will or will not achieve the requirements of... other environmental laws and policies.” 40 C.F.R. § 1502.2(d). A failure to consider a reasonable range of alternatives or “present complete and accurate information to decision makers and to the public” regarding the alternatives will violate NEPA. See Natural Resources Def. Council v. U.S. Forest Serv., 421 F.3d 797, 813–14 (9th Cir. 2005).</p> <p>An agency derives its project alternatives from the environmental impact statement's “purpose and need” section, which defines “the underlying purpose and need to which an agency is responding in proposing the alternatives including the proposed action.” City of Carmel-by-the-Sea, 123 F.3d at 1155; 40 C.F.R. § 1502.13. The reasonableness of an alternative is governed by a given project's “purpose and need.” Id. Agencies enjoy considerable discretion in defining the purpose and need of a project. Friends of Southeast's Future v. Morrison, 153 F.3d 1059, 1066 (9th Cir. 1998). However, in doing so “an agency cannot define its objectives in unreasonably narrow terms.” City of Carmel-by-the-Sea, 123 F.3d at 1155.</p> <p>As set forth below, the SDEIS fails to consider a reasonable range of alternatives, and it improperly dismisses viable alternatives from consideration.</p>	ALT	The purpose and need statement in Section 1.6, “Purpose of and Need for Action,” in the Final EIS describes the purpose and need for the Forest Service, which is appropriate given the proposed mining plan of operations and the Forest Service’s decision-making space. The Final EIS includes the No Action Alternative, the Johnson Creek Route Alternative, and the 2021 MMP, which represent a reasonable range of alternatives. As described in Section 2.6, “Alternatives Considered but Eliminated from Detailed Study,” the Forest Service considered a broad range of alternatives that were ultimately dismissed from further detailed study for the reasons cited in section 2.6. As described in Section 1.7, “Federal Decision Framework,” in the Final EIS, part of the Forest Service’s decision is to determine whether approval of an alternative would require any changes or additions to mitigate impacts or satisfy applicable authorities. As such, the Final EIS includes a variety of detailed monitoring and mitigation measures that would be applied to the selected alternative to mitigate potential adverse effects from implementing the alternatives.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	65	For example, the SDEIS does not provide adequate justification for eliminating underground mining as an alternative to be considered in the SDEIS. Unlike the Feasibility Study, which aggressively promotes the possibility for underground mining to potential investors, the SDEIS avoids serious discussion of underground mining as a possibility. Underground mining is declared to be uneconomic, but there is no quantitative information provided in the SDEIS to defend that supposition. The potential for underground mining should be viewed first in the light of a choice as an environmentally preferable	ALT	As stated in section 2.2.2 of the SDEIS, potential alternatives and component options were screened based upon four criteria. Underground mining was considered but eliminated from further detailed study in the SDEIS for the reasons discussed in Section 2.6.1.1.

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			SDEIS alternative. Underground mining would mean less waste disposal on the surface, and less disruption of existing surface water flows, while still allowing removal of the existing source of contamination proposed for the open pit mining alternative. In the haste to eliminate underground mining as a consideration, a potential environmentally preferable option is not being properly analyzed.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	66	Further, the SDEIS does not include an alternative that examines a dry stack tailings facility or a mining footprint limited to the existing footprint of previous disturbance. Given the significant negative issues of placing the Tailings Storage Facility in the upper Meadow Creek streambed, wetlands, and RCAs, the Forest Service should develop an alternative that essentially limits tailings production to the volume that can be safely stored without inundating wetlands, RCAs or streams. Thus, the limiting factor for mining would be tailings storage. Once all the suitable, non-sensitive areas are used for tailings storage sites, mining should cease.	ALT	The 2021 MMP describes Perpetua's primary objectives based on professional examination of the mineral reserves, economics, and common sense. The SGP mine plan was designed to reasonably produce the target metals with an economically efficient operation. Therefore, the Project is based on economic and profitable production of the recoverable metal values, without consideration of limiting this mining to the amount of tailings produced. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative. Section 2.6.2.2 of the SDEIS describes consideration of dry stack tailings and the reasons why this alternative was eliminated from further detailed analysis. Section 2.6.3.1 of the SDEIS discusses multiple TSF alternative locations and sizes that were considered but eliminated from further consideration for the reasons stated.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	67	We also recommended developing an alternative in which the tailings and/or waste rock are relocated back into the main pits (or other geologically stable area). While rehandling this material would require additional expense, the Forest Service should compare this with the cost of dealing with a catastrophic dam failure, contamination, and effects of downstream public health and fisheries issues. We appreciate rounding the crests and utilizing variable slope angles of waste rock piles to blend in with natural landforms where this can be done without compromising stability or integrity of the waste rock piles.	ALT	Handling of development rock is described in Section 2.4.5.5 of the SDEIS. Table 2.4-9 shows the amounts of development rock that would be placed back into the open pits. Other development rock would be used to construct the TSF embankment and the TSF buttress. Tailings from the SGP mill must be placed in a TSF that meets the requirements of the Idaho cyanidation regulations which require engineered liners to minimize leakage of water from the deposited tailings. It would be impractical to construct such a liner in the steep and rocky interior of an open pit. Additionally, it would be very impractical to deposit tailings in an open pit during active mining operations. The Tailings Storage Facility and TSF Buttress subsection of Section 4.2.2.2 of the SDEIS describes the geotechnical stability of the proposed TSF and shows that it would have a high degree of geotechnical stability such that consideration of a catastrophic failure of the TSF embankment would be a worst-case assumption not required under NEPA.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	68	Related to reducing the footprint of mine operations, the Forest Service should assess how utilizing 85 ton mine trucks instead of 200 ton mine trucks would reduce the size of the roads that would be needed to support mine operations.	ALT	In the case of the SGP, a number of haul truck sizes were considered as discussed in Section 16.3.4 of the 2021 Feasibility Study (M3 2021) and 100-ton trucks were found to be inefficient for production mining.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	69	Given Perpetua's recent statements that antimony production is one of the primary goals and the grant from the Department of Defense, the Forest Service should develop an alternative emphasizing antimony recovery. In the SDEIS, it is noted that only 15 to 20% of the total mill feed would contain sufficient antimony mineral grades to warrant production of antimony concentrate. We suggest developing an alternative focused on only developing the ore that contains high antimony mineral grades. This mineralized area would still contain some gold and silver but could dramatically reduce the footprint, wetlands impacts, and water treatment costs. Perpetua has already received a subsidy to mine this material so there is no longer a need to fully fund this project through gold extraction.	ALT	The 2021 MMP describes Perpetua's primary objectives based on professional examination of the mineral reserves, economics, and common sense. The mine plan was designed to reasonably produce the target metals with an economically efficient operation. Figure 22.2 of the 2021 Feasibility Report (M3 2021) shows the relative payable metal value for the three target metals and clearly demonstrates that the gold value dominates over the antimony and silver values. Therefore, limiting the Project to only the antimony production would severely impact the economics of the SGP. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	70	As an alternative to the proposed transmission line route from Johnson Creek substation to the mine site along an old and revegetated transmission line route from the 1940's, the Forest Service should develop an alternative constructing this transmission line along the Johnson Creek/Stibnite Road. This route would avoid the need to clear a 100-foot swath of vegetation for 9.1 miles and reconstruct a new access road and also make transmission line maintenance and decommissioning easier. Another ROW alternative that the Forest Service should consider is the old Thunder Mountain Road. The road prism is in place but water management features such as water bars are needed. Furthermore, the SDEIS fails to include an alternative that considers early closure or long-term cession of mining activities due to the sequence of ore production anticipated for the SGP and/or inherent	ALT	Section 2.6.3.1 of the SDEIS discusses alternative power line configurations between the proposed Johnson Creek substation and the mine site and the reasons why they were eliminated from detailed study in the EIS. It is the Forest Service's intention that the permanent closure characteristics described in Section 2.4.7 of the SDEIS would be achieved. Temporary closure of the operations is included in Section 2.4.5.15 of the SDEIS. This section describes what actions would continue during a temporary closure of the facilities to maintain compliance with commitments for monitoring and environmental compliance. It also states that compliance with the proposed permanent regulatory closure characteristics would be required, unless modified by the required regulatory authorities. The 2021 Feasibility

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			volatility of gold prices. Perpetua’s 2021 Feasibility Study indicates that Mill Feed and Gold Head Grade peaks at production year 4 before sharply declining for the remaining 11 years of the life of the mine.124 Notably, while the average gold grade (g/t) declines over time, the amount of development rock that must be removed to reach the lower grade ores increases.125 In short, the SGP becomes a less profitable mining operation overtime.126 Given uncertainty in gold, silver, and antimony prices, early closure is a reasonably foreseeable possibility for the SGP. Even if an early closure alternative is not developed, the SDEIS must address how long the mine will remain idle (i.e., in “care and maintenance”) before the operator is required to enter a permanent closure phase. This is critically important because the anticipated “back-filling” of both the Hangar Flats Pit and the Yellow Pine Pit as well as other reclamation activities (backfilling the Midnight Pit) rely on development rock mined from the SGP’s lowest grade deposit within the West End Pit.127 If mine sequencing fails to follow that which is proposed in the 2021 MMP, the whole plan falls apart and the Payette National Forest is back to square one with even deeper and more giant holes in the ground than currently exist. Failure to plan, is planning to fail. The SDEIS must consider and evaluate plans for early closure at critical mining phases that if not achieved would significantly impact the mine operator’s ability to perform proposed restoration and reclamation actions128—actions this SDEIS assumes are events that will occur.		Report (M3 2021) describes the economic risk analysis for the Project as designed and utilizes a base case gold price of \$1,600/oz. using the 3-year trailing price (60%) and the 2-year futures price (40%). The gold price in the last three years has ranged from about \$1,650/oz. to over \$1,900/oz. The economic analysis for the SGP utilized five metal price cases for gold from a low of \$1,350/oz. to a high of \$2,350 oz. At the low price point for gold, the payback period for the Project was less than 4 years and the internal rate of return before taxes was just over 17%. The situation described in the comment that gold and silver pricing could drop in the future to a point where continued mining at the SGP would be terminated early is considered speculative and not foreseeable. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	71	As recounted in these comments, there are a number of other significant resource issues that will be adversely affected by the proposal that should have been the basis for the development of additional alternatives. These resource issues include the destruction of whitebark pine trees, degradation of the Frank Church River of No Return Wilderness (FCRNRW), wetlands, and water quality, the mobilization of arsenic in the environment, and the lengthy and unknown rate of restoration and ecological recovery after the mine’s closure.	ALT	The effects of the Project on resources such as whitebark pine (SDEIS Section 4.10.2.2), wilderness (4.23.2.2), wetlands (4.11.2.2), water chemistry including arsenic (4.9.2.2), and reclamation (4.5.2.2) are described in the SDEIS. These effects are the subject of design features, Forest Service requirements, and mitigation measures rather than alternatives because action alternatives meeting the Project's purpose and need would experience these effects.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	72	lengthy and unknown rate of restoration and ecological recovery after the mine’s closure. 1. The refusal to consider any alternatives to “the Mining Portion” of Perpetua’s proposed mine violates NEPA The SDEIS (p. 2-2) considers only two action alternatives: the 2021 MMP (Perpetua’s proposal); and the Johnson Creek Route Alternative. While the Johnson Creek Route Alternative considers a different access route to the site, there is no other difference. As the SDEIS states: “The mining portion of this alternative would be the same as the 2021 MMP.” Id. There is no difference between these two action alternatives when it comes to: <ul style="list-style-type: none"> ● Mine pit locations, areal extents, and mining and backfilling methods; ● Transportation management on existing and proposed roads ● Pit dewatering, surface water management, and water treatment ● Ore processing ● Lime generation ● Tailings storage facility (TSF) construction and operation ● TSF buttress construction methods ● Water supply needs and uses ● Management of mine impacted water and stormwater runoff ● Electrical transmission lines ● Stibnite Gold Logistics Facility (SGLF) ● A road maintenance facility ● Surface and underground exploration ● Stibnite Gold Project worker housing facility SDEIS, p. 2-3. Perpetua’s proposal is for mining. While alternative access routes are an important consideration, it is “the mining portion” of Perpetua’s proposal which will have the greatest number of, the most severe, and the longest lasting environmental impacts. Yet, the SDEIS fails to consider any alternatives related to any aspects of “the mining portion” of Perpetua’s proposal. This violates NEPA. To consider a	ALT	The 2021 MMP describes Perpetua's primary objectives based on professional examination of the mineral reserves, economics, and common sense. CEQ has stated that "Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using commonsense, rather than simply desirable from the standpoint of the applicant." (40 Most Asked Questions Concerning CEQs NEPA Regulations, Q/A 2a, 51 FR 15618, April 25, 1986). CEQ has also stated, "an agency's responsibilities to examine alternatives sites has always been bounded by some notion of feasibility" and, "there is no need to disregard the applicant's purpose and needs and the commonsense realities of a given situation in the development of alternatives" (CEQ Guidance Regarding NEPA Regulations, 48 FR 34263, July 28, 1983). The 2021 MMP mine plan describes Perpetua's primary objectives based on professional examination of the mineral reserves, economics, and common sense (M3 2021). The Project mine plans are based on economic and profitable production of the recoverable metal values, constrained by the site-specific physical conditions at the site such as geology, mineralization, topography, hydrology, and in this case, the legacy mining features. Section 2.6 details the alternatives considered but eliminated from detailed study.

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			<p>reasonable range of alternatives, the Forest Service must consider one or more alternatives to “the mining portion” of Perpetua’s proposal, such as alternatives to: mine pit locations and extents; mining and backfilling methods; pit dewatering, surface water management, and water treatment; ore processing; and TSF construction and operation. These are major, controversial issues with huge and lasting environmental implications; yet, the SDEIS does not consider any alternatives with any difference when it comes to these issues.</p> <p>In the August 2020 DEIS, the Forest Service did consider two additional alternatives to “the mining portion” of Perpetua’s proposal. See SDEIS ES-1. But in the SDEIS, Forest Service eliminated those alternatives from further consideration and is no longer considering any alternatives to “the mining portion” of Perpetua’s proposal. Id. Without considering any alternatives to “the mining portion” of Perpetua’s proposal, the Forest Service is not considering a reasonable range of alternatives as required by NEPA. Additionally, the Forest Service improperly dismissed viable alternatives proposed in public scoping comments and at other points which would satisfy the purpose and need of the project and could reduce the adverse environmental impacts, as discussed next for some of these potential alternatives.</p> <p>a. Underground alternative</p> <p>As described in CSP2 (2022), the SDEIS does not provide adequate justification for eliminating underground mining as an alternative to be considered in the SDEIS. In explaining why underground mining was eliminated as a consideration in the SDEIS, the rationale presented begins by asserting: “In aggregate, grades for these three deposits above a 0.48 grams per ton (g/t) gold cut-off grade averaged 1.43 g/t gold, 1.91 g/t silver, and 0.064 percent antimony (M3 2021). Typical economic cutoff grades for underground mine operations are approximately 5 g/t gold.” (SDEIS 2022, emphasis added)</p> <p>The basic consideration for potential economic viability must begin by considering how much gold that is greater than the cutoff grade has been identified, and whether this amount would justify underground mining. This is not addressed in the SDEIS analysis.</p> <p>In addition, if underground mining were to take place, the cutoff grade would likely be less than the 5 g/t proposed in the SDEIS. The reference cited in the SDEIS, the Stibnite Gold Project Feasibility Study (M3 2021), has an entire section devoted to the discussion of “Potential high-grade underground exploration prospects” (M3 2021, Section 9.8). In that section M3 used “gold cutoff” values of 2.4 g/t and 3 g/t, both of which are well below the 5 g/t cited in the SDEIS. The SDEIS does not give a citation for its choice of 5 g/t as “Typical economic cutoff grades for underground mining...”. The 5 g/t cutoff grade is not mentioned in the Feasibility Study. The choice of a typical cutoff grade for underground mining in the SDEIS should at least be consistent with the information being presented to the company’s potential investors in its technical reports.</p> <p>Unlike the Feasibility Study, which aggressively addressed the possibility for underground mining to potential investors, the SDEIS appears to avoid serious discussion of underground mining as a possibility by proposing underground mining is economically unfeasible, then failing to defend that premise with any quantitative analyses.</p> <p>The potential for underground mining should also be viewed in the light of a potential choice as an environmentally preferable SDEIS alternative. Underground mining would mean less waste disposal on the surface, and less disruption of existing surface water flows, while still allowing removal of much of the existing waste sources of contamination proposed for the open pit mining alternative. The SDEIS should also consider this alternative in terms of reduced impacts to soils. Section 4.5.2.2 indicates that Total Soil Resource Commitment (TSRC) guidelines in the PNF Forest Plan to limit TSRC to 5% of activity area would be violated with the project leading to a TSRC of 17%. Reclamation activities would not reduce this amount as noted on p. 4-78:</p> <p>“As a general rule, the processes responsible for restoration of soil productivity occur over a very long timeframe (centuries to millennia) and do not directly correlate to successful reclamation, which is mainly oriented to short-term objectives.”</p>		

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			<p>And, “Thus, the recovery of greater than 40 percent soil productivity within a 50-year timeframe is unlikely (Forest Service 2022c).”</p> <p>This conclusion led the Forest Service to propose a Forest Plan Amendment (FPA) which would waive the TSRC guidelines. The Forest Service should consider whether an underground alternative would reduce these unacceptable impacts to soils and the deficit in available reclamation materials. In the haste to eliminate underground mining as a consideration, a potential environmentally preferable option is not being properly analyzed.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	73	<p>b. Utility corridors</p> <p>The SDEIS fails to consider any alternatives to the utility corridor to reduce potential impacts. For example, at the proposed Montanore Mine in Montana, multiple alternatives to the proposed utility corridor were proposed, with detailed comparisons, to determine which alternative would reduce impacts to important fish and wildlife resources.129</p>	ALT	Section 2.4.4.7 of the SDEIS described the electric transmission line that would supply power to the SGP. Approximately 59 miles of this line would be an upgrade of existing transmission lines from Lake Fork to the proposed Johnson Creek substation. The existing transmission lines are owned by Idaho Power Company and they have a right-of-way from the Forest Service for the lines. Idaho Power has proposed to upgrade these lines so there are no alternatives to these existing alignments. For the SGP, approximately 9 miles of new transmission line would connect the Johnson Creek substation to the mine. Section 2.6.3.2 detailed two potential alternative alignments that were considered for the newly constructed power line proposed from the Johnson Creek area into the mine and the reasons why these alignments were eliminated from further detailed analysis.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	74	<p>c. Off-site processing of gold concentrates</p> <p>The Forest Service evaluated and rejected Off-Site Gold Processing in Section 2.6.2.1 of the SDEIS that states:</p> <p>Under this alternative, raw ore would be processed off-site and would reduce the amount of reagents transported and used at the SGP, and the number of employees traveling to the site. It would also eliminate the need to store mill tailings at the SGP site. Transporting approximately 22,000 tons per day by trucks to an offsite mill would require approximately 550 round trips daily during the 15 years of mine operations. This would greatly increase the air emissions and transportation impacts of the SGP and dramatically increase operational costs. The main problem with this alternative is that there currently is no commercial milling operation in the U.S. West that could economically process the SGP ore. So, a new mill, with all the same associated environmental impacts as the proposed SGP on-site mill would need to be constructed.” (Emphasis added)</p> <p>However, the 2021 Technical Feasibility Report disclosed that pilot tests showed that the processes were technically and economically viable. Furthermore, that report indicated, “Average estimated supplemental loss in gold recovery was 3.3%, compared with the flotation of an on-site POX-ready concentrate.” This implies a 25 to 30-fold concentration of LOM gold grades, reducing the required trucking to 20 loads/day (versus the 550 loads/day referenced by the SDEIS) at concentrate metals values comparable to the antimony concentrate Perpetua intends to ship to Asia or the Middle East to be processed.</p> <p>This alternative would minimize, or eliminate, the highly toxic POX/CN leaching processes at Stibnite. This would reduce the total TSF arsenic disposal burden by >85% or by >350,000 tons, with the remainder of the arsenic burden being disposed of in Class 1 facilities in Nevada rather than the sensitive headwaters of the EFSFSR. This would result in a 55% decrease in on-site disposal of arsenic, and elimination of labile As downstream of the flotation circuits.</p> <p>These findings certainly suggest that off-site processing of gold concentrates meet the Alternatives criteria noted by the SDEIS: i) Does the alternative, including a combination of component options, meet the purpose and need of the SGP (yes), ii) Does the alternative or component option potentially reduce environmental effects to at least one resource (yes), iii) is the alternative or component option technically feasible (yes), and iv) is the alternative or component option economically feasible (yes).</p> <p>The Forest Service should include off-site processing of gold concentrates as an alternative in a revised Supplemental DEIS.</p>	ALT	Section 2.6.2.1 of the SDEIS discusses the off-site processing of raw ore to eliminate the need for a mill, TSF, and associated infrastructure and employees at the SGP. Regarding the first alternative suggested by the commenter, production of a gold/silver concentrate at the SGP that should be shipped to an off-site facility to extract the gold and silver from the concentrate, this would still require an on-site mill, TSF, and associated infrastructure but would eliminate the need for the on-site POX and CN circuits. The main benefit of this alternative asserted by the commenter would be to reduce labile arsenic in the on-site TSF. Because the TSF is designed to operate with no discharge of tailings downstream in any case, this alternative would not change the reasonably foreseeable environmental impacts of the Project.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Ronn Julian	17666	1	<p>Thank you for the opportunity to provide comments on the Stibnite Gold Project. It is hard to imagine the lapse in time since the DEIS was released for comment, but it is not too much of a surprise. When I reviewed the DEIS, it just never seemed possible for that group of action alternatives to make the grade. The scope of development and the magnitude of land disturbing activities was just too great to make it through the entire process. Please recall that I am unique in terms of commenters given my nearly two decades as the Cascade District Ranger and having worked for Midas Gold Idaho both as a consultant and a public affairs employee and eventually as a member of the Board of Directors. I found the experience gained at these two employment arenas provides me with some valuable insight with regards to this project and this environmental review process.</p> <p>Consequently, I responded to the initial call for public comments way back when. My comments were directed to provide the foundation for an important analysis done well so that there were no re-starts. While my comments were not fully appreciated by the Company, I was satisfied they might help the process. Unfortunately, that has not been what I have seen unfold. There has been a tendency on behalf of some agency staff to not engage in terms of advice to the Company by pointing out trade-offs and suggesting alternate ways to accomplish objectives. And likewise on the proponent side, there has been a level of frustration based in a large part to a fundamental misunderstanding of NEPA and all the trappings that go with it. I would describe the relationship to have been contentious at some points. Collectively, these elements have made progress challenging. What you have before you now was born of that difficult relationship.</p> <p>I hard copy mailed my DEIS comments in on 10/24/20 as I had lost internet service. Upon returning from two weeks in Alaska, I checked your public reading file and did not find my comment letter. I recall speaking to Brian Harris about the absence and he indicated it does take some time for hard copy letters to be incorporated into the data base. He indicated that he would look into the matter. I never did hear back from him and am not certain whether it is in the data base at this point. Hence, I have included it with this letter.</p> <p>The major concerns that I saw with the DEIS was the range of alternatives and the potential for jeopardy biological opinions. In my judgement, the range was far too narrow given the possibilities. The possibilities that exist with this project are not numerous, but are quite different in terms of effects. As I reviewed the SEIS, I arrive at the same conclusion. This project analysis will be subjected to a high level of scrutiny and will most likely undergo litigation. I honestly believe the range of alternatives will not pass the “robust analysis of a broad range of alternatives” test. The sophisticated character of some of the potential litigants is rather daunting and will play an important part of the judicial process. This project cannot move forward without a much improved analysis.</p>	ALT	SDEIS Sections 2.2 and 2.6 describe the development of Project alternatives and the rationale for consideration in the NEPA analysis. The determinations of the biological opinion would be based on the Agency Preferred Alternative and would be incorporated into the Forest Service decision on the Project.
Ronn Julian	17666	3	<p>I encourage you to enhance the “robust analysis on a broad range of alternatives” so that you are highly informed as the Responsible Official and that the regulatory process can withstand the test of adequacy it is surely going to receive. For example:</p> <p>Develop a design feature that employs the SFSR road as the mine access for the winter months for the construction period of the mine. It completely eliminates the need to construct the parallel snowmobile trail along upper Johnson Creek Road. No short-term effect on existing wintertime recreation. Winter loads during the construction period on the SFSR Road will generally be non-hazardous in nature and consist mainly of building supplies and plant construction products. The SFSR Road offers an all-surface road during the winter months that will minimize potential vehicle accidents and it is mostly located in a low snowfall belt which translates to a lower cost to maintain. Design features such as requirements for convoys with pilot cars all mining traffic on a predetermined and advertised schedule; the fuel depot at the mine site should be full-to-the-rim come December; any use of the SFSR route for hazardous loads would be minimal and restricted to blue bird weather and ice-free road surfaces. The average winter season would be December thru March. The SFSR Road can easily handle that amount of freight and traffic. The benefit to Valley County would be the mining company taking over the cost of wintertime maintenance and the likely use of a motor grader instead of the 1-way plow currently used by the County. Note: the jurisdiction of the road rests with the USFS so a motor grader with a wing could be specified in the Road Use Permit. The additional time could be used to identify an alternative route for</p>	ALT	SDEIS Section 2.6 describes the consideration of alternatives including access routes.

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			the snowmobile trail that might employ the use a portion of the Lunch Creek Road network and other suitable terrain away from the JC Road.		
Ronn Julian	17666	4	<p>1. Develop an alternative that upgrades the Johnson Creek Road (versus full reconstruction) to provide additional turn outs, passing lanes and include a mining traffic management plan* that addresses a schedule for inbound and outbound traffic, driver experience, vehicle configuration, and pilot cars. That road moved a great deal of mining traffic in the last burst of mining activity in the late 90's and early years of the new century. Design features could include paving the road through the town of Yellow Pine; paving or crushed aggregate along areas adjacent to streams and selected areas of dust abatement; reconstruction window for the lower reaches of the road during the winter months. There would be a similar but smaller scale need to upgrade the EFSR Road from YP to Stibnite. The possible development of the Antimony Cut by a separate mining company in the lower Johnson Creek area may be a foreseeable need that may fit well with this alternative. This alternative would provide quite a contrast on costs and disturbance quantities to the Burntlog route. The effects analysis would likely demonstrate a long-term need for a parallel snowmobile route that could be constructed in the same timeframe as the road improvements. In addition, there is time to evaluate alternative locations for the snowmobile route that may employ some of the road system in Lunch Creek and suitable terrain away from the JC Road. This alternative will provide quite a contrast in terms of the number of days it is far too stormy for any mine traffic on any roads in this area. It will likely show that the JC Road route is far more dependable than the Burntlog route that lies partly in the heaviest snowfall belt for miles around this part of Idaho. The deepest snowpack lies along the Pistol Ridge that towers over the Burntlog drainage. Note: I see no mention in any of the documents of the solution that will be employed when the Burntlog road is snowed-shut and unavailable for 5-7 days. The reader must conclude that the only other snow-free route is the SFSR road. This situation can and will occur every winter on more than one occasion.</p> <p>A mining traffic management plan must be developed and be included in the environmental review and supporting documents as a design feature. As a minimum, it will address and define the following: vehicle configuration such as triple axel flatbed, semi-trailer, pup trailer that will be used to haul to and from the mine (fuel trucks with pup trailers are not appropriate on these roads). Approved trucking operator standards (you simply cannot have unfamiliar drivers hauling random freight to the mine in over-the-road tractor/trailer combinations). A schedule for pilot car convoys and a predetermined and advertised inbound/outbound schedule. Further if the size of mine site overburden trucks at 200 tons is driving the access road standards to the mine, then the utility of 85 ton overburden trucks needs to be evaluated.</p>	ALT	<p>The Johnson Creek Route Alternative was developed and analyzed in the SDEIS. This alternative did not entail full reconstruction but the upgrades required for mine access use were substantial and included in the analysis.</p> <p>SDEIS Section 4.16 describes the Transportation Management Plan developed for the Project which includes descriptions of proposed road use and maintenance including measures to limit vehicle incidents. Full-size mining equipment would not operate on access roads.</p>
Ronn Julian	17666	4	<p>2. There are a couple of alternatives for the location of the electrical service line from the floor of Johnson Creek to Stibnite that deserve a look. The Riordan/Horse Heaven route that was used in the 1940's certainly was the shortest and was likely selected for that very reason. However, the circumstances we have today should not automatically opt for that route simply because one official at Idaho Power insists they still hold a permit for that location and convinced Midas managers that has to be the location of the line. That war-era line was decommissioned decades ago and there is no existing permit for a power line for that location. Again, lack of engagement by the land manager and the proponent coordinating with the Payette NF.</p> <p>a. One alternative location would be to build the line from Yellow Pine to Stibnite in the EFSR canyon. It is likely many of the tower locations could be accessed with short spurs off of the EFSR Road. The ground disturbance and costs would be quite a contrast to the Riordan route.</p> <p>b. A second alternative location would be to upgrade the 138KV only to the junction area of the Thunder Mountain Road (Twin Bridges on the BNF) and then follow a route adjacent to the TM Road to the Stibnite area. The TM Road is in a very depleted condition due to the 2007 high intensity wildfire in the headwaters of the drainage. This road with some reconstruction and rehabilitation work would offer very suitable</p>	ALT	SDEIS Section 2.6 describes the consideration of alternatives including powerline route options.

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			<p>access for powerline construction and maintenance vehicles. Recall, if the Burntlog route is chosen as the mine access route, much of the TM Road will be upgraded to a 28-foot roadway and that will greatly facilitate powerline access. There is sufficient terrain to locate the necessary switching station/transformer configuration in the in the Twin Bridges location. This alternative would eliminate the 138KV upgrade to the 11-mile line from Twin Bridges to Yellow Pine (as described in the preferred alternative).</p> <p>It is only prudent to look at the decision to feed the upgraded 138KV line from the single line that comes into Valley County from the power complex on the Snake River. Idaho Power's Comprehensive Study identified the need for a second line into the County that would feed in from the Ola area to the south. If the need for the loop is valid, there is no better time to look at that route in terms of time and cost. The astronomical figure that is being poured into the substation upgrades on the existing line (by Perpetua) is more than enough reason to question the wisdom of the northern route. That is potentially a lot of funding that could be put towards mine site design and mitigation. If nothing else, the disclosure requirement in the NEPA regulations would require the rationale for not opting for the south loop feed. This may seem like a minor detail but it is issues like these that are "eye candy" in the litigation process.</p>		
Ronn Julian	17666	4	<p>It was a bit of a surprise to me to not see an alternative in the SEIS that provided less processing of the ore bodies at the mine site which resulted in a "concentrated slurry" that contains all the various precious metals. During my time associated with Midas Gold, the Company pursued this option in great detail and preliminary results looked promising. The less-processed concentrate would be trucked out of the mine site to be refined in another location. The possible benefits to this alternative may have required less demand for electricity which may have negated the upgrade to 138KV and less processing etc. at Stibnite. It would seem to enhance the range of alternatives if this alternative received mention and consideration. I know sometimes that proponents view NEPA as something that has to be completed rather than a process that analyzes alternatives to quantify effects and help guide the decision process. I'd be curious if this work was ever disclosed to your office.</p>	ALT	<p>SDEIS Section 2.6 describes the consideration of alternatives including processing options.</p> <p>Section 13.13.2 of the Feasibility Study (M3 2021) discusses the potential for production of a gold concentrate that could be shipped off site for further processing. The report describes that production of said concentrate would require a more complex and expensive gold flotation circuit than is currently planned for the SGP. Offsite toll processing of a gold concentrate would also require production of a cleaner, higher-grade concentrate at the SGP than would be necessary for the planned onsite gold extraction circuit, which would result in some additional loss of precious metal in the process. The Feasibility Report stated that, compared to production of a gold concentrate for onsite processing, cleaning the concentrate to shippable grades would result in a supplemental 3.3 percent loss of gold. With an estimated 4,217 koz of total recovered gold and 852 koz of silver from the proposed operations (Table 22.2 in M3 2021), this supplemental loss would be about 139,161 ounces of gold. Using the Base Case metal prices of \$1,600/oz for gold, this supplemental loss of gold would cost the Project about \$223 million. This would not be consistent with the Project Purpose and Need.</p>
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	11	<p>A. The No Action Alternative is Not Selectable</p> <p>IMA cannot fathom any circumstance in which it would be appropriate for the Forest Service to select the No Action Alternative as the Agency Preferred Alternative in the Final EIS. Selecting the No Action Alternative would preserve the environmentally degraded <i>status quo</i> and forego this unique opportunity to use private-sector resources to clean up the Stibnite Mine site.</p> <p>IMA suggests the Final EIS put more effort into discussing why the No Action Alternative is not selectable for the SGP because the SDEIS does not fully describe the numerous environmental restoration measures that would not be built and the environmental improvements that would not materialize under the No Action Alternative. For example, the No Action discussion in Section 4.12.2.1 does not mention that opportunities to eliminate the Yellow Pine Pit cascade barrier to fish migration and to reconnect over 21 miles of the EFSFSR would not occur under the No Action Alternative. Instead, this section states that no negative impacts to fish or fish habitat would occur if the MMP is not built and fails to acknowledge that habitat restoration and water quality benefits would be foregone without the project. This is an inaccurate and incomplete disclosure of the lost opportunity costs associated with the No Action Alternative.</p> <p>Similarly, the Executive Summary lacks a meaningful discussion of the environmental restoration and improvement opportunities that would not occur under the No Action Alternative. The No Action Alternative would mean that none of the numerous significant environmental restoration measures in the MMP (e.g., removing some of the legacy mine wastes that are contaminating area streams and eliminating the cascade that precludes fish migration immediately upgradient of the Yellow Pine Pit)</p>	ALT	<p>The current site conditions and the effects of previous mining that was unreclaimed are described in SDEIS Chapter 3. The effects analysis presented in Chapter 4 represents a comparison of predicted Project effects on environmental resources to the current conditions and describes those effects relative to the existing conditions. As described in SDEIS Section 2.7, these comparisons form the basis for selection of the 2021 MMP as the Agency Preferred Alternative.</p>

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			would occur. Both the Executive Summary and the resource sections in Chapter 4 of the Final EIS should more fully describe how the No Action Alternative would perpetuate the existing degraded environmental conditions at Stibnite.		
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	12	<p>B. The Agency Preferred Alternative</p> <p>There are obvious environmental and safety reasons why the Burntlog Route is clearly preferable to the Johnson Creek Route Alternative. Therefore, IMA strongly supports the Forest Service's decision to select the Burntlog Route as the Agency Preferred Alternative in the SDEIS. The SDEIS calls this alternative the "2021 Modified Mine Plan (MMP) Alternative." (This is the transportation route that Perpetua proposes in its updated "ModPRO2" Plan of Operations.)</p> <p>As documented in the SDEIS, the Burntlog Route Alternative has fewer environmental risk factors compared to the Johnson Creek Route Alternative. Because the Johnson Creek Route is closer to fish-bearing streams than the Burntlog Route, there is a higher potential for adverse impacts to water quality in the event of a fuel or chemical spill or leak from a delivery truck. Also, regular use of the Johnson Creek Route would increase sedimentation impacts.</p> <p>Additionally, the Burntlog Route has fewer safety concerns than the Johnson Creek Alternative. There are several large avalanche paths along the Johnson Creek Route, which make it an unsafe choice for routine winter use. Because it will not be possible to realign the route to completely avoid the avalanche paths, the road would probably have to be closed during high-risk avalanche conditions. Such road closures would create obvious operational constraints and could also precipitate an emergency if project personnel are unable to leave the mine site or if emergency vehicles cannot reach the site. The inevitability of unpredictable avalanche events would obviously pose a direct and serious risk to people driving this route who could be caught in an avalanche.</p> <p>For these reasons, IMA recommends that the Forest Service select the Burnt Log Route as the Agency Preferred Alternative in the Final EIS.</p>	ALT	No further response required. General in nature or position statement.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	1	Clearly and sharply defining impacts from the mine access routes/road alternatives.	ALT	The specific comments included in this comment letter are responded to in other comments/responses for this and other comment categories. No further response is required here. General in nature or position statement.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	11	<p>Alternatives Analysis – Burntlog Route and the Johnson Creek Alternative</p> <p>The material summarized in the Executive Summary and in Table 2.8.1 Alternative Comparison and Impact Summary¹ indicate that the Burntlog Route may result in greater impacts on several environmental and economic indicators, than as generally presented for the 2021 MMP Alternative (which includes the Burntlog Route). Examples include more greenhouse gas (GHG) emissions, soil impacts, stream crossings, forest disturbance, wetland loss, wildlife habitat disturbances, new roads, ground disturbance, impact on historical properties, higher inconsistency with designated Recreation Opportunity Spectrum, and lower contributions to employment trends. Further, the 2021 MMP Alternative will likely: impact roadless characteristics in three inventories roadless areas; increase non-native plant species spread; and create construction noise into the Frank Church River of No Return Wilderness. As the proposed mine access routes (Burntlog Route and the Johnson Creek Route Alternative) are the primary difference between the two Action Alternatives, EPA recommends the FEIS clearly and sharply define issues related to each access route and ensure the assessments are accurately reflected across the different sections.</p>	ALT	SDEIS Section 2.7 describes the identification of the 2021 MMP as the Agency Preferred Alternative over the Johnson Creek Route Alternative. This identification does not conclude that the MMP 2021 does not have effects on resources but notes that it has lesser effects with regard to geological hazards, avalanches, spills, sedimentation, disturbance of riparian areas, timber resources, public safety, and tribal fisheries. Those lesser effects form the basis for the identification of the preferred alternative.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	63	<p>Agency Preferred Alternative</p> <p>Rationale of 2021 MMP Identification</p> <p>The Executive Summary highlights three reasons the Forest Service identified the 2021 MMP Alternative as the Agency Preferred Alternative, but the first two bullets (i.e., incorporates water management and closure activities to reduce the duration of long-term water treatment requirements and</p>	ALT	The text has been revised to highlight the specific elements of the 2021 MMP compared to the Johnson Creek Route Alternative.

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			<p>incorporate measures to manage stream temperatures) are also true for the Johnson Creek Alternative since the mining portion of the Action Alternatives are the same. Similarly, Section 2.7 highlights eight reasons the Forest Service identified the 2021 MMP as the Agency Preferred Alternative, but the first two are also true for Johnson Creek Alternative. For the FEIS, since the Action Alternatives differ by proposed mine access routes, EPA recommends replacing these first two reasons with other primary reasons that are exclusive for the 2021 MMP.</p> <p>The Agency Preferred Alternative sections in the Executive Summary and Chapter 2, as presented, appear to imply that the Agency Preferred Alternative is environmentally superior to the Johnson Creek Alternative. For transparency, EPA recommends the FEIS provide additional context for the selection, such as if the reasons highlighted were given preference or prioritized over other potential negative impacts.</p>		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	64	<p>Least Environmentally Damaging Alternative (LEDPA)</p> <p>Because the U.S. Army Corps of Engineers is planning to use this EIS to support its CWA Section 404 analysis, EPA recommends that the FEIS discuss whether the Agency Preferred Alternative is also the LEDPA.</p>	ALT	At the time of the SDEIS, the USACE had not determined its LEDPA.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	65	<p>Environmentally Preferable Alternative</p> <p>EPA recommends the FEIS describe the criteria which will be used to ultimately determine the environmentally preferable alternative under NEPA.</p>	ALT	Edit has been made.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	68	<p>Dry Stack Tailings</p> <ul style="list-style-type: none"> The DSEIS indicates the use of the dry stack method of tailings disposal was evaluated and determined to be technically and economically infeasible.68 An additional consideration in the determination to not fully evaluate a dry stack option is that stability of the proposed TSF is enhanced by the waste rock buttress so the stability advantage of a dry stack over a tailings impoundment is not as prominent for the SGP as it might be for other projects. We recommend that this consideration be included in the FEIS. 	ALT	Edit has been made.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	69	<p>Agency Preferred Alternative</p> <ul style="list-style-type: none"> The rationale for Agency Preferred Alternative in Section 2.7 raises two travelway distances (i.e., 0.5 miles and 100ft) in comparison for potential spill contamination, sedimentation, and turbidity to streams during operations. <p>As there is very likely covariance (i.e., connection) between the two travelway distance zones and that these two zones could be repeating the same information, EPA suggests the FEIS use only one distance zone in this comparison.</p>	ALT	The text has been revised to make the travel way distances consistent.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	1	<p>The National Environmental Policy Act (NEPA) mandates that federal agencies "...Rigorously explore and objectively evaluate all reasonable alternatives..." 40 CFR §1502.14(a). However, the SDEIS only considers two Action Alternatives, both of which have the same actual mine plan. The range of alternatives analyzed in the SDEIS is simply inadequate given a project of this size, both environmentally and its social impact. The Forest Service should go back and develop an adequate range of alternatives in compliance with the mandates in NEPA. Additionally, the Forest Service should provide adequate justification for the elimination of other alternatives previously studied that had substantive differences in the mining portions.</p>	ALT	Section 2.6 of the SDEIS discusses 17 alternatives that were considered but were eliminated from further detailed analysis in the EIS for the reasons stated. New narrative has been added to Section 1.1 of the Final EIS explaining the handling of the action alternatives in the 2020 DEIS. CEQ has stated that "Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using commonsense, rather than simply desirable from the standpoint of the applicant." (40 Most Asked Questions Concerning CEQs NEPA Regulations, Q/A 2a, 51 FR 15618, April 25,1986). CEQ has also stated, "an agency's responsibilities to examine alternatives sites has always been bounded by some notion of feasibility" and, "there is no need to disregard the applicant's purpose and needs and the commonsense realities of a given situation in the development of alternatives" (CEQ Guidance Regarding NEPA Regulations, 48 FR 34263, July 28, 1983). The 2021 MMP describes Perpetua's primary objectives based on professional examination of the mineral reserves, economics, and common sense (M3 2021). The 2021 MMP is based on economic and profitable production of the recoverable metal values, constrained by the site-specific physical conditions at the site such as geology, mineralization, topography, hydrology, and in

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					this case, the legacy mining features. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Zack Waterman (Northern Rockies Conservation Director)	19317	2	The SDEIS fails to consider a reasonable range of alternatives. The SDEIS only considers the applicant's proposed mine plan and a no-action alternative. This is not a reasonable range of alternatives. Please evaluate an alternative that utilizes underground mining operations rather than open-pit mining. Underground mining operations would greatly reduce the most adverse environmental impacts and must be considered. At a minimum, the Forest Service should consider a third alternative that significantly reduces adverse ecological impacts.	ALT	Section 2.6 of the SDEIS discusses 17 alternatives that were considered by were eliminated from further detailed analysis in the EIS for the reasons stated. These included underground mining and other alternatives that were considered. The action alternatives included in the SDEIS are considered to be sufficient for the evaluation of the 2021 MMP. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	61	All the alternatives discussed in detail and dismissed would benefit from identifying which issues were considered when developing the alternatives. In particular, all the environmental design features and mitigation measures would be enhanced by including the significant issue.	ALT	Adding which issues were attached to each alternative considered but not evaluated, and each EDF or mitigation measure in the SDEIS would add unnecessary complexity to the narrative that is not required.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	62	" <i>Alternatives Screening Criteria</i> " - Most of the "significant issues" listed in 1.10 are addressed through the development of the environmental design features, agency mitigation measures, and Stibnite Gold mitigation measure. These are key and major components of the alternative development that we recommend be described briefly here.	ALT	Adding which issues were attached to each alternative, and each EDF or mitigation measure in the SDEIS would add unnecessary complexity to the narrative that is not required. Section 2.2 of the SDEIS adequately describes the process for identifying action alternatives.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	63	" <i>Options not meeting the purpose and need (Section 1.6) were documented and eliminated first</i> " Please describe which options do not meet the purpose and need. They are not described in the cited Section 1.6 as the citation indicates.	ALT	As described in the third complete paragraph of Section 2.2.2 of the SDEIS, component options are discussed in more detail in Section 2.6.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	65	" <i>A road maintenance facility</i> " - Recommend clarifying that the location of the maintenance facility is different between the alternatives, as reflected in Table 2.2-1.	ALT	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	66	" <i>Under the No Action Alternative, the Plan would not be approved and no mining, ore processing, or related activities would occur, including removal of legacy materials (i.e., SODA and Hecla heap leach) included in the Plan.</i> " Please insert after " heap leach ": " restoration of stream channels, and enhanced riparian plantings " included in the plan.	ALT	The recommended edit has not been made because Phase 1 of the ASAOC, which would occur if the No Action Alternative were selected does include some stream channel and riparian vegetation restoration.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	82	Recommend revising and clarifying this section by: 1) including a tie to why this alternative arose (public suggestion or which significant issue) and 2) consistently applying the rationale stated as to whether the alternative is not reasonable or does not meet the purpose and need (and why it doesn't meet the purpose and need).	ALT	The recommended clarifications in Section 2.6 have been added for the source of the alternatives discussed in Section 2.6 and why they may not be reasonable, or do not meet the purpose and need.
Alan Haslam (Vice President, Permitting,	19325	25	Recommend that the Agency Preferred Alternative should also cite improved fish access and habitat, consistent with our comments in Sections 3 and 4 of the SDEIS as well as the Specialist Report.	ALT	The principal differentiation between the alternatives regarding fish access and habitat is the reduced risk of traffic incidents and spills under the 2021 MMP. This reason for identification

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Perpetua Resources Idaho, Inc.)					of the 2021 MMP as the Preferred Alternative is already captured in the identification rationale.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	4	Accurate representation of the alternatives - including the No Action Alternative - is fundamental to reliable and defensible impact analysis for the comparison of alternatives. Thus, comments on Chapter 2 provide clarifying information or recommendations to improve the technical accuracy of the descriptions of activities and actions associated with each of the alternatives.	ALT	Noted. The specific comments included in this comment letter are responded to in other comments/responses for this and other comment categories. No further response is required here. General in nature or position statement.
Jon Robison	19330	8	An engineered stream underlain by a liner and displaced from the nearest stream reach by 400 vertical feet does not seem like a restoration project to me. The Forest Service should examine additional alternatives such as utilizing dry stack tailings to avoid these impacts.	ALT	Dry stack tailings disposal was considered and eliminated from detailed analysis for the reasons discussed in Section 2.6.2.2.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	197	Regarding the Johnson Creek Road, the SDEIS claims in numerous locations (see table 4.16-3, p. 4-491 of the SDEIS as an example) that once the Burntlog Route is complete, no mine traffic, and particularly heavy vehicles, will use the Johnson Creek route. We believe it is unreasonable to expect that zero mine traffic will use this route given the SDEIS fails to offer mitigation or Design Features that will ensure all mine traffic will adhere to the Burntlog Route. Further, Perpetua has stated the value of having redundant routes available in case of an emergency (DAC, 2021 at 1). Construction of the SGP under the Johnson Creek Road alternative is anticipated to extend the life of the project by two years. However, by not having to completely reclaim the Burntlog Route and the additional associated access roads/routes following closure, Perpetua may be faced with a null benefits/loss statement that in effect balances itself regarding fiscal output and total commitment. We recommend that the Forest Service complete a thorough cost/benefit analysis of these two alternatives to determine the true worth and value of each regarding potential impacts and adverse effects.	ALT	Section 2.4.4.3 of the SDEIS states that once the Burntlog Route is constructed it would be the primary SGP access and the Johnson Creek Road would no longer be used for mine-related traffic. The Johnson Creek Road would continue to be used as a public access road during the SGP construction and operations. Perpetua has proposed the Burntlog Route because it would avoid safety risks inherent with the Johnson Creek Road. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	202	12. Use of an "upper slope" road is better than a "lower slope" road The gist of the argument in the DEIS (2020) and SDEIS is that the Johnson Creek/Stibnite road access ("lower road") will be worse than the Burntlog Route ("upper" or "mid-slope" road) access primarily from the number of landslides/rockslides, the extra two years of construction required if the Stibnite road is to be the primary haul route during construction, and the longer lengths of roads parallel to a stream. Literature shows that the lower roads "receive" the slides/rockfalls, but the upper/mid-slope roads generally "create" them. Many sediment creating and delivering functions exist in the literature on upper/mid-slope roads that have not been put into context to allow choices to be made between alternatives.	ALT	The specific comments included in this comment letter are responded to in other comments/responses for this and other comment categories. No further response is required here. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	206	15. SDEIS contains two locations for the proposed Burntlog Maintenance Facility Two sites appear in various SDEIS, DEIS and Specialist documents to be the location of the proposed Burntlog Maintenance Facility site. One is adjacent to Peanut Creek, and the other at "...approximately 4.4 miles east of the junction of Johnson Creek Road (CR 10-413) and Warm Lake Road (CR 10-579)." These two sites are 0.5 miles away from each other and are physically different locations. If the two locations are presented as a form of "alternative," it is not clear which location is preferred, nor is it clear why the Forest Service/Perpetua would propose alternative locations for the same facility. In any event, we recommend that the Forest Service determine which location is accurate and remove all references to the second locale and complete data analysis, particularly those associated with sediment deposition, impacts to IRAs and wilderness, fisheries, and wildlife. We pose numerous questions and make recommendations regarding this specific topic in Newberry 2022 (Section 11.a.1, p. 19).	ALT	The location of the maintenance facility is associated with the selection of the access route. Under the 2021 MMP, the Burntlog Route would be the access route and the "Burntlog Maintenance Facility" would be located near the start of that route. Under the Johnson Creek Route alternative, the "Landmark Maintenance Facility" would be located near the junction of Johnson Creek Road and Warm Lake Road. Therefore, the location of the maintenance facility is a component of the access route selection.
Bonnie Gestring (Northwest Program Director,	17634	261	8. The SDEIS should include an action alternative that minimizes impacts eligible, suitable, and designated WSR values	ALT	As described in Section 3.23.4.2 of the SDEIS, the SGP would intersect with eligible or suitable WSR corridors at the proposed access roads and utility corridors, specifically, SFSR, Burntlog Creek, and Johnson Creek. Effects to the WSR values of these streams from the SGP are described in Section 4.23.2.2 of the EIS. As stated in Sections 1.10.3.4 and 4.23.2 there would not be any adverse effects that would affect the eligible segment and there would be no

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Earthworks) and seven others			All action alternatives in the SDEIS may harm WSR values besides the No Action Alternative. Another action alternative should be included in the FEIS and before the ROD that eliminates harm to the eligible, suitable, and designated WSR values in case the project moves forward.		impairment to the free-flowing characteristics of the segment. Therefore, the Project would comply with FSH 1909.12, Chapter 84.3.
David Chambers	17634-A	1	The Stibnite Gold Project Supplemental Draft Environmental Impact Statement (SDEIS) analyzes one open pit mining project proposal, with two access road alternatives. There are no mining alternatives analyzed. Underground mining had been eliminated from evaluation in the DEIS on the basis that underground mining is not economic, but this rationale is supported only by innuendo, not by technically defensible information. Because the potential for underground mining is heavily promoted by Perpetua in its feasibility studies, this mining alternative should have been included for more detailed analysis.	ALT	<p>Underground mining practices were common in the past but have largely been replaced by open pit mining due to efficiencies of scale provided by improvements in mining equipment and methods. Underground mining is still conducted worldwide but has been shown to only be practical when the target ore body is too deep to mine profitably by open pit and the ore grades are high enough to cover costs. The history of the Stibnite property is an example of this economic transition. The earlier mining activities at Stibnite were underground but later mining operations were all of the open pit type.</p> <p>The 2021 feasibility report only describes open pit operations for the proposed target orebodies. If underground mining of these orebodies was technically and economically feasible, the experts involved with the NI-43-101 Feasibility Report would have most likely discussed it. It can therefore be concluded that applying underground mining methods to development of the orebodies included in the 2021 MMP would not be financially feasible or comply with the purpose and need for the project.</p> <p>If the same orebodies were to be developed by underground methods, other aspects of the project would not be feasible. The amount of development rock removed from the underground workings would be much less than is proposed in the 2021 MMP. This would provide less material for backfilling the Yellow Pine pit and to buttress the TSF embankment.</p> <p>The 2021 feasibility report does discuss the presence of potential, future underground mine targets for other, higher-grade orebodies within the SGP property. The report is clear that current exploration information of potential underground targets is insufficient and additional exploration of these targets is necessary before providing the required information on ore grades, continuity, scale, and geotechnical characteristics required to define a mineral resource. Therefore, future underground mining operations at the SGP is currently too speculative for evaluation under NEPA.</p> <p>There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.</p>
David Chambers	17634-A	4	<p>2.2 Development of Alternatives</p> <p>From a mining perspective, there is only one alternative analyzed in the SDEIS – the 2021 MMP as proposed by Perpetua. The alternatives consist of two different access road options to the mine. As discussed further in Section 2.6.1.1 below, there are several good reasons for an underground mine alternative to be analyzed, and the EIS analysis has not conclusively demonstrated that underground mining is not economically viable. Hand waving arguments about a lack of economic viability do not provide sufficient justification to eliminate an alternative that could provide a significant reduction in environmental effects.</p> <p>As now presented, there is no real alternative to the mining project proposed by Perpetua, in spite of the fact that the company proposes an extensive underground drilling prospect as a part of this project proposal, and has promoted several possible underground prospects to potential investors as a part of its most recent Feasibility Study (M3 2021).</p> <p>The potential for underground mining should be viewed first in the light of a choice as an environmentally preferable SDEIS alternative. Underground mining would mean less waste disposal on the surface, and less disruption of existing surface water flows, while still allowing removal of the existing source of contamination proposed for the open pit mining alternative. In the haste to eliminate underground mining as a consideration, a potential environmentally preferable option is not being properly analyzed.</p>	ALT	<p>Underground mining practices were common in the past but have largely been replaced by open pit mining due to efficiencies of scale provided by improvements in mining equipment and methods. Underground mining is still conducted worldwide but has been shown to only be practical when the target ore body is too deep to mine profitably by open pit and the ore grades are high enough to cover costs. The history of the Stibnite property is an example of this economic transition. The earlier mining activities at Stibnite were underground but later mining operations were all of the open pit type.</p> <p>The 2021 feasibility report only describes open pit operations for the proposed target orebodies.</p> <p>If underground mining of these orebodies was technically and economically feasible, the Forest Service is confident the experts involved with the NI-43-101 Feasibility Report would have discussed it. It can therefore be concluded that applying underground mining methods to development of the orebodies included in the 2021 MMP would not be financially feasible or comply with the Purpose and Need for the project.</p> <p>If the same orebodies were to be developed by underground methods, other aspects of the SGP would not be feasible. The amount of development rock removed from the underground workings would be much less than is proposed in the 2021 MMP. This would provide less material for backfilling the Yellow Pine pit and to buttress the TSF embankment.</p>

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					<p>The 2021 feasibility report does discuss the presence of potential, future underground mine targets for other, higher-grade orebodies within the SGP property. The report is clear that current exploration information of potential underground targets is insufficient and additional exploration of these targets is necessary before providing the required information on ore grades, continuity, scale, and geotechnical characteristics required to define a mineral resource. Therefore, future underground mining operations at the SGP is currently too speculative for evaluation under NEPA.</p> <p>There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.</p>
David Chambers	17634-A	10	<p>2.6 Alternatives Considered but Eliminated from Further Detailed Study - 2.6.1.1 Underground Mining</p> <p>The SDEIS does not provide adequate justification for eliminating underground mining as an alternative to be considered in the SDEIS. In explaining why underground mining was eliminated as a consideration in the SDEIS, the rationale presented begins by asserting:</p> <p>“In aggregate, grades for these three deposits above a 0.48 grams per ton (g/t) gold cut-off grade averaged 1.43 g/t gold, 1.91 g/t silver, and 0.064 percent antimony (M3 2021). Typical economic cutoff grades for underground mine operations are approximately 5 g/t gold.” (SDEIS 2022, emphasis added)</p> <p>The basic consideration for potential economic viability must begin by considering how much gold greater than the cutoff grade that has been identified, and whether this amount would justify underground mining. This is not addressed in the SDEIS analysis.</p> <p>In addition, if underground mining were to take place, the cutoff grade would likely be less than the 5 g/t proposed in the SDEIS. The reference cited in the SDEIS, the Stibnite Gold Project Feasibility Study (M3 2021), has an entire section devoted to the discussion of “Potential high-grade underground exploration prospects” (M3 2021, Section 9.8). In that section M3 using “gold cutoff” values of 2.4 g/t and 3 g/t, both of which are well below the 5 g/t cited in the SDEIS. The SDEIS does not give a citation for its choice of 5 g/t as “Typical economic cutoff grades for underground mining ...”. The 5 g/t cutoff grade is not mentioned in the Feasibility Study. The choice of a typical cutoff grade for underground mining in the SDEIS should at least be consistent with the information being presented to the company’s potential investors in its technical reports.</p> <p>Unlike the Feasibility Study, which aggressively addressed the possibility for underground mining to potential investors, the SDEIS appears to avoid serious discussion of underground mining as a possibility by proposing underground mining is economically unfeasible, then failing to defend that premise with any quantitative analyses.</p> <p>The potential for underground mining should also be viewed in the light of a potential choice as an environmentally preferable SDEIS alternative. Underground mining would mean less waste disposal on the surface, and less disruption of existing surface water flows, while still allowing removal of much of the existing waste sources of contamination proposed for the open pit mining alternative. In the haste to eliminate underground mining as a consideration, a potential environmentally preferable option is not being properly analyzed.</p>	ALT	<p>Underground mining practices were common in the past but have largely been replaced by open pit mining due to efficiencies of scale provided by improvements in mining equipment and methods. Underground mining is still conducted worldwide but has been shown to only be practical when the target ore body is too deep to mine profitably by open pit and the ore grades are high enough to cover costs. The history of the Stibnite property is an example of this economic transition. The earlier mining activities at Stibnite were underground but later mining operations were all of the open pit type.</p> <p>The 2021 feasibility report only describes open pit operations for the proposed target orebodies. If underground mining of these orebodies was technically and economically was feasible, the Forest Service is confident the experts involved with the NI-43-101 Feasibility Report would have discussed it. It can therefore be concluded that applying underground mining methods to development of the orebodies included in the 2021 MMP would not be financially feasible or comply with the Purpose and Need for the project.</p> <p>If the same orebodies were to be developed by underground methods, other aspects of the project would not be feasible. The amount of development rock removed from the underground workings would be much less than is proposed in the 2021 MMP. This would provide less material for backfilling the Yellow Pine pit and to buttress the TSF embankment.</p> <p>The 2021 feasibility report does discuss the presence of potential, future underground mine targets for other, higher-grade orebodies within the SGP property. The report is clear that current exploration information of potential underground targets is insufficient and additional exploration of these targets is necessary before providing the required information on ore grades, continuity, scale, and geotechnical characteristics required to define a mineral resource. Therefore, future underground mining operations at the SGP is currently too speculative for evaluation under NEPA.</p> <p>There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.</p>
Leah K. Corrigan	19000	3	<p>The range of alternatives considered is inappropriately narrow</p> <p>The Forest Service failed to analyze and adequate range of alternatives. The agency is required to rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated. The benchmark for examination of the range of possible alternatives is that is that the Forest service must take a hard look at possible alternatives. This is especially true for any alternative that appears to be legal, is consistent with policy objectives, has broad public support and is reasonably feasible.</p> <p>The Forest Service failed to consider alternatives that would result in less substantial environmental harm. All of the action alternatives will result in unreasonable environmental harm to water quality and</p>	ALT	<p>SDEIS Section 2.2.2 describes the alternatives development process. Potential alternatives were screened based upon four criteria: does it meet the purpose and need; does it reduce environmental effects to at least one resource; is it technically feasible; and is it economically feasible. Alternatives not meeting the purpose and need were the first ones eliminated. The remaining ones were then evaluated for technical and economic feasibility and potential environmental impacts using the significant impact issues identified during scoping (Section 1.10 SDEIS).</p> <p>Section 2.6 of the SDEIS discusses 17 alternatives that were considered by were eliminated from further detailed analysis in the EIS for the reasons stated. These included underground</p>

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			<p>quantity, fisheries, special status fish species, and other resources. The Forest Service should prepare a new or supplemental EIS to consider additional alternatives, that would result in less substantial environmental harm, while still meeting the Forest Service's obligation to consider the SGP plan of operations and allow access to the public lands to search for minerals, including the alternatives described below.</p> <ul style="list-style-type: none"> - All four of the action alternatives will have negative impacts across an affected area ranging between 3,219 acres and 3,533 acres. The Forest Service should analyze alternatives that limit the footprint of development to a smaller total acreage, including an alternative that limits the mine footprint to previously disturbed areas. - The FS should analyze an alternative that is similar to the no action alternative, but that includes removal of the Soda and Brady tailings to restore fish habitat. - The Forest Service should consider an action alternative that is consistent with the Payette and Boise Land and Resource Management Plans, and that does not require that the plans be amended. - The Forest Service should analyze an alternative that includes more effective measures to avoid, minimize and mitigate adverse impacts water quantity and quality and fish populations, particularly endangered fish species. This should include an alternative that results in a net improvement in water quantity, water quality, and the health of fish populations and riparian ecosystems in the Salmon River and its tributaries. - The Forest Service should analyze an alternative that proposes mineral withdrawal for the Salmon River watershed (while this would ultimately require congressional action, it is appropriate for the Forest Service to analyze an alternative that protects the world class resources in the watershed (including the health of the Salmon River and its tributaries, wetlands and riparian areas, roadless areas, wildlife, scenic values, etc.) from mining. - The Forest Service should analyze an alternative that avoids building roads, allowing surface disturbance, and putting mining waste in undisturbed habitat for fish species, particularly endangered fish species. In addition, the FS should analyze an alternative that prohibits activities likely to result in contamination of streams with arsenic, methylated mercury, and other minerals and compounds likely to cause significant long-term adverse impacts on fish species, particularly endangered fish species. - The Forest Service should analyze an alternative that reconnects fish habitat, isolates historic mine waste from streams, and restores degraded riparian areas. <p>I urge the FS to prepare a new or supplemental DEIS which includes consideration of a broader range of alternatives.</p>		<p>mining and other alternatives that were considered. The action alternatives included in the SDEIS are considered to be sufficient for the evaluation of the 2021 MMP. The Forest Service's choice of action alternatives can be influenced by the primary objectives of the 2021 MMP. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.</p>
Samuel Penney (Chairman)	19396	25	<p>2.2 Inadequate Range of Alternatives Nez Perce Treaty Rights Alternative</p> <p>As part of the purpose and need, the SDEIS identifies as one of the needs to "[e]nsure that the proposed occupancy and use of NFS lands is consistent with statutory and regulatory requirements." The 1855 Treaty, as the Supreme Law of the Land under the United States Constitution, is identified in the SDEIS as an applicable federal law to which compliance is required to meet the Project's purpose. The Forest must develop and include in the SDEIS all reasonable alternatives that protect Nez Perce treaty rights and resources. In fact, the Proposed Action and neither alternative in the SDEIS fulfill these requirements. The Forest concluded in the SDEIS that the Project will substantially and irreparably harm treaty rights and resources and cultural resources under both action alternatives. Construction and operation of the mine would directly and indirectly cause major harm to tribal resources. Tribal access to areas within the Project would be restricted during the Project's construction, operation, and closure and reclamation phases, preventing Nez Perce tribal members from exercising off-reservation rights to fish, hunt, gather, and pasture, for a period of 20 years, excluding reclamation. The Project would also impact salmon and other aquatic species and essential fish habitat that would in turn impact availability and</p>	ALT	<p>SDEIS Section 2.2.2 describes the alternatives development process. Potential alternatives were screened based upon four criteria: does it meet the purpose and need; does it reduce environmental effects to at least one resource; is it technically feasible; and is it economically feasible. Alternatives not meeting the purpose and need were the first ones eliminated. The remaining ones were then evaluated for technical and economic feasibility and potential environmental impacts using the significant impact issues identified during scoping, which included impacts to Tribal Treaty Rights (Section 1.10 SDEIS).</p>

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			harvestability of these and other treaty-reserved resources by the Tribe at its traditional fishing, hunting, and gathering areas. Given the Forest's treaty--based duty to avoid taking action resulting in harm to the Tribe's treaty rights, the Forest's two alternatives in the SDEIS are unreasonably narrow because both result in substantial and irreparable harm to the Tribe's treaty rights and resources.		
Samuel Penney (Chairman)	19396	26	<p>No Forest Plan Amendments Alternative</p> <p>The SDEIS states: "When a proposed project is not consistent with Forest Plan standards applicable to the location of a project and/or the types of activities proposed, the Forest has the following options: (1) modify the proposed project to make it consistent with the Forest Plan; (2) reject the proposal; (3) amend the Forest Plan so that the project would be consistent with the Forest Plan as amended; or (4) amend the Forest Plan contemporaneously with the approval of the project so the project would be consistent with the Forest Plan as amended."</p> <p>The Forest's discretion to exercise any of these options to achieve Forest Plan consistency is not unbounded. The Agency's action is expressly "subject to valid existing rights." There is no question that the Tribe's rights reserved in its 1855 Treaty with the United States are "valid existing rights" applicable to the Project area. These rights constrain the Forest's discretion to amend existing Forest Plan standards in ways aimed at accommodating the Project but which are inconsistent with the Agency's treaty-based and trust obligations to the Tribe and will result in harm to the Tribe's treaty-reserved rights and resources. Such is the case here. For example, the Forest seeks to amend standards that will remove existing prohibitions on the degradation of aquatic, terrestrial, and watershed resource conditions from beyond three years. These standards, if amended, would authorize long-term degradation to resource conditions that will substantially and impermissibly harm the Tribe's treaty-reserved rights and resources.</p> <p>To avoid harm to the Tribe's treaty-reserved rights and resources while maintaining consistency with Forest Plan standards, the Forest should not use option three above that weaken Forest Plan standards that harm the Tribe's treaty resources. Instead, the Agency must include and rigorously explore new reasonable alternatives that protect the Tribe's rights by embracing option one (change the Project) or option two (reject the proposal) and which by their terms do not require Forest Plan amendments.</p>	ALT	The Forest Service would require modifications and mitigation measures to make the Project consistent with the Forest Plans to the extent practicable. In instances where consistency would not be achieved while meeting the Project's purpose and need, the Forest Plans would be amended at the same time as the Project ROD. Appendix A of the SDEIS is a review of Forest Plan consistency and proposed amendments as part of the Project. As part of the analysis and decision on this Project, the Forest Service explored modifications and measures protective of Tribal treaty resources.
Samuel Penney (Chairman)	19396	27	<p>Project Life Phases Alternative(s)</p> <p>As noted in the EIS Scoping and Issues Summary Report (Section 2.6.12 Alternatives Development, one recommendation was, "[f]or every phase of mine life, develop a series of alternatives in which the restoration components can be pursued without ongoing mine development activities." Mine life phases are generally recognized as exploration, permitting, construction, operations, reclamation and closure, and post-closure. Additionally, mine life phases may include different operations periods representing periods of mining, such as those involving mining of different open pits and other areas as described in the SDEIS. The SDEIS only includes alternatives that assume the mine is operated and closed as proposed and does not include alternatives that require restoration components without mining development, or for closure during mine life operational phases despite evidence of clear economic issues in later mine years.</p>	ALT	The 2021 MMP describes Perpetua's primary objectives based on professional examination of the mineral reserves, economics, and common sense. The SGP mine plan was designed to produce the target metals with an economically efficient operation. The Project mine plans are based on economic and profitable production of the recoverable metal values, constrained by the site-specific physical conditions at the site such as geology, mineralization, topography, hydrology, and in this case, the legacy mining features. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Samuel Penney (Chairman)	19396	28	<p>No Antimony Production Alternative</p> <p>The U.S. Geological Survey produced a report on antimony that addresses its uses and applications; demand, availability of supply and consumption; strategic and critical resource issues; geology; resources and production; exploration for new deposits; environmental considerations; and problems and future research. The results are summarized as follows:</p> <p>Antimony is used widely by modern industrialized society. Antimony's leading use is as a fire retardant in safety equipment and in household goods, such as mattresses. The element imparts strength, hardness, and corrosion resistance to alloys, including in lead-acid storage batteries.</p> <p>The demand and availability of supply and consumption has increased during the past century from 7,710 metric tons in 1900 to 185,000 metric tons in 2008. In 2013, China produced about 80 percent of</p>	ALT	Table 17-3 of the 2021 Feasibility Report (M3 2021) shows that the higher antimony concentrations in the ore also occur along with the higher gold grades during the first years of the operations. The antimony grades then drop off to low concentrations in the later years of the operations, with the exception of year 9 where antimony concentrations are similar to the early years. The Feasibility Report states that the antimony flotation circuit would be operated to produce an antimony concentrate except for years of low-antimony mill feed when the ground ore would bypass the antimony flotation circuit and be processed in the gold/silver flotation circuit. Section 3.8.4 of the 2021 MMP also discusses this matter and states that 15 to 20 percent of the total mill feed is expected to have sufficient antimony grade to warrant removal of an antimony concentrate. The Antimony Flotation subsection of Section 2.4.5.7 of

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			<p>the world's supply of antimony. In the United States, there is one active antimony smelter in Thompson Falls, Montana (United States Antimony Corp.). Apparent consumption of antimony by the United States from 1979 to 2009 has ranged from approximately 20,000 metric tons to 47,000 metric tons with the peak occurring in 1997 and lower demand occurring since 2009.</p> <p>The U.S. Government has considered antimony to be a critical mineral mainly because of its use in military applications. Currently, China has the bulk of the world's identified antimony resources, the majority of the world's antimony is mined in China, and much of the remainder is shipped to China for smelting. However, the U.S. Geological Survey report notes that, "[b]arring market manipulation by a few dominant producers, recycling, mining, and smelter production are expected to meet the demand for antimony and antimony compounds for the foreseeable future."</p> <p>There are abundant identified antimony resources available, but the bulk of those resources are in a few very large deposits that are not evenly distributed across the globe. Today's market favors large deposits that are conducive to high-volume bulk-mining techniques. The United States and the countries of the Western Hemisphere appear to have mostly small deposits that are uneconomic to mine under current and foreseeable conditions. According to the report the United States has no deposits, from which the ore is mined principally for antimony, that are large enough or rich enough to compete with foreign sources in normal times. The Perpetua proposed Project is cited as an example of identified resources in the United States that meet this description.</p> <p>The U.S. Geological Survey report notes that, "[a]ntimony resources that may be mined in the future are likely to be those tied directly to deposits of precious metals, copper, lead, and (or) zinc, similar to those from which most domestic antimony has historically been recovered as a byproduct or coproduct. Gold is an important joint product with antimony, but gold-antimony veins are commonly mined just for their gold. Because the presence of antimony makes gold more difficult and more expensive to process (the antimony interferes with the heap-leaching agent by consuming oxygen and hindering the effect of cyanide on the gold ore), some amount of gold ore that has a high antimony grade may be stockpiled." The report goes on to note that "[e]nhanced recovery of antimony from precious-metal deposits may represent the most readily available source of antimony if demand were to increase rapidly" and that antimony could be recovered from existing mines in Idaho and Nevada.</p> <p>Information on antimony mine waste related to the environment is extremely limited. Limited data are available on the acid-generating potential of antimony mineral bearing mine waste. The presence of carbonate minerals, such as calcite, and only minor amounts of pyrite in the mine waste from antimony deposits in general suggest that the acid-neutralizing potential is likely to exceed the acid-generating potential of the mine wastes.</p> <p>In general, trivalent antimony (Sb³⁺) is more toxic than pentavalent antimony (Sb⁵⁺). In humans, antimony can result in diseases of the liver, respiratory and cardiovascular systems, and skin. Compared to trivalent arsenic, pentavalent antimony is 5 times less cytotoxic and 10 times less genotoxic. The EPA has set a maximum contaminant limit of 6 ppb for antimony and 10 ppb for arsenic for drinking water. The World Health Organization drinking water guideline is 20 ppb for antimony and 10 ppb for arsenic. National ambient-water-quality criteria with respect to freshwater organisms are not available from the EPA for antimony; however, mine drainage from antimony mines can locally exceed both acute and chronic ecological guidelines for antimony and arsenic.</p> <p>The report notes that from an environmental perspective, no clear case study of the behavior of antimony and related trace elements in a modern mine setting using current best practices exists. The toxicity of aqueous antimony species to aquatic organisms is a notable gap in knowledge. Knowledge of the toxicity of antimony in sediments is also limited.</p> <p>The Stibnite Mine was named for the antimony containing sulfide mineral stibnite (Sb₂S₃). As noted in the PRO, the Project area was historically mined from the mid-1920's through 1952 for antimony, gold, and tungsten using both underground and open pit mining methods, and from 1982 to 1997 for gold using open pit methods. The mining, milling and processing activities created numerous legacy impacts including underground mine workings, multiple open pits, development rock dumps, tailings deposits,</p>		<p>the SDEIS states that ore high in antimony would be processed by the antimony flotation circuit to produce an antimony concentrate.</p> <p>The Antimony Concentrate Transport subsection of Section 2.4.5.7 of the SDEIS describes that the antimony concentrate would be placed into supersack containers at the mill which would then be placed within shipping containers that would be fully enclosed for truck transport offsite. One to two truckloads of concentrate are described to be shipped daily when the concentrate is being produced. So significant storage of antimony concentrate on site is not expected. Temporary storage of the individual shipping containers at offsite terminals or ports is no different than the current operations of those facilities so incremental environmental effects from the same are not expected.</p> <p>So not producing an antimony concentrate in the low antimony feedstock years is already part of the 2021 MMP. When an antimony concentrate is being produced, the tailings from the antimony flotation circuit would continue on to the gold/silver flotation process. Operation of the antimony flotation circuit would have minimal impact on the amount of tailings being sent to the TSF, the only difference being the small percentage of ore being removed as antimony concentrate. Because the antimony mineralization occurs along with the gold/silver mineralization, the same amount and type of ore and development rock would still be removed from the open pits whether or not an antimony concentrate is produced. Because this aspect of not producing antimony concentrate in certain years of the operations has already been incorporated into the 2021 MMP and the environmental analyses, there is no need to consider a separate alternative.</p>

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			<p>heap leach pads, spent heap leach ore piles, a mill and smelter site, three town sites, camp sites, a ruptured water dam (with its associated erosion and downstream sedimentation), haul roads, an abandoned water diversion tunnel, an airstrip and other disturbance.</p> <p>The proposed process circuit for the Project includes crushing, grinding, flotation, pressure oxidation and cyanide leaching. The flotation circuit consists of up to two sequential flotation stages to produce two different concentrates; the first stage of the circuit was designed to produce an antimony-rich concentrate, and the second stage was designed to produce a gold-rich concentrate that is pressure oxidized and cyanide leached for the recovery of gold and silver. If the antimony content of the feed material is not present in economic concentrations, then the antimony circuit would be bypassed and a gold bearing sulfide concentrate would be the only concentrate produced by the flotation circuit.</p> <p>The December 22, 2020 Stibnite Gold Project Feasibility Study Technical Report (“Feasibility Report”) is based on producing a by-product antimony concentrate with sale of the concentrate to an antimony smelter, with the report noting that “suitable, currently operating antimony smelters are located in Asia or Oman” Smelters use a combination of pyrometallurgical processes to produce antimony metal including roasting to remove sulfur, fuming to produce antimony oxide, and reduction to produce antimony metal. The shipment of concentrate to an overseas smelter was considered appropriate given the estimated cost and perceived complexity of building and operating a secondary antimony processing plant.</p> <p>ModPro2 acknowledges this in the following passage: “The concentrate, when sold, would likely be shipped to facilities outside of the United States for smelting and refining because there are currently no such facilities operating in the United States with capacity for refining antimony sulfide concentrate. There are United States companies with refining equipment facilities and expertise that could potentially be brought online at some future date to refine antimony sulfide concentrate; however, Perpetua Resources does not have contracts in place with these companies and their ability to handle these concentrates has not been determined.”</p> <p>The importance of antimony as a matter of Project economics is overstated. As shown in Table 1 from the Feasibility Report base case, the gross revenue from the production of antimony is only expected to earn \$275M over the Project life, or less than 4% of total revenue, while gold is expected to earn \$6.7B over the Project life, or 96% of total revenue. In addition, the cost of further shipping and refining gold is by orders of magnitude less than what is anticipated for antimony, making the net impact on Project economics even less significant. This suggests that there are multiple factors making antimony production economics from the Project marginal, and potentially revenue negative.</p> <p>Table 1. Stibnite Gold Project Feasibility Report (TABLE)</p> <p>The aspect of antimony as a strategic and critical mineral has been over-emphasized with respect to the proposed Project. Recovery of antimony from precious-metal deposits currently being mined in Nevada and elsewhere in the United States represent a readily available source of antimony, if domestic production was considered justifiable. The more critical issue regardless of source would be antimony smelting capacity, which is currently limited. Present plans to ship antimony concentrates to China for smelting would in fact only do more to compound any present strategic or critical mineral issues.</p> <p>The matter of antimony production from the Project is primarily a matter of economics. If the proposed Project proceeds to production, and economics do not warrant antimony production, it is not assured that antimony production will be included as part of the process, or as an Alternative that it will continue to be operated throughout the Project life. Given that a change in the proposal to not produce antimony in the future might have a significant impact on tailings and even possibly waste rock geochemistry, this option should have been considered as an Alternative in the SDEIS.</p> <p>The SDEIS should also address the potential for antimony production to not occur at any point in the project life cycle. The SDEIS should include this as an action alternative and modify the environmental analysis to address what additional impacts would be expected should this occur in terms of the overall</p>		

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			resource mined and/or milled, waste rock and tailings quantities and geochemistry, and impacts to water quantity and quality. If it is not included as an alternative, then the SDEIS should address what regulations would have to be addressed and how or if mining operations would be allowed to proceed until regulatory approvals are received. The SDEIS should also address limitations of the amount of concentrate stored at the site or otherwise stockpiled at locations outside of the mine site in the event the antimony is not immediately sold for refining.		
Samuel Penney (Chairman)	19396	29	<p>Early Closure</p> <p>As shown in Figure 1.5 Mill Feed and Gold Head Grade by Deposit and Year in the Stibnite Gold Project Feasibility Report as referenced in the SDEIS, gold production peaks in year four of the project life and then significantly declines over the remaining project life. Given the volatility of gold prices, as well as uncertainty in silver prices and the antimony market overall, there is a reasonable possibility of early closure of the proposed project. The SDEIS should include as an action alternative the possibility of early closure and address what impacts and mitigation specific to that action would occur. The SDEIS should address if this would occur, how long operations could be suspended before the mine would be required to undergo permanent closure.</p>	ALT	It is the Forest Service's intention that the permanent closure characteristics described in Section 2.4.7 of the SDEIS would be achieved. Temporary closure of the operations is included in Section 2.4.5.15 of the SDEIS. This section describes what actions would continue during a temporary closure of the facilities to maintain compliance with commitments for monitoring and environmental compliance. It also states that compliance with the proposed permanent regulatory closure characteristics would be required, unless modified by the required regulatory authorities. The 2021 Feasibility Report (M3 2021) describes the economic risk analysis for the Project as designed and utilizes a base case gold price of \$1,600/oz. using the 3-year trailing price (60%) and the 2-year futures price (40%). The gold price in the last three years has ranged from about \$1,650/oz. to over \$1,900/oz. The economic analysis for the SGP utilized five metal price cases for gold from a low of \$1,350/oz. to a high of \$2,350 oz. At the low price point for gold, the payback period for the Project was less than 4 years and the internal rate of return before taxes was just over 17%. The situation described in the comment that gold and silver pricing could drop in the future to a point where continued mining at the SGP would be terminated early is considered to be unlikely and not foreseeable. It is considered more likely that the entire Project would be completed through final reclamation as described in the 2021 MMP. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Samuel Penney (Chairman)	19396	30	<p>Alternatives Considered, Carried Forward, or Eliminated from Further Study Section 2.6 of the SDEIS frequently cites various alternatives in this section as not being either "technically feasible" and/or "economically feasible." However, nowhere in the SDEIS are these terms defined. Similarly, the basis for the alternatives provided in AECOM 2020 does not define technical or economic feasibility. Stibnite Gold Project EIS Draft Alternatives Considered, Carried Forward, or Eliminated from Further Study does however note that "In determining the range of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant." This desire of the applicant is nonetheless indicated as influencing the decisions as suggested that "Information also was solicited from Midas Gold regarding the technical and economic feasibility of alternatives." Perpetua's input as the basis for technical or economic feasibility should not have been used as the basis for the Project SDEIS, however lacking further definitions, and analysis and consideration of the alternatives relative to those definitions, it would appear the SDEIS relies entirely on Perpetua's input.</p>	ALT	CEQ has stated that "Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using commons sense, rather than simply desirable from the standpoint of the applicant." (40 Most Asked Questions Concerning CEQs NEPA Regulations, Q/A 2a, 51 FR 15618, April 25,1986). CEQ has also stated, "an agency's responsibilities to examine alternatives sites has always been bounded by some notion of feasibility" and, "there is no need to disregard the applicant's purpose and needs and the common sense realities of a given situation in the development of alternatives" (CEQ Guidance Regarding NEPA Regulations, 48 FR 34263, July 28, 1983). The 2021 MMP describes Perpetua's primary objectives based on professional examination of the mineral reserves, economics, and common sense (M3 2021). The 2021 MMP is based on economic and profitable production of the recoverable metal values, constrained by the site-specific physical conditions at the site such as geology, mineralization, topography, hydrology, and in this case, the legacy mining features. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Samuel Penney (Chairman)	19396	31	<p>For an alternative to be economically feasible, the standard should not be whether the alternative retains the present projected profitability, but instead what is practical or reasonable. The following figure (Chart 3) shows the rate of return for the United States domestic mining industry as well as other industry groups for the period 1999-2018. As suggested by the figure, none other than nondurable-goods manufacturing have consistently achieved a rate or return of 19.3%, and the mining industry's rate or return has ranged from less than zero to a high of below 10%. Therefore, it might be reasonable for an alternative to be economical provided the proponent achieves a rate of return of 10%. This would then be the standard upon which to measure the economic feasibility of a given alternative. By performing a cash flow analysis similar to that contained in the prefeasibility study but adding capital and operating costs, an evaluation can be made as to actual potential economic impacts.</p>	ALT	CEQ has stated that "Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using commons sense, rather than simply desirable from the standpoint of the applicant." (40 Most Asked Questions Concerning CEQs NEPA Regulations, Q/A 2a, 51 FR 15618, April 25,1986). CEQ has also stated, "an agency's responsibilities to examine alternatives sites has always been bounded by some notion of feasibility" and, "there is no need to disregard the applicant's purpose and needs and the common sense realities of a given situation in the development of alternatives" (CEQ Guidance Regarding NEPA Regulations, 48 FR 34263, July 28, 1983). The 2021 MMP mine plan describes Perpetua's primary objectives based on professional examination of the mineral reserves, economics, and common sense (M3 2021). The 2021 MMP is based on economic and profitable production of the recoverable metal values, constrained by the site-specific physical conditions at the site such as geology, mineralization, topography, hydrology, and in

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			The SDEIS and supporting AECOM 2020 Stibnite Gold Project EIS Draft Alternatives Considered, Carried Forward, or Eliminated from Further Study document should have provided a definition of technical and economic feasibility; and the rationale of each alternative with respect to technical and/or economic feasibility should have been evaluated and considered therein. The basis for economic feasibility should consider what is typical for the mining industry and a range of gold prices including the current gold price. Technical feasibility also should not be based on what Perpetua would prefer to do, but rather, what can be done.		this case, the legacy mining features. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Samuel Penney (Chairman)	19396	32	<p>Section 2.6.2.2. Tailings Storage Facility (“TSF”) Dry Stack Tailings states, “The use of the dry stack method of tailings disposal was evaluated and determined to be technically and economically infeasible.” The determination as to the inclusion of dry stack tailings is based on AECOM 2020b which contains the following summary: “In AECOM’s professional opinion, filtered (dry stack) tailing is not feasible, both technically and economically, for the Project. This is due to the proposed fine tailing grind and filter clogging, the tailing transport, placement, and compaction issues resulting from the site’s wet and cold climate, an unprecedented tailing production rate for a filtered (dry stack) facility, and the relatively high operating costs discussed above. This opinion conflicts with other projects that have come to different conclusions, but where the project proponent ultimately favored the result. This includes not only the Greens Creek and Pogo Mines mentioned by AECOM, but also the Rosemont Project referenced by AECOM, as well as the Twin Metals project. Clearly, if filtered (aka dry stack) tailings are desirable, it can be achieved.</p> <p>Rather than subjectively address the technical and economic feasibility of dry stack tailings, the SDEIS instead should have addressed whether dry stack tailings would provide an environmental or safety advantage over the Alternatives examined in the SDEIS. Given the level of public interest and concern regarding potential tailings catastrophic failures, dry stack tailings should have been carried forward as an alternative for comparison with the other alternatives in the SDEIS.</p>	ALT	The AECOM evaluation of dry stack tailings is still applicable to the SGP. Additionally, dry stack tailings can be considered to offer greater stability from potential release of tailings water and solids from a TSF. All of these factors should be evaluated on a site-specific basis and the fact that dry stack tailings are used in other mining operations with different settings does not necessarily mean they should be applied to the SGP. Since the AECOM review was completed, Perpetua redesigned the TSF and TSF Buttress, as described in the 2021 MMP, to afford extraordinary support for the TSF embankment. As discussed in the Geotechnical Stability subsection of Section 4.2.2.2 of the SDEIS, the factor of safety of the revised design exceeds the regulatory requirements for long-term tailings storage.
Samuel Penney (Chairman)	19396	33	<p>2.3 No Action Alternative</p> <p>Inadequate Description of Baseline Conditions and No Action Alternative</p> <p>Under NEPA, the Forest is required to "describe the environment of the area(s) to be affected or created by the alternatives under consideration...." The establishment of the baseline conditions of the affected environment is a fundamental requirement of the NEPA process and is critical to any NEPA analysis. "Without establishing the baseline conditions which exist... before [a project begins, there is simply no way to determine what effect the [project] will have on the environment and, consequently, no way to comply with NEPA."</p> <p>The DEIS and SDEIS do not completely and accurately describe the no action alternative which the SDEIS uses as a baseline condition for comparing the environmental effects of the proposed action and alternatives. Other than a few obvious features such as the Yellow Pine pit, the DEIS and SDEIS do not identify or describe, or otherwise account for as baseline conditions, the numerous and significant discharges and sources of contamination existing at the present, nonremediated site.</p>	ALT	The affected environment is described in Chapter 3.0 of the EIS and is based on available information and site studies that provide a description of current conditions for the resources evaluated in the EIS. These descriptions include the existing effects of legacy mining features at the property. Chapter 3.0 details of the existing effects of legacy mining features on each of the discussed environmental resources are discussed. The scale of this discussion for each resource is relative to the issues being addressed. For example, the effect of legacy mining on surface waters is generally described in Section 3.8.4.2 of the SDEIS. The surface water quality monitoring locations along the streams in the Project area are described in the section. The surface water quality data from the monitoring locations are described in Section 3.9. A description of the chemical influence of historical mining wastes is located in Section 3.9.4.3. This captures the overall chemical effects of the legacy mining features on the streams which is more relevant than individual contributions from discrete legacy mining features like tunnels.
Samuel Penney (Chairman)	19396	40	The SDEIS fails to recognize that the restoration of the mine site without additional mining would be expected to result in a significant improvement to existing water quality conditions as compared to baseline conditions described in the SDEIS. The SDEIS should have described the existing conditions in detail with respect to legacy mining activities and their impact on water quality, and used restored rather than existing conditions to establish and compare as baseline conditions for all other alternatives considered in the SDEIS.	ALT	The affected environment is described in Chapter 3.0 of the EIS and is based on available information and site studies that provide a description of current conditions for the resources evaluated in the EIS. These descriptions include the existing effects of legacy mining features at the property. As described in the following comment response, the only reasonably foreseeable cleanup response that can be considered for the No Action Alternative is the Phase 1 work included in the ASAOC. The ASAOC scope of work for these response activities does not include prediction of the environmental effects of the work. Description of these effects are not yet available and would be learned from future monitoring after the Phase 1 work was completed by 2025. The subsequent phases described in the ASAOC are optional and could be terminated altogether if the No Action Alternative was selected by the Forest Service. Because of this, describing the baseline conditions as those that would exist after the legacy mining features were cleaned up would be speculative.

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Samuel Penney (Chairman)	19396	41	Inadequate No Action Alternative As the Tribe stated in its scoping and DEIS comments, a true no action alternative is not that the site will remain polluted/degraded since Perpetua is under an obligation to remediate all of the pollution/impacts under its broad, current liability. The Agency cannot skew the no action alternative to argue that approval of the Project is needed to clean up the site, when cleanup is already mandated by federal law. The SDEIS provides no such acknowledgement, and instead offers a vague, incomplete, and narrow description of the site. The SDEIS notes, "...the Plan would not be approved and no mining, ore processing, or related activities would occur..." Thus, in the no-action alternative, the Forest needs to fully review Perpetua's current liabilities and the extent of remediation that would be accomplished if Perpetua met its current liabilities, independent of approval of the Project under applicable federal laws such as the Clean Water Act and/or Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"). The Forest's review in the SDEIS should have included a full evaluation of the Tribe's recommended approach for a "no action alternative including cleanup" for the site, as described in the attached October 27,2020, memo prepared by Jim Kuipers, P.E., Kuipers & Associates.	ALT	The history of the CERCLA actions at the Stibnite Location are described in Section 1.3 of the SDEIS. That narrative describes Perpetua's liability to conduct response activities at the site under the January 15, 2021 ASAOC. Any consideration of potential future cleanup activities at the Stibnite site needs to consider the terms of the ASAOC between Perpetua, EPA and the Forest Service. Importantly, section 9 and 12 of the ASAOC recognize that Perpetua did not create the historic environmental issues at the site and does not admit to any liability under the ASAOC. Phase 1 of the ASAOC includes certain time critical removal actions that would be implemented by Perpetua between 2021 and 2025. The Phases 2 and 3 under the ASAOC would be optional if Perpetua received approval for the SGP and plans for these future activities under the ASAOC can be terminated by Perpetua and the Agencies if the proposed new mining at Stibnite is not approved (the No Action Alternative). As described in Section 1.3, because these phases are optional, they are not considered to be reasonably foreseeable for the purposes of the SGP EIS. The description of the No Action Alternative in Section 2.3 of the SDEIS correctly limits the reasonably foreseeable CERCLA response actions to those directed by the ASAOC.
Samuel Penney (Chairman)	19396	52	2.6 Alternatives Considered but Eliminated from Further Detailed Study Economic viability should not be used as a rationale for not minimizing environmental effects under NEPA.	ALT	CEQ has stated that " <i>Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using commons sense, rather than simply desirable from the standpoint of the applicant.</i> " (40 Most Asked Questions Concerning CEQs NEPA Regulations, Q/A 2a, 51 FR 15618, April 25,1986). CEQ has also stated, " <i>an agency's responsibilities to examine alternatives sites has always been bounded by some notion of feasibility</i> " and, " <i>there is no need to disregard the applicant's purpose and needs and the common sense realities of a given situation in the development of alternatives</i> " (CEQ Guidance Regarding NEPA Regulations, 48 FR 34263, July 28, 1983). The 2021 MMP describes Perpetua's primary objectives based on professional examination of the mineral reserves, economics, and common sense (M3 2021). The 2021 MMP is based on economic and profitable production of the recoverable metal values, constrained by the site-specific physical conditions at the site such as geology, mineralization, topography, hydrology, and in this case, the legacy mining features. There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.
Samuel Penney (Chairman)	19396	367	Because the Forest does not deem impacts to soils, wildlife, and vegetation as significant issues in the SDEIS, none of the action alternatives were developed to minimize impacts to plant and wildlife habitat. Both action alternatives pose significant and adverse impacts to wildlife and wildlife habitat, especially to wolverine (>2,000 acres directly impacted), alpine species, wetland and riparian wildlife, and migratory birds.	ALT	Section 1.10.1 of the SDEIS reviews the Forest Service's opinion on the significant issues that drive the development of action alternatives. This does not eliminate the evaluation of other issues in the EIS for other environmental resources as described in Section 1.10.2 and Table 1.10-1 of the SDEIS. A number of issues were identified for soils, vegetation, and wildlife and impacts to these resources were evaluated in Sections 4.5, 4.10, and 4.13 of the EIS, respectively.

Geologic Resources and Geotechnical Hazards

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Jim Constantopoulos	1007	2	Upon reviewing the EIS and other available materials, I find that project is well thought out, sustainable, economically viable, and environmentally sound. The viability of the project is reflected in the statement in the DEIS "Midas Gold's compilation of historic geologic and mineral resource data in addition to data acquired from their own exploration drilling programs (Appendix 1) have clearly identified a remaining mineable resource..." This is further reflected in the statement, "Midas has proposed a reasonable plan of operations for development based on their knowledge of the mineral resources in the project area and the infrastructure necessary to support mineral development of this scale." While the gold and silver grades and indicated resources are impressive, I'm more impressed that this will be the only U.S. mine project to provide much-needed antimony for domestic markets. In several of my courses, we discuss the	GEO	No further response required. General in nature or position statement.

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			green energy transition and critical minerals as defined in Executive Order 13817. Students need to understand where we are as a nation regarding mineral dependency, and this project is an excellent example of what we can do to reduce that dependency.		
Dan Garner (Representative, District 34)	7142	2	Currently, China, Russia and Tajikistan control 90% of the global antimony supply and the US has no domestically mined source. The Stibnite site is the only identified reserve of antimony in the US and would be a key factor in reducing our reliance on foreign imports. Supplying antimony, which is used in production of ammunition, can help secure our national defense and protect our service members.	GEO	No further response required. General in nature or position statement.
Greg Lanting (Representative)	7147	3	Furthermore, this project will provide the much-needed critical mineral, antimony. The project site has an estimated 148 million pounds of antimony reserve. With the current political environment, domestically mining this important resource is crucial now more than ever. Further, Perpetua can enter into mill-toll or similar agreements that keep Perpetua in control of the product.	GEO	No further response required. General in nature or position statement.
Britt Raybould (Representative)	7180	2	If approved, Stibnite Gold would be the only domestically sourced antimony site in the US. Currently, our nation depends on Chinese and Russian imports of this critical mineral, which is used to manufacture ammunition and semiconductors. Supplying antimony from Idaho can help secure our national defense and protect our military heroes.	GEO	No further response required. General in nature or position statement.
Doug Pickett (Representative, District 27)	7187	2	Idaho has an incredible environment with an abundance of critical natural resources. Currently, 90-percent of the global antimony supply is found in China, Russia, and Tajikistan. With antimony being used to manufacture ammunition and semiconductors, I feel it would be smarter to domestically source this material, rather than relying on foreign imports; thus, potentially putting our country at risk.	GEO	No further response required. General in nature or position statement.
Dustin Manwaring (Representative)	7189	3	As a US citizen, we cannot ignore how the production of antimony at Stibnite will strengthen our national security. Right now, the U.S. relies primarily on China and Russia for this mineral- because there is no domestically mined source of antimony. With the recent pandemic and the incursion in Ukraine, Americans value a domestic supply chain for strategic minerals more than ever. The Stibnite Gold Project could produce over 100 million pounds of antimony and meet roughly 35% of U.S. demand in the first couple years of production. Antimony is used in every bullet that our armed services fires, in lead-acid batteries and in flame retardants.	GEO	No further response required. General in nature or position statement.
Matt Bundy (Representative)	7197	3	As a 20-year veteran of the Air Force, I am aware of the significance of having a domestic supply of antimony for our defense and the safety of our service members. The Stibnite Gold Project would enable the first antimony source to be mined domestically. Our country is vulnerable because of our reliance on antimony from foreign countries. Not supporting this project would be a serious mistake. Particularly in light of prior indications of interest in the project from the Department of Defense. In September, the company was awarded a \$200,000 SBIR grant from the DoD to examine whether the antimony at Stibnite can meet military demands.	GEO	No further response required. General in nature or position statement.
Ted Hill (Representative, District 14, Seat A)	7204	2	Antimony is a critical mineral needed for primers in hundreds of munition types required by the U.S. Military. Currently the United States is relying on China, Russia and Tajikistan who control 90% of the global supply as we do not have a domestically mined source. This makes the United States extremely vulnerable. The Stibnite project has a large antimony resource, 148 million pounds. When mined, this resource could satisfy about 35% of overall commercial demand in the U.S. and for antimony and all Department of Defense demand. This is crucial and timely.	GEO	No further response required. General in nature or position statement.
Kenny Wroten (Representative, District 13, Seat B)	7214	3	Moreover, Perpetua has also designed the Stibnite Project with the environment in mind. The company has outlined, in immense detail, the repair of past mining legacies, while extracting critical elements such as antimony. By mining this critical resource, which is currently the only identified source of antimony in the US, it would enhance our domestic production; all while removing hundreds of pounds of metal and contaminants in our waterways, and will enhance more than a dozen miles of streams.	GEO	No further response required. General in nature or position statement.
Stephanie Jo Mickelsen (Representative,	7258	2	In addition to my new role as a Representative for District 32, I also serve as the State Director of the Idaho Farm Bureau. What I hear from farmers across our state are concerns of economic instability, especially given Russia's invasion of Ukraine. It's raising prices on many products, but also raising questions about our national security. Permitting Stibnite Gold would allow Perpetua the ability to	GEO	No further response required. General in nature or position statement.

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District 32, Seat A)			locally source antimony, which is a key component of ammunition used by the US military. Currently, Russia, China, and Tajikistan account for 90-percent of the global antimony supply, so approval of Stibnite would bolster our national security.		
Conway Ivey (Executive Chairman, Ivy Minerals, Inc.)	13274	4	I was surprised to see that the SDEIS makes almost no mention of the value of the MMP in providing a domestic source of a strategic mineral, antimony. Executive Order 14017 (EO), signed by President Biden, directed the federal government to undertake a review of vulnerabilities in critical mineral and material supply chains in the US, with a goal of identifying bottlenecks in those minerals and approaches to increase their domestic production. This EO reflects a new political and social realization that the United States is vulnerable when critical minerals used in its manufacturing and defense industries are primarily or entirely sourced from geopolitical entities that are unreliable, or openly hostile to our country. Antimony trisulfide is essential to national defense as a key component for a wide range of munitions in the US defense arsenal. The SGP would be the only domestically mined source of antimony and has one of the largest resources in the world not controlled by China or Russia. The SDEIS says that the MMP would produce 148.7 million tons of antimony, meaning that this one mining project would likely satisfy the strategic need to source this mineral from the United States itself. The importance of this resource is underscored by the December 19, 2022 Department of Defense ("DoD") Press Release announcing a \$24.8 million award to Perpetua which states the SGP "is the sole domestic geologic reserve of antimony that can meet DoD requirements". Its press release goes on to say, "This investment is essential to ensure the timely (emphasis mine) development of a domestic source of antimony trisu/fide for the manufacturer of small arms and medium caliber cartridges, as well as many other missile and munition items." Downplaying or ignoring this value of the MMP is a major shortcoming of the SDEIS, which needs to be remedied with a greater discussion and analysis in the Final EIS because it is another major reason the USFS should approve the MMP. If these economic and strategic mineral benefits, were all that was provided by the MMP, they would support and justify USFS approval of the project. But they are far from the only benefits.	GEO	<p>Additional narrative has been added to the Final EIS to discuss the EO 14017 relevance to the SGP. Narrative has also been added to Section 3.2.3 of the Final EIS to discuss the Department of Defense (DoD) actions related to the Project.</p> <p>Add the following narrative to the end of Section 3.2.3:</p> <p><u>Federal Administrative Actions Related to Antimony Supply</u></p> <p>A number of federal administrative actions have been taken that relate to the marketplace for antimony supply.</p> <p>On December 17, 2017, the U.S. Geological Survey published the report <i>Critical Mineral Resources of the United States - Economic and Environmental Geology and Prospects for Future Supply</i>. Chapter C of that work was on Antimony (USGS Professional Paper 1802-C.) That report described the uses, demand, and supply for various forms of antimony and showed that China produced about 80 percent of the world's supply of antimony. The United States was described as essentially importing all its supply of antimony, with over 67% coming from China.</p> <p>On September 30, 2020, President Trump signed the <i>Executive Order Addressing the Threat to the Domestic Supply Chain From Reliance on Critical Minerals from Foreign Adversaries and Supporting the Domestic Mining and Processing Industries</i> (EO 13953). The EO declared a national emergency to deal with the threat of our reliance on critical minerals from foreign sources. It required various federal agencies to provide reports describing the threat and recommending any actions necessary to address the threat. It established a policy that relevant federal agencies should prioritize expansion and protection of the domestic supply chain for critical minerals.</p> <p>President Biden signed the <i>Executive Order on America's Supply Chains</i> (EO 14017) on February 24, 2021. It ordered reviews of six sectors (defense, commerce and homeland security, energy, agriculture, transportation, and health and human services) and a review of four classes of products where American manufacturers rely on imports. Among other topics, it required the Department of Defense to submit a report identifying risks in the supply chain for critical minerals and other strategic materials and recommendations to address those risks.</p> <p>On June 8, 2021 the DoD released the <i>Strategic and Critical Materials 100-day Sector Review Report</i> as directed by EO 14017. The DoD defined strategic and critical minerals as those that support military and essential civilian industry and are not found or produced in the U.S. in quantities to meet the needs of the nation. It listed a number of materials it identified as "unclassified base case shortfall materials" that, during a national emergency, the U.S. would be likely to face inadequate supply of these materials due to an inability to obtain adequate supplies from foreign sources. Antimony was included in the list of unclassified base case shortfall materials. The report included a number of recommendations related to expanding sustainable domestic production of strategic and critical materials, including recycling and recovery from mine wastes.</p> <p>On February 22, 2022 the U.S. Geological Survey released a new list of 50 mineral commodities critical to the U.S. economy and national security. Antimony was included in the list. The short-term importance of the new list is that it is intended to focus the USGS in its ongoing research quantifying potential sources of critical minerals within the U.S., including ores and mining wastes.</p> <p>In February 2022 the DoD released its report on <i>Securing Defense-Critical Supply Chains</i>, in response to EO 14017. Among other topics, the report recommended that the DoD enhance</p>

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					<p>and grow the U.S. industrial base by supporting development of domestic production capacity for supply chains that are critical for national defense. In the included update for the <i>Strategic and Critical Materials 100-day Sector Review</i>, the DoD stated it intends to facilitate business-to-business ties domestically and with allies, to mitigate vulnerabilities for strategic and critical materials.</p> <p>On December 19, 2022 the DoD issued a \$24.8M Critical Minerals Award through its Defense Production Act (DPA) Investments Program and the Air Force Executive Agent, using funds from the Ukraine Supplemental Appropriations to Perpetua Resources to secure an American source of critical minerals for missiles and munitions. The funds are intended to be used to complete environmental and engineering studies necessary to obtain a Final EIS and ROD and other ancillary permits through 2024. The DoD said, "This investment is essential to ensure the timely development of a domestic source of antimony trisulfide for the manufacture of small arms and medium caliber cartridges and well as many other missile and munitions items." The DoD announcement of the award also said, "This award does not interrupt the ongoing National Environmental Policy Act (NEPA) review process, nor does a DPA Investment confer any right or benefit through the permitting process."</p>
Kevin Vivian (President, Agri-Service)	14669	2	In addition to the gold that will be mined at the future site, the Stibnite Gold Project will enable America to resume domestic production of antimony, which the U.S. government considers a "critical mineral" due to its use in national defense, aerospace, and energy. According to the U.S. Geologic Survey (USGS), our country is currently not producing any antimony domestically, leaving China, Russia, and Tajikistan as the leading sources of the mineral for the U.S. Antimony continues to become ever more critical to our country's national and economic security. From its uses in ammunition and primers, to solar panels and renewable energy batteries, it is imperative that we secure a US supply of this critical mineral. The Stibnite Gold Project will enable America to resume mining of this important mineral on our own soil. And it will also allow us to build up a stockpile of antimony as recommended by the Department of Defense to prepare for a projected shortfall of the mineral.	GEO	No further response required. General in nature or position statement.
Bowen, Mike (Executive Director, New Mexico Mining Association)	16872	2	As we explained in our October 2020 letter on the DEIS, New Mexico has many mining districts that were developed in the same timeframe as the Stibnite Mining District where mining started in the late 19th century and continued through the first half of the 20th century. The MMP redevelopment, remining, and restoration proposal analyzed in the SDEIS is thus of interest to NMMA - especially in light of recent policy developments pertaining to critical minerals and evaluating old mine wastes as a potential source of critical minerals. Both the Biden Administration and Congress have recently developed policies that favor producing critical minerals from old mine wastes. For example, the 100-day report entitled "Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad Based Growth", explicitly requires the Secretaries of Agriculture and the Interior to evaluate reprocessing mine wastes as a viable source of critical minerals. As a remining and reprocessing project that will recover the critical mineral antimony from legacy mine wastes, the SGP could become the first project to confirm the viability of producing a critical mineral from legacy mine wastes. With the enactment of the November 2021 Infrastructure Investment and Jobs Act (IIJA), which is also known as the Bipartisan Infrastructure Law, Congress established several critical minerals mandates. Section 40206 of the IIJA notes that permitting delays are a principal factor in contributing to the nation's dangerous reliance on foreign countries for critical minerals, and directs the Secretaries of Agriculture and the Interior to prepare a report within one year to make recommendations to streamline the permitting process. The IIJA also created a \$510.7 million scientific research program for the U. S. Geological Survey (USGS) and directed that most of this funding be used for critical minerals research. As part of the IIJA-funded critical minerals research program, the USGS is studying the potential for critical minerals in mine waste. In light of these critical minerals and remining directives, the SGP becomes a project of national importance. The Forest Service needs to consider this importance as it finalizes the National Environmental Policy Act (NEPA) process for the SGP, prepares the Final Environmental Impact Statement (FEIS), and issues the Record of Decision (ROD) to approve the SGP.	GEO	No further response required. General in nature or position statement.

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			The national importance of the SGP demonstrating the feasibility of producing a critical mineral from legacy mine wastes dictates that the Forest service should expedite issuing the ROD.		
Bowen, Mike (Executive Director, New Mexico Mining Association)	16872	3	The Department of Defense's December 19, 2022 announcement that it has awarded Perpetua a \$24.8 million Title III Defense Production Act (DPA) grant to advance the SGP signals the U.S. military urgently needs the antimony from the SGP. The statement that the Stibnite deposit is "the sole domestic geologic reserve of antimony that can meet Department of Defense (DoD) requirements "is sobering and means that the Forest Service needs to approve this project quickly - preferably as early as possible in 2023 - for national security and defense reasons. The following excerpts from DoD's announcement also underscore the national importance of the SGP: "This investment is essential to ensure the timely development of a domestic source of antimony trisulfide for the manufacture of small arms and medium caliber cartridges, as well as many other missile and munition items." "This action reinforces the Administration's goals to increase the resilience of our critical mineral supply chains while deterring adversarial aggression." The obvious conclusion to be reached from DoD's announcement is that without the antimony from the SGP, the country's vulnerable antimony supply chain compromises the U.S. military's ability to manufacture the weapons needed to protect the country. The U.S. currently imports 84 percent of the antimony we need, with about half of the imported antimony coming from China. This high level of import reliance - especially from China – may be one of the main reasons the military is eager to have a reliable domestic source of antimony from the SGP. The need for the antimony from the SGP is increased by DoD's admission that the SGP as the only antimony reserve that meets the military's technical specifications. Given these facts, it seems obvious that the SGP needs to be built and operated as soon as possible to strengthen our antimony supply chain and reduce our reliance on China and other foreign countries for this critical mineral. The only way for this to happen is for the Forest Service to expedite publication of its FEIS for the SGP and issue the ROD approving the SGP.	GEO	The Payette and Boise National Forests have made the timely completion of the SGP Final EIS a high priority.
Lehrer, Laura	16878	4	The lack of monitoring of the tailings site. Failure of the dam would be swift and catastrophic. Technology is available to apply more rigorous standards to the construction and maintenance of this part of the project which would reduce the risk, but it is not being required by the Forest Service. We can, and should apply higher standards.	GEO	The IDWR is the proper authority in Idaho to regulate design, construction, and operation of dams, including tailings disposal facilities. These requirements are cited in Section 3.2.3 of the SDEIS. Perpetua would need to comply with the IDWR regulations and requirements for its TSF. The monitoring requirements for the TSF would be established by the IDWR permitting process and the Forest Service recognizes the primacy of the IDWR in these matters, so has not specified monitoring of the TSF in the EIS.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	1	The U.S. is fortunate that Perpetua Resources Ltd. (Perpetua) is proposing to develop the Stibnite Gold Project (SGP) in Valley County, Idaho to produce gold and the critical mineral, antimony, because this project will achieve two important missions: 1. It will clean up an area where World War II- and Korean War-vintage mine wastes are degrading water quality and preventing fish migration; and 2. It will supply the country with an urgently-needed domestic source of antimony. The U.S. Department of Defense's (DoD's) December 19, 2022 announcement to award Perpetua up to \$24.8 million in a Title III Defense Production Act grant describes the SGP as having "the sole domestic geologic reserve of antimony that can meet Department of Defense (DoD) requirements." DoD knows the antimony at the SGP is suitable for military applications because the federal government "produced antimony trisulfide for the U.S. ammunition industrial base during World War II and the Korean War" from the Stibnite Mine. This emergency wartime mining effort created the mine wastes that are currently leaching arsenic, antimony, and other contaminants into the Stibnite mine area watershed and obstructing fish migration corridors.	GEO	No further response required. General in nature or position statement.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	3	Based on the DoD's December 19, 2022 announcement, it is clear the U.S. military urgently needs the antimony contained in the Stibnite gold-antimony deposit. The DoD awarded a \$24.8 million Title III Defense Production (DPA) grant to Perpetua to help the Company "complete environmental and engineering studies necessary to obtain a Final Environmental Impact Statement, a Final Record of Decision, and other ancillary permits." The following statements from DoD's December 19, 2022 press release underscore the importance of the SGP to the Nation: "This investment is essential to ensure the timely development of a domestic source of antimony trisulfide for the manufacture of small arms and medium caliber cartridges, as well as many other missile and munition items." "This action reinforces	GEO	No further response required. General in nature or position statement.

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			the Administration's goals to increase the resilience of our critical mineral supply chains while deterring adversarial aggression." As the Nation's "sole domestic geologic reserve of antimony that can meet Department of Defense (DoD) requirements," there can be no doubt that obtaining antimony from the SGP is essential for our national defense and security. Our October 2020 comments on the DEIS described WMC's longstanding concerns about the Nation's reliance on foreign countries for many critical minerals, including antimony. We noted that the U.S. Geological Survey's 2020 Minerals Commodity Summaries showed that the U.S. imported 84 percent of the antimony the country used in 2019. Over one-half of this antimony was imported from China. Today, the country's import reliance on China for antimony remains the same. We continue to import 84 percent of the antimony we need, with much of it coming from China. DoD's Title III DPA award in support of the SGP suggests that DoD considers this substantial import reliance to be an untenable situation for the U.S military and a significant threat to national security. In addition to its critical military applications, antimony from the SGP will be used in utility-scale storage batteries. In August 2021, Perpetua announced that it had entered into an agreement to supply a portion of antimony production from the SGP to Ambri Inc. ("Ambri"). Ambri is a U.S. company that has developed an antimony-based, low-cost liquid metal battery for the stationary, long-duration, daily cycling energy storage market. The antimony-based Ambri battery combines technological innovation with commercial applications for low-cost, long lifespan and safe energy storage systems that will increase the overall contribution from renewable sources to help enable the transition to green, carbon-free power grids. The clean energy use of antimony is another compelling reason why the SGP is so important to the Nation.		
Idaho Regulatory Agencies	17718	68	Instead of mixing various IDAPA sections IDL suggests separating the sections by State agencies.	GEO	Edits made. Made the following changes to these two subsections of Section 3.2.3. "Idaho Department of Water Resources Rules - Idaho dam safety statutes are enumerated in Section 42-1709 through Section 42-1721 of the Idaho Code. Mine tailings impoundment structures greater than or equal to 30 feet high are regulated by the IDWR in the same manner as water storage projects, with an additional provision that a surety bond be secured by the owner, payable to IDWR to ensure the TSF is placed in a safe and maintenance-free condition upon decommissioning. Design and construction requirements for Mine Tailings Impoundment Structures are described in the IDAPA Section 37.03.05, while Section 37.03.06 describes rules for the safety of dams. Idaho Department of Environmental Quality Cyanide Processing Rules - These rules establish a permitting process to construct, operate and close facilities intended to contain, treat or dispose of water containing cyanide. The IDAPA 58 Administrative Rules (58.01.13) address ore processing by cyanidation and apply to processing facilities, tailings dams, pipelines, and process ponds if they contain cyanide process water. Idaho Code § 42-1711; Idaho Administrative Procedure Act ("IDAPA") 37.03.05.40."
Idaho Regulatory Agencies	17718	69	"There are no known or suspected cave or karst resources in the analysis area. " may be true. However, your inference is incorrect: "The extensive metamorphism of the carbonate rocks in the area, as well as level of exposure relative to the original ground surface where caves and karst would form, would generally preclude the existence or preservation of such features in the area." Karst forms in all three carbonate rocks: limestone, dolostone, and marble. It is well known that significant economic ore deposits accumulate in the voids in karst rocks, including marble, especially where mineral-bearing thermal or sulfide-rich solutions have modified the bedrock.	GEO	Edits made. Changed Section 3.2.4.5 as follows: "There are no known or suspected cave or karst resources in the analysis area. The extensive metamorphism of the carbonate rocks in the area, as well as level of exposure relative to the original ground surface where caves and karst would form, would generally preclude the existence or preservation of such features in the area."
Idaho Regulatory Agencies	17718	78	For clarity, please include "view" when stating plan, as in plan view (or map view). To write for the reader's perspective, please use commas to separate clauses. Example for sentence 2: It would be roughly circular in plan <u>view</u> , with a lobe extending into the Homestake area <u>towards</u> the northeast, and another lobe <u>extending in</u> towards the south end of the pit.	GEO	Edits made. In Section 4.2.2.2 and the paragraphs for Yellow Pine pit, Hangar Flats pit, and West End pit changed "plan" to "Plan view".

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Idaho Regulatory Agencies	17718	79	"The underlying bedrock is more than sufficiently competent to support the proposed structures because the rock types consist of quartz monzonite, diorite, granite and rhyolite (Tierra Group 2018)." Rock type by itself in no way proves that there is sufficient competence to support structures. Doesn't Tierra Group, 2018 discuss some type of fracture analysis, etc. as determined from detailed study of adjacent outcrop, or by detailed borehole rock core analysis? Please provide data to support this statement.	GEO	The foundation characteristic within the SGP is described in Section 3.2.4.7 of the EIS. The bedrock strength characteristics, including fracturing, of the SGP area are described in a number of the technical reports cited in this section and the bedrock is generally described as being very competent. Stability analyses of the TSF, including strength characteristics of the bedrock and unconsolidated materials under the TSF are reviewed by the Tierra Group.
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	12	<p>VII. Comprehensive Cleanup of the Stibnite Mine Cannot Happen Without the MMP</p> <p>The MMP is essential to the eventual comprehensive cleanup of the Stibnite Mine area because revenue from the production of gold and antimony from the Stibnite Mine will become the economic driver that can help fund future restoration of legacy features that are outside the project boundary for the MMP. Although the MMP will remediate numerous mine features in the MMP project boundary, there are some problematic legacy mine features outside of this boundary that will continue to leach metals into area streams after mining is completed. The January 2021 Administrative Settlement and Order on Consent (ASAOC) between Perpetua, the Forest Service and the U.S. Environmental Protection Agency (EPA) described in Section 1.3 of the SDEIS is designed to remediate the legacy features outside of the MMP project boundary. Perpetua initiated Phase 1 of the ASAOC in July 2022. In the future, Perpetua may be able to pursue the conceptual site restoration measures in Phases 2 and 3 of the ASAOC if and when Perpetua is producing gold and antimony from the Stibnite Mine.</p> <p>Under Phase I of the ASAOC, Perpetua is voluntarily addressing several areas identified as being time-critical by implementing restoration measures that will eliminate or reduce contaminant sources from these areas as quickly as possible. The Forest Service and the EPA are directing and supervising the ASAOC Phase I remediation activities, which will cost Perpetua \$12 million to complete. In addition to these direct, on-the-ground remediation costs, Perpetua provided the agencies with a \$7.5 million performance bond to guarantee this work.</p> <p>The ASAOC Phase I water quality improvements are anticipated to be completed by 2025 and include constructing stream diversion ditches to divert water away from legacy mine wastes that are contaminating area streams, removing approximately 325,000 tons of legacy development rock and tailings from locations in Meadow Creek and the EFSFSR that are currently adversely impacting water quality. Phase I also entails conducting baseline studies at five historic mine adits that are discharging mine drainage.</p> <p>Once the SGP has all of its operating permits and production is underway, Phases 2 and 3 of the ASAOC give Perpetua the option to remediate additional legacy mine features located outside the MMP project boundary. These phases will require additional baseline data and engineering studies and probably entail additional permitting.</p> <p>The sequential combination of the ASAOC Phase 1, the MMP, and the ASAOC Phases 2 and 3 would ultimately achieve a comprehensive, site-wide restoration and cleanup of the Stibnite Mine site. It is therefore imperative that the Forest Service, the U.S. Army Corps of Engineers, and the Idaho State regulatory agencies take immediate steps to set this remediation sequence in motion.</p> <p>The opportunity to achieve a complete cleanup of the Stibnite Mine site that Perpetua will subsidize is both unique and important. There may not be a similar opportunity in the future if the SGP is not built and operated. If this occurs, the lost opportunity costs would be enormous and the <i>status quo</i> environmental problems would adversely affect water quality, fish habitat, and ultimately people and communities for many years.</p>	GEO	The ASAOC work is separate from the NEPA permitting process and was initiated in direct response to a Citizens Clean Water Act Lawsuit by the Nez Perce Tribe.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	7	Establishing an Independent Tailings Review Board (ITRB) for the tailings storage facility including the buttress dam and conducting regular independent reviews as a mitigation measure to ensure geotechnical stability and protection of surface resources.	GEO	The IDWR is the proper authority in Idaho to regulate design and operation of dams, including tailings disposal facilities. Perpetua would need to comply with the IDWR regulations and requirements for its TSF. The Forest Service supports the inclusion of an ITRB as part of the site-specific, IDWR requirements for monitoring and operating the SGP TSF and would request that this be part of the IDWR permit conditions.

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Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	41	<p>Mitigation Measures for Geotechnical Stability</p> <p>The SDEIS analysis does not recommend any additional geotechnical stability mitigation measures beyond those identified in Section 2.4.9. Although the TSF dam is designed to meet and exceed regulatory stability criteria, recent studies of dam failures have established that the dominant cause of failures arises from deficiencies in engineering practice associated with the spectrum of activities embraced by design, construction, quality control, and quality assurance. Therefore, there is credible information highlighting that, even assuming that the dam and buttress are adequately designed, dam incidents could still happen due to human-caused errors during construction and operations. A best practice to mitigate this, is the establishment of an Independent Tailings Review Board (ITRB) and regular independent reviews during design, construction, operations, and closure. An ITRB and regular independent review is a best practice for new tailings dam facilities (with high or greater consequence classifications) in the Global Industry Standard on Tailings Management.</p> <p>The State of Idaho's dam safety regulations do not appear to require independent review. Therefore, we recommend that the FEIS include a requirement that an ITRB be established and regularly conduct independent reviews as a mitigation measure to ensure geotechnical stability, including during seismic events, and protection of surface resources. We note that the Forest Service is requiring establishment of an ITRB in RODs for the Pinto Valley Mine (AZ) and Kensington Mine (AK), based on the global standard and FEMA Federal Guidelines for Dam Safety Risk Management.</p>	GEO	The IDWR is the proper authority in Idaho to regulate design and operation of dams, including tailings disposal facilities. Perpetua would need to comply with the IDWR regulations and requirements for its TSF. The Forest Service supports the inclusion of an ITRB as part of the site-specific, IDWR requirements for monitoring and operating the SGP TSF and would request that this be part of the IDWR permit conditions.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	42	<p>Geotechnical Stability of Mine Access Roads</p> <p>When comparing geotechnical stability related to mass wasting events (i.e., landslides, rockfalls, and avalanche paths) of the 2021 MMP Alternative's Burntlog Route and the Johnson Creek Route Alternative, EPA recommends the FEIS consider the implementation of proposed environmental design features (EDFs) for the two Action Alternatives in the alternatives analysis. For example, for existing areas of landslides and rockfalls, geotechnical design considerations and improvements to existing roads with EDFs could address the issues raised as concerns for the Johnson Creek Route Alternative with geotechnical stability potentially improving as a result of the alternative. EPA also recommends that the FEIS clearly state in Section 4.2.2.3 Johnson Creek Route Alternative that the EDFs proposed for the 2021 MMP Alternative's Burntlog Route also apply to the Johnson Creek Route Alternative.</p>	GEO	<p>The effectiveness of the proposed EDFs for addressing mass wasting hazards along both access road alternatives would depend on the detailed design and installation quality of the EDF actions, and the natural conditions at each site. It would be speculative at this time to make assumptions that site-specific application of the EDFs would eliminate certain mass wasting hazards and thus remove certain landslide or rockfall sites from the comparison of the access road alternatives. Therefore, the Forest Service believes a valid comparison of the two access road alternatives has already been included in the SDEIS. The narrative of Section 4.2.2.3 has been edited to include a statement that the EDFs described in Section 4.2.2.2 for landslides, rockfalls, and avalanches would also apply to the Johnson Creek Route Alternative.</p> <p>At the end of the first paragraph in Section 4.2.2.3 the following sentence was added: "The EDFs for landslides, rockfalls, and avalanches described in Section 4.2.2.2 for the Burntlog Route would also apply to the Johnson Creek Route Alternative."</p>
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	18	While sustaining domestic production of critical minerals is a broad national goal, implementing large scale production measures should not absolve mineral development companies of obligations to extract those minerals in a responsible manner. The Tribes have noticed a growing trend to emphasize the demand for domestic production of rare minerals as a justification for the mineral extraction, and the expediency of environmental review; with a tendency to 'lower the bar' for remediation and on-site monitoring during mining activities. Creating meaningful mineral development operations requires significant investments in environmental remediation and resource protection for decades to come. In the present case, if/when the 'critical' minerals become obsolete commodities, the mining company should still be prepared to fully implement the required remediation and not be allowed to forgo actions that are committed to in the mine plan of operations by increasing the reclamation bond up front; in other words, pay the up-front cost of reclamation at the outset of mining rather than depend on uncertain mineral markets years from now. While a great deal of effort is going into justifying a permit from the mining operation, a clear rationale of 'why' creating irreversible damage to the South Fork is actually in the public interest has not been presented by this SEIS.	GEO	In compliance with state and federal requirements of approval that regulate the reclamation of all parts of the 2021 MMP, Perpetua would be required to post adequate surety to reclaim the disturbances caused by the operations. These regulations allow the mining operators to submit applications for adjustments to the operations due to economic or physical conditions that may become apparent after the initial permit approvals. In any case, the regulations do require full reclamation of all disturbances created by the operations.
Small, Nathan (Chairman, Fort Hall Business Council,	18903	30	Antimony reserves at SGP are highly insignificant compared to major global suppliers. Additionally, because Perpetua does not have an antimony refinery and will have to sell ore to a foreign refinery (there are no refineries in the US) yet to be determined, which means storage of the antimony ore will be required, it is clear that justifying this project under the critical minerals program poorly advised.	GEO	The 2021 MMP describes that antimony concentrate would be produced from the antimony ore as it is encountered. This concentrate would be shipped offsite to be sold to a smelting customer.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Shoshone-Bannock Tribes)					
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	31	Because of the small reserves of antimony at SGP and because mining is an unsustainable activity as the resources are finite, please establish an antimony recycling program for Idaho and use your financial resources to educate the public regarding the finite resources that mining highlights.	GEO	No further response required; unrelated to the decision being made.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	38	The Shoshone-Bannock Tribes request the USFS require focused analysis of earthquake impacts to on-site and off-site resources including: static analysis, response spectra analysis and time history analysis with a detailed report provided on stability features of the Tailings Structure under stress conditions, impacts to resources should a catastrophic failure occur and location dispositions of materials should this occur.	GEO	Seismicity of the region around the SGP is discussed in Section 3.2.4.6 of the SDEIS. This information includes detailed seismic hazard analysis prepared by Golder Associates (2021). The relative stability of the TSF embankment with and without the presence of the adjacent development rock buttress is discussed in SDEIS Section 4.2.2.2 and Table 4.2-1. The stability evaluations of the TSF under stress conditions calculated for the seismic design criteria are discussed in Section 4.2.2.2 of the SDEIS and show the TSF embankment would have factors of safety well above the required values and therefore is expected to be safe from earthquake induced damage that would result in a catastrophic release of tailings. The Forest Service has therefore not conducted an impact evaluation of such a release because such would be a worst-case analysis that is specifically not required by NEPA.
Deantha Skibinski, Executive Director, Alaska Miners Association	18899	9	<p>Antimony from the SGP is Uniquely Suited to Meet the U.S. Military's Needs</p> <p>In its December 19, 2022 announcement of the \$24.8 million Title III Defense Production Act (DPA) award to Perpetua to help complete the NEPA process⁴, the Department of Defense said the SGP contains “the sole domestic geologic reserve of antimony that can meet Department of Defense (DoD) requirements⁵.” The DoD announcement includes other statements that underscore the national security importance of this project:</p> <p>“This investment is essential to ensure the timely development of a domestic source of antimony trisulfide for the manufacture of small arms and medium caliber cartridges, as well as many other missile and munition items.”</p> <p>“This action reinforces the Administration’s goals to increase the resilience of our critical mineral supply chains while deterring adversarial aggression.”</p> <p>The DoD award reflects the vulnerable status of the country’s antimony supply chain and our risky reliance on China and other foreign countries for much of the antimony the military needs to manufacture the “small arms and medium caliber cartridges,...missile and munitions items” that are clearly needed for national defense. According to the U.S. Geological Survey’s 2022 Minerals Commodity Summaries, the U.S. imports 84 percent of the antimony we use. Over half of this antimony was imported from China⁶. DoD’s Title III DPA award to support the SGP suggests that the U.S. military is concerned that the country’s substantial antimony import reliance creates an untenable situation for the U.S military and a significant threat to national security.</p>	GEO	<p>No further response required. General in nature or position statement.</p> <p>The Forest Service’s consideration of the Project on the basis of its ability to produce gold, silver, and antimony is described in SDEIS Section 1.6 as the Project’s Purpose and Need.</p>
Joseph Pietri	19062	10	Gold is the big item here but Antimony is conveniently located within the process of extracting gold and silver and Perpetua and the big investors were indeed fortunate to play out the green energy and strategic materials for defense card. No doubt using DC insiders for a \$25M boost. There are plenty of munitions in the US Arsenal Stores to Annihilate all of life on earth already and there has been for years. Just guessing on that but it is a bad trade off to the Earth to deliberately decimate thousands of acres to make rich people richer essentially. Let's face it, that is what this Mine is about pure Midas Greed. The restoration is a great marketing ploy but perhaps you can tell me how many of the same types of mines were restored and how many Companies pulled out, bankrupted and left a mess and a cleanup bill as big as the mess for the public to deal with. I'd like answers about that.	GEO	No further response required. General in nature or position statement.
Chris Hart	19206	2	Looking at landslide and avalanche data, it becomes obvious why the USFS named the Burntlog Route as its preferred alternative. According to the SDEIS, the Johnson Creek Route has 45 landslide and 94	GEO	No further response required. General in nature or position statement.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
			avalanche paths. While these natural hazards aren't eliminated on Burntlog, they are reduced. Mine traffic will only have to pass 26 landslide and 38 avalanche paths while traveling on the Burntlog Route. Simply put, the Burntlog Route is safer. In fact, the SDEIS concludes utilizing Johnson Creek would increase the potential for accidents and spills associated with the project because of naturally occurring geohazards.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	625	"Both action alternatives would increase risks from mass wasting hazards ..." - Please provide rationale for the purpose of this paragraph or remove. It does not identify any cumulative impacts on geology or geotechnical hazards.	GEO	One of the issues considered in the SDEIS for geology is the geotechnical stability of SGP facilities. The risks posed by mass wasting hazards along both access road alternatives are described in Section 4.2.2. As described in SDEIS Section 5.2.2, the use of common access routes by the Project and RFFAs does not increase the likelihood of mass wasting but would increase the consequences of mass wasting impacts.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	117	As an update for the FEIS, this section may also discuss the grant awarded by the DOD to study production of antimony tri-sulfide for munitions, as announced in December 2022.	GEO	Edit has been made to the Final EIS. The following is included as a new third paragraph on page 4-8 of Section 4.2.2.2: "In December 2022 the Department of Defense announced that the Defense Production Act Investment Program would provide up to \$24.8 million for Perpetua to complete environmental and engineering studies necessary to obtain the permits for the SGP. The reason for this investment was to support the timely development of a domestic source of antimony trisulfide essential to national defense."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	118	"High-antimony ore makes up about 30 percent of the ore in the Yellow Pine deposit and 54 percent of the ore in the Hangar Flats deposit..." Please correct: High antimony is approximately 21% of the YP mineral reserve and 36% of the HF reserve, as shown in table 1-4 of the Feasibility Study, (M3 2021). The stated numbers are not consistent with the resource either.	GEO	Edit has been made. In Section 4.2.2.2, the following edits were made: "High-antimony ore makes up about 30 21 percent of the ore in the Yellow Pine deposit and 54 36 percent of the ore in the Hangar Flats; there is no antimony ore in the Bradley tailings or West End deposit (M3 2021)."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	119	"The SGLF has a post-mining land use designation of light industry, where it would remain un-reclaimed after mine operations and transferred to a third-party for light industrial uses ". Please clarify: According to the Valley Co conditions of approval, this facility would need to be reclaimed if a third party doesn't obtain a new Condition Use Permit for the facility within 3 years.	GEO	Edit has been made. On page 4-11 of Section 4.2.2.2: "The SGLF has <u>could have</u> a post-mining land use designation of light industry, where it would remain un-reclaimed after mine operations and <u>if its ownership was transferred to a third-party for light industrial uses within three years of it being closed for the 2021 MMP operations.</u> "
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	120	Please add "and up to" before "5-foot-thick", replace "peat" with "organic soil", and strike "silt and clay" to avoid overstating the extent and nature of the organics layer, and implicitly acknowledge that loose sand is also a potential weak material by avoiding over specifying "silt and clay"	GEO	Edit has been made in Section 4.2.2.2: "The TSF and TSF Buttress areas include a discontinuous, <u>and up to</u> , 5-foot-thick layer of peat <u>organic soil</u> which would be removed along with topsoil and other potentially compressible/weak silt and clay soils encountered during construction."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	121	"The presence of the buttress would enhance the overall tailings embankment stability by providing significant additional resisting mass (70 million tons) to resist tailings embankment deformation in static or earthquake conditions ". Please correct; should be 81 million short tons.	GEO	Edit has been made in Section 4.2.2.2: "The presence of the buttress would enhance the overall tailings embankment stability by providing significant additional resisting mass (70 <u>81</u> million tons) to resist tailings embankment deformation in static or earthquake conditions."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	122	To aid understanding by defining FOS before it is used, and to correctly define design criteria and the analysis cases (standalone dam, or dam with buttress/loss of containment) which were incorrect in the SDEIS, please strike the paragraph beginning with "Slope stability analyses were performed..." and insert the following two paragraphs instead, below the paragraph beginning with "The term "factor of safety" is used... ":	GEO	The proposed narrative changes are a better explanation of the latest stability results based on Tierra Group 2021. Edit has been made.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
			<p>Based on IDAPA criteria, FEMA guidance, and industry best practice, Perpetua Resources adopted the Maximum Credible Earthquake (MCE, roughly the 10,000-year event) as the design seismic event for the TSF embankment on a standalone basis. That is, the standalone dam would have a minimum factor of safety of 1.0 for the MCE without taking any credit for the presence of the buttress, even though some amount of buttress would always be present.</p> <p>Slope stability analyses were performed for static, or normal loading conditions, and for pseudo static conditions, representing earthquake loading conditions. The TSF embankment and TSF Buttress were analyzed to determine factors of safety for two potential failure surfaces: 1) full height failure of the downstream slope of the TSF Buttress such that the failure surface intersects the TSF dam crest and thereby causes a potential loss of tailings or water containment; and 2) TSF dam failure, similarly intersecting the crest, but assuming the buttress was not present. Analyses were developed for a variety of events up to and including the design event (the MCE). Results for static conditions, the 2,475-year event, and the MCE are reported in</p>		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	123	The numbers in the table are confusing and do not match the cases in the RFAI-116 response, from 4/20/2021, which presented the ModPRO2/MMP results, and do not properly reflect the facility design criteria (MCE for standalone dam). Tierra Group 2021 (in response to RFAI-116) would be the proper citation for FOS values to tabulate; Tierra Group 2017 discusses methodology but the results therein are for the PRO configuration. The dam with the buttress has a static FOS ranging from 4 to nearly 6. The standalone dam is around 2 but always more than 1.5. Buttress face (a closure/reclamation stability question not a dam safety question) is above 1.5, but was not included here. Please replace Table 4.2-1 with the corrected table provided in the comment letter, including striking table footnote 1.	GEO	Edits to Table 4.2-1 have been made to incorporate the latest stability results from Tierra Group 2021.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	124	<p>Please correct this paragraph to reflect updated values and updated references for comment above, and consider deleting most of it (everything after "NEPA analysis.") in favor of tabulated values, as the remainder of the paragraph is largely redundant with content above. A potential replacement paragraph is below (without preferred deletion): Based on the slope stability analysis of the proposed design of the TSF dam (Tierra Group 2017, 2021), failure of the TSF embankment from a seismic event is considered to have extremely low probability – less than, and likely far less than, 1 in 10 million annually. Therefore, analysis of failure-related environmental effects is not included in this NEPA analysis. The pseudo-static (i.e., earthquake load) factor of safety for the TSF embankment with the downstream design and buttressing has been calculated for the design earthquake event and selected smaller events covering a range of potential earthquakes possible at the site. At TSF complete build-out, the pseudo static Factor of Safety for the 2,475-year event would be 3.61, more than three times the minimum earthquake load Factor of Safety 1.00, per IDAPA Section 37.03.0. For the MCE (design event) at full build-out and post-closure, the Factor of Safety would be 2.05. The MCE event has a much longer return period (approximately 10,000 years), meaning there is a lower probability of occurrence than the 2,475-year return period earthquake, and results in higher peak ground acceleration (see Section 3.2, for information on peak ground acceleration).</p> <p>Additionally, at complete build-out of the TSF, the static load Factor of Safety would be 5.85, which is well above the minimum required static</p>	GEO	<p>Edits have been made to correlate with the Tierra Group 2021 stability results.</p> <p>Replaced paragraph starting with "Based on the slope stability analysis . . ." with the following version: "Based on the slope stability analysis of the proposed design of the TSF dam (Tierra Group 2017, 2021), failure of the TSF embankment from a seismic event is considered to have extremely low probability – less than, and likely far less than, 1 in 10 million annually. Therefore, analysis of failure-related environmental effects is not included in this NEPA analysis. The pseudo-static (i.e., earthquake load) factor of safety for the TSF embankment with the downstream design and buttressing has been calculated for the design earthquake event and selected smaller events covering a range of potential earthquakes possible at the site. At TSF complete build-out, the pseudo static Factor of Safety for the 2,475-year event would be 3.61, more than three times the minimum earthquake load Factor of Safety 1.00, per IDAPA Section 37.03.0. For the MCE (design event) at full build-out and post-closure, the Factor of Safety would be 2.05. The MCE event has a much longer return period (approximately 10,000 years), meaning there is a lower probability of occurrence than the 2,475-year return period earthquake, and results in higher peak ground acceleration (see Section 3.2.4.6, for information on peak ground acceleration). Additionally, at complete build-out of the TSF, the static load Factor of Safety would be 5.85, which is well above the minimum required static Factor of Safety.</p>
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	125	"Effects would range from temporary (e.g., minor damage that is easily reparable) to permanent (e.g., lateral displacement at fault crossings)". Please remove example; there are no active faults crossing mine facilities as this implies.	GEO	Edit has been made. Sentence starting with "Effects would range . . ." now reads as follows: "Effects to operating facilities would be range from temporary as any damage would be immediately repaired. (e.g., minor damage that is easily reparable) to permanent (e.g., lateral displacement at fault crossings) "
Alan Haslam (Vice President, Permitting, Perpetua	19325	126	The language "Impacts would be reduced to moderate intensity effects through incorporation of existing geotechnical design standards..." coupled with the previous sentences' characterization of impacts as "high-intensity" or "permanent" implies incorrectly that this impact reduction is in some doubt. We are designing to current codes or above. If the effects are reduced to "moderate" then the previous sentences	GEO	Edits have been made to better correlate with the impact descriptions in prior sentences. "Impacts would be reduced to moderate intensity effects through incorporation of existing geotechnical design standards, and building code standards, as well as construction quality control during construction, operations, and maintenance activities and surveillance."

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Resources Idaho, Inc.)			should discuss "Potential effects" not just "Effects" when referring to intensity or duration of effects without application of design standards or other mitigation measures.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	5	<p>Comments for this resource area are limited to Section 4.2 and include several minor technical clarifications. Though limited in number, comments on the tailings storage facility (TSF) embankment and TSF Buttress are important, and additional information is provided here and in Attachment A that will be useful in addressing comments.</p> <p>Information presented in the SDEIS Table 4.2-1 is discussed below, and a table with revised values is provided for consideration and inclusion in the FEIS. The following paragraph provides the reasoning for these proposed revisions: On pages 4-17 through 4-19 of Section 4.2.2.2, there are a number of updates and clarifications needed related to TSF design criteria and factors of safety. Most importantly, the section misstates the TSF dam seismic design criteria, which is the Maximum Credible Earthquake (MCE) not the 475-year. This seems to be a carryover from the Plan of Restoration and Operations (PRO) where the 475-year criterion was intended to refer to certain short-lived interior impoundment slopes covering rocky hillsides, not the dam itself. As stated in the 2020 Feasibility Study cited in the response to Response for Additional Information (RAI)-116 (April 20, 2021), Perpetua Resources has since adopted the 2,475-year event for evaluation of those slopes, while retaining the MCE for all phases of the dam on a standalone basis (i.e., without accounting for the additional stability added by the Buttress). Additionally, the reported geotechnical factors of safety in the SDEIS do not match those previously furnished for the 2021 Modified Mine Plan (MMP), also in RAI-116, and may be leftovers from the PRO configuration of the Buttress. Suggested changes are included in Attachment A, with changes to Table 4.2-1 noted below. Table 4.2-1 as presented in the SDEIS: Proposed Revisions to SDEIS Table 4.2-1:</p>	GEO	Corrections and edits have been made as described in preceding comments/responses.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	165	Avalanche and Avalanche Mitigation Although the SDEIS addressed some of the previous comments regarding assessment and identification of avalanche terrain along the proposed access routes, there remain significant issues because the current analysis: 1. Mischaracterizes avalanche hazard between the proposed access routes and within the mine site; 2. Underestimates the frequency and extent of avalanche control work necessary to maintain safe ingress and egress during all phases of proposed mining operations; 3. Fails to address direct, indirect, and cumulative effects to forest resources resulting from avalanche mitigation measures and an avalanche control program; and 4. Underestimates annual winter precipitation along the proposed Burntlog Route.	GEO	Specific comments raised in this summarization are addressed in other comment categories. See responses to comments 17634.169, 17634.170, 17634.172, 17634.173, and 17634.176. No further response required here. General in nature or position statement.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	168	<p>Corrections to descriptions in SDEIS Chapter 3</p> <p>The SDEIS should accurately describe the affected environment. Section 3.2.4.7 cites a document by the Idaho Office of Emergency Management to explain avalanche formation. This document contains misleading information regarding avalanche formation.202 Rather, this section should cite sources widely accepted by the avalanche industry, such as documents produced by the Canadian Avalanche Association or the American Avalanche Association. On page 3-27, the SDEIS says: “Avalanches occur on slopes averaging 25 to 50 degrees, with the majority on slopes between 30 and 40 degrees, and several avalanche hazard areas occur within the analysis area (Figure 3.2-5).” Instead, this should read: “Avalanches occur on slopes averaging 25-55 degrees, with most slab avalanches occurring on slopes between 30 and 45 degrees, and several avalanche hazard areas occur within the analysis area (Figure 3.2-5).”</p> <p>The next sentence and paragraph state: “Avalanches are triggered by natural seismic or climatic factors such as earthquakes, thermal changes, rainfall, and blizzards, or by human activities (Idaho Office of Emergency Management 2018). The most common types of avalanches are loose-snow and slab avalanches. A loose-snow avalanche is composed of dry, fresh snow deposits that accumulate as an unstable mass atop a stable snow and slick ice sublayer. A loose-snow avalanche releases when the sheer force of its mass overcomes the underlying resistant forces of the cohesive layer. A slab avalanche generally is composed of a thick, cohesive snowpack deposited or accumulated on top of a light, cohesion-less snow layer or slick ice sub-layer. At the starting surface or top of the slab, a deep fracture develops in the slab of well-bonded, cohesive snow. A slab avalanche release is usually triggered by turbulence or impulse waves.” SDEIS at 3-17.</p> <p>This section should be changed to read:</p> <p>A combination of variables, including weather, and snowpack and terrain characteristics, contribute to the formation of avalanche conditions. The most common types of avalanches are loose snow and slab avalanches. Loose snow avalanches occur when slope angle exceeds the sheer strength of surface snow to resist downslope motion. As the surface snow moves downslope it may entrain subsurface snow, increasing the mass and destructive potential of the loose snow avalanche. Wet loose snow avalanches triggered by melting due to warming by the sun or rainfall on the snowpack are generally more massive, and therefore have a greater destructive potential, than dry ones.</p> <p>Slab avalanches consist of a cohesive layer of snow (the slab) overlying a thinner, weaker layer of snow, sitting atop a bed surface (either the ground or another cohesive layer of snow). When the weight of the overlying cohesive layer of snow exceeds the shear strength of the weak layer, the weak layer will begin to fail. A slab avalanche is triggered when the rate of failure in the weak layer is fast enough for fracture to occur, causing the slab to move downslope. Slab avalanches can be triggered naturally by loading new snow, wind deposited snow, or rainfall to the snowpack, cornice fall, warming air temperatures, or earthquakes. Artificial triggers that affect the rate of failure in the weak layer, which can lead to fracture and release of a slab avalanche include skiers, snowmobilers, and explosives. Slab avalanches are typically more destructive than loose snow avalanches because they are more massive and thus result in larger, farther running avalanche events.</p> <p>Additionally, the sentence immediately following Table 4.6-1 (SDEIS 4-98) should be changed to read: “Avalanche risk abatement via explosive methods would be implemented for the SGP. Explosives would be used at higher elevations in the starting zones of the potential avalanche paths to trigger avalanches.”</p> <p>The “with minimum impact” phrase should be omitted because it is confusing and does not describe why explosives are delivered to the starting zones, which is because that is where avalanches can be initiated.</p>	GEO	<p>The suggested edits in Section 3.2.4.7 have largely been adopted to replace the existing paragraph with a new one.</p> <p>Replaced the paragraph in Section 3.2.4.7, beginning with, "The most common types..." with the following: "A combination of variables, including weather, and snowpack and terrain characteristics, contribute to the formation of avalanche conditions. The most common types of avalanches are loose snow and slab avalanches. Loose snow avalanches occur when slope angle exceeds the sheer strength of surface snow to resist downslope motion. As the surface snow moves downslope it may entrain subsurface snow, increasing the mass and destructive potential of the avalanche. Wet loose snow avalanches triggered by melting due to warming by the sun or rainfall on the snowpack are generally more massive, and therefore have a greater destructive potential, than dry ones. Slab avalanches consist of a cohesive layer of snow overlying a weaker layer of snow. When the weight of the overlying cohesive layer of snow exceeds the shear strength of the underlying weak layer, the weak layer may fail causing the slab to move downslope. Slab avalanches can be triggered naturally by loading of new snow, wind deposited snow, or rainfall to the snowpack, cornice fall, warming air temperatures, or earthquakes. Artificial triggers that can lead to fracture and release of a slab avalanche include skiers, snowmobilers, and explosives. Slab avalanches are typically more destructive than loose snow avalanches because they are more massive and thus result in larger, farther running avalanche events."</p>
Bonnie Gestring (Northwest Program Director,	17634	169	<p>The SDEIS mischaracterizes avalanche hazard between the proposed access routes</p> <p>The SDEIS finds that because 38 avalanche paths exist along the Burntlog Route but 94 avalanche paths exist along the Johnson Creek Route, there is a reduced risk to “hazardous materials transport, and public health and safety transportation risks during operations” along the Burntlog Route.206 However, the</p>	GEO	<p>Description of the AHI information that is included in the DAC (2021) technical report has been added to the Avalanche subsection of Section 4.2.2.2 in the Final EIS. The conclusions of the relative avalanche risk along the two access road alternatives described by DAC (2021) and used in the SDEIS have been edited to include the AHI information. Narrative has also</p>

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Earthworks) and seven others			<p>number and size of potential avalanche paths is not the sole basis to determine which route has “less susceptibility” to risks associated with avalanche hazard. Although Dynamic Avalanche Consulting, Stibnite Gold Access Roads: Snow Avalanche Hazard Assessment For Access Roads (Aug. 2021) (herein “DAC (2021)”), assesses the Avalanche Hazard Index (AHI) for each route, the SDEIS makes no reference to it—except in a table of acronyms at the end of the document. SDEIS at 7-55. This error should be corrected.</p> <p>“The AHI is used to determine how serious avalanche problems are to allow comparisons of the avalanche risk to different roads to establish priority areas, to determine appropriate level of avalanche risk management, and to show where control measures have the greatest effect.” DAC (2021), at 39. AHI is a risk assessment tool that considers both exposure and vulnerability of moving and waiting vehicles to avalanches. This is a well-established industry metric to assess and quantify avalanche risk to roadways. Unlike the SDEIS’s conclusion that number and size of potential avalanche paths renders one route more hazardous than another, AHI takes into account a variety of variables, including frequency of avalanche occurrences, total length of highway exposed to avalanche terrain, traffic volume and speed, and type of vehicle traveling the road.</p> <p>Of the 38 avalanche paths identified along the Burntlog Route from Warm Lake to the mine site, 31 are high frequency paths capable of producing D2 and D3 avalanches with one-to three-year return intervals. SDEIS 3-26. Excluding the three paths capable of D3 avalanches every three years on the grade from Warm Lake to Landmark, one path (BLK-7) along the Burntlog Route is anticipated to produce D3 avalanches every three years. SDEIS 4-15. Notably, there are no historical avalanche observations between Black Lake summit and the mine site. DAC (2021), at 6.</p> <p>There are 94 avalanche paths identified along the Johnson Creek Route from Warm Lake to the mine site. SDEIS 3-27. Of these, 31—yes, the same number as the Burntlog Route—are high frequency paths capable of producing D2 and D3 avalanches with a one- to three-year return interval. DAC (2021), at 78. Five can produce D3 avalanches every three years, and four are capable of and have been observed to produce D4 avalanches. The estimated return interval for D4 avalanches is thirty years.</p> <p>Although more confidence exists in the potential for these paths to produce D4 avalanches because of recent observations, these are low frequency occurrences.</p> <p>Frequency is defined as the anticipated number of avalanches per year that will reach or exceed a particular location. As distance from the starting increases, frequency decreases. Thus, in valley-bottom locations like the Stibnite Road, D4 events occur less often. DAC (2021).</p> <p>Comparing the two proposed access routes in this manner shows that the number of high frequency paths are equal. It also shows that of the identified avalanche paths, the Johnson Creek Route has four more avalanche paths capable of producing D3 avalanches every three years than the Burntlog Route. The AHI calculated for the routes captures this difference by concluding that each route is within the moderate hazard category and differs by less than a value of six on a hazard index that can range from 0 to well over 150. Even though there is little difference in risk to vehicles being struck between the two routes, the SDEIS considers only number and size, but not frequency or other variables that are critical to assessing potential risk that vehicles traveling these roads will be struck by an avalanche.</p> <p>Moreover, several assumptions made for the Burntlog Route may increase the AHI. This makes that route equally or even more hazardous than the Johnson Creek Route. Because the Burntlog Route travels for 30 miles between 7000- and 8600-foot elevation, it “will be subject to more wind effects and wind-drift potential,” DAC (2021), at 41, and higher snowfall amounts than the Johnson Creek Route, which travels mostly between 4800- and 6500-foot elevation. DAC (2021), at 13. The SDEIS fails to consider adverse road conditions that will result from managing a resource road above 7000 feet in this area. The significant elevation and steepness differences between the routes must be assessed because claiming the Johnson Creek Route has “higher potential for increased trucking accidents and greater spill risk,” from avalanches fails to account for known terrain and weather characteristics adversely affecting driving conditions along a significant portion of the Burntlog Route. See SDEIS, at ES-13.</p>		<p>been added to clarify that once the Burntlog Route is constructed, mine-related traffic use of the Johnson Creek Route would cease.</p>

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			<p>Putting aside Warm Lake Summit, which is common to both routes, the Burntlog Route includes at least three steep climbs (or descents depending on travel direction). In particular, the section that switchbacks into the Black Lake cirque and then climbs toward the Old Thunder Mountain Road is not only above 8000 feet but also the section of road most exposed to avalanche hazard. Decreased traffic speed in this area, which is where 13 one-to-three-year D2 and D3 avalanche paths are located, due to adverse winter travel conditions would increase Burntlog Route's AHI because traffic speed would necessarily decrease below the assumed 25 mph in DAC (2021). It is also worth noting that an Environmental Design Feature proposed by the Forest Service to protect water resources, wetlands, and fish is to maintain an adequate snow floor over the gravel road surface. The effect on vehicle speed of this EDF must be evaluated with respect to the AHI to ensure that appropriate vehicle speed input variables are used in assessing AHI.</p> <p>In addition, unlike the Johnson Creek Route, the frequency and size of the 13 one- to three-year D2 and D3 avalanche paths along the Burntlog Route have no history of observation. No road has ever been constructed across them, which would alter topography, potentially destabilize starting zones, and result in increased avalanche frequency. Any increase in frequency and/or size would result in an increase in AHI. Indeed, even though DAC (2021) highlighted recently observed avalanche activity from four north facing paths along a 1.4-mile section of the Stibnite Road, its correlation with recent fire activity, and the "serious hazard" these paths present because of terrain characteristics, the AHI assessment found little hazard difference between the proposed routes. And none may exist with small changes in the assumptions relative to each route. The SDEIS should not assume, without considering AHI, that the Burntlog Route is less safe with respect to avalanches than the Johnson Creek Route.</p> <p>DAC (2021) notes that as the number of vehicles decreases, so does the relative difference in AHI between the two routes. DAC (2021), at 42. The SDEIS fails to consider reducing the overall number of vehicle trips to reduce AHI because the SDEIS fails to include any discussion of AHI. The corollary is that an increase in vehicle traffic on a particular route increases the AHI, which increases the relative difference in AHI between the routes. The SDEIS fails to consider non-mine site traffic that may use or be allowed to use the Burntlog Route when access through the mine site is closed because of public safety hazards. The SDEIS also fails to consider an increase in the number of vehicle trips for winter/early spring snow plowing and road maintenance. In fact, DAC (2021) states that "[w]ithout further detailed information on [Winter Average Daily Traffic] versus [Annual Average Daily Traffic] volumes, [the Specialist Report] default[s] to the equivalent [Annual Average Daily Traffic] volume for" all phases of mining operations. DAC (2021), at 41. This assumption fails to account for the increased traffic needed for snow plowing and maintenance/avalanche control work, which is especially problematic because these activities would occur when avalanche conditions are more likely to be present, i.e., during winter storms, wind events, and other-related phenomena like rain on snow events that cause deteriorated road conditions. To be very clear, again, adverse winter driving conditions decrease vehicle speed and therefore increase AHI. These unaccounted for variables not only increase the number of vehicles using the Burntlog Route but also may decrease vehicle speed at precisely the time when avalanche conditions are most prevalent. Consequently it seems likely that the AHI for the Burntlog Route is significantly underestimated.</p> <p>The SDEIS is ambiguous about whether under the 2021 MMP the Stibnite Road between Yellow Pine and the mine site would be maintained year-round to ensure two means of access to the mine site. If this is the case, re-assessing AHI to also include public use of this section of road is necessary. In fact, Perpetua's own avalanche consulting firm has recommended that both routes be available because of the potential that one or the other would be closed due to adverse weather/driving conditions and avalanche conditions. In this case, avalanche mitigation would need to occur along both routes, not just the Burntlog Route, to maintain mine site access when the Burntlog Route is impassable or closed. Winter weather conditions that close the Burntlog Route may necessitate maintaining the lower elevation Johnson Creek Route to achieve anticipated time frames of the various phases of mining activities and ensure ingress/egress to the mine site is available in case of emergencies during blizzards or other weather events that preclude use of aircraft. The SDEIS should address or at least clarify this issue.</p>		

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	170	SDEIS should address or at least clarify this issue. Finally, the SDEIS fails to point out that the miles of road affected by high frequency avalanches for both routes are nearly identical (3.1 miles for the Burntlog Route and 3.0 miles for the Johnson Creek Route). Instead, the SDEIS highlights that 8.0 miles of the Johnson Creek Route have some potential to be impacted by avalanches as compared with 4.5 miles for the Burntlog Route. This comparison does not consider frequency or AHI.	GEO	Description of the AHI information that is included in the DAC (2021) technical report has been added to the Avalanche subsection of Section 4.2.2.2 in the Final EIS. The conclusions of the relative avalanche risk along the two access road alternatives described by DAC (2021) and used in the SDEIS have been edited to include the AHI information.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	171	In sum, the SDEIS should assess the AHI by including all traffic (mine and public) using all mine access routes to avoid erroneous conclusions, such as “[t]he Burntlog Route would avoid environmental and human health and safety risks associated with the Johnson Creek Road which passes through identified areas for avalanches, landslides, and floods.”	GEO	The AHI information included in the DAC (2021) report has been added to the Avalanche subsection of Section 4.2.2.2 of the Final EIS. The descriptions of the relative avalanche risks posed by the two access road alternatives, including consideration of the AHI information have been edited as necessary. It is not an incorrect statement that the Burntlog Route would avoid the risks posed by the Johnson Creek Route because they are mutually exclusive of each other once the Burntlog Route is operational. But the Johnson Creek Route risks would be present during construction and this fact has been clarified in the Final EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	201	Up-to-date geologic hazard assessment not completed on existing Johnson Creek or Stibnite roads Several major slides and debris falls have occurred recently on the Stibnite road, and several high hazard locations are known on the Johnson Creek (and at least one on the upper Warm Lake road near the summit). These roads will be used no less than two years during construction and potentially in the 2021 MMP alternative for the life of the project. Yet full reconstruction will not occur on these roads according to the current plan. The most recent geologic hazard assessment cited in the SDEIS is STRATA, 2016. It is unreasonable to assume that conditions remain the same six years after the most recent assessment. Further, we recommend that the Forest Service require a new geologic hazard assessment every two years at a minimum through the life of the project.	GEO	The geologic hazards areas, along the two proposed access road alternatives was updated by AECOM in 2020 (AECOM 2020c). The relative numbers of these hazards along the two access roads discussed in the SDEIS, and shown on Figure 3.2-6, are from this more recent analysis.
David Chambers	17634-A	7	2.4.6.2 Underground Exploration In the SDEIS, it is noted: “Underground exploration activities could occur for the SGP throughout the life of the mine, such as the newly-discovered Scout Prospect, a 1-mile, downward-sloping tunnel... Approximately 100,000 tons of rock would be excavated from the decline.” Underground exploration could potentially impact water quality and quantity, and involve the surface disposal of rock with as-yet defined geochemical properties, which could affect the type and level of contaminants that leach from this rock. Information on the predicted water quality and quantity impacts, the geochemistry of the waste that require surface disposal, and the closure plans for the underground workings should be presented in the SDEIS. If an exploration project that included a 1-mile tunnel producing 100,000 tons of waste rock were proposed as an independent project, it would warrant an EIS. Yet the only information provided about this project is limited to the 10 sentences that constitute Section 2.4.6.2. The lack of information, data, and analysis in the SDEIS is insufficient to authorize an activity of this scope. In addition, the Feasibility Study (M3 2021) contains an entire Section, 9.8 Potential High-Grade Underground Mining Prospects, that discusses 5 separate underground prospects in the immediate vicinity of the Stibnite Gold Project (including Scout), consisting of 14 pages of information. The two pages of information on the Scout Prospect in the Feasibility Study is devoted mostly to the mineral resource potential, but it is noted that Scout lies in the Scout Valley Fault Zone, and that the potential underground target is in the range of 2-5 million tons.	GEO	The handling of the development rock from the underground exploration facilities is described in Section 2.4.6.2 of the SDEIS. This rock would be used for surface pad construction, ore feed, or development rock used in the TSF Buttress. The proposed closure plans for the underground exploration tunnel are described in Section 2.4.7.3. The water quality impact analyses for these facilities are described in Section 4.9.2.2. The potential scale of environmental effects of the underground exploration facilities are considered well within that of the rest of the Proposed Action so this NEPA analysis is considered sufficient for the underground exploration facilities. If additional underground ore resources are discovered such that significant changes would be proposed in the future to develop these resources in addition to those already included in the 2021 MMP, the Forest Service would evaluate what additional NEPA analysis is required.
David Chambers	17634-A	11	4.2.2.2 2021 MMP – Tailings Storage Facility and TSF Buttress The stability analysis of the tailings dam is discussed in this section. The analysis is summarized in Table 4.2-1 Calculated Factors of Safety for the TSF Embankment and TSF Buttress. The analysis is based on a study performed for the original project as proposed by Midas Gold (Tierra Group 2017). The	GEO	Additional slope stability analyses have been performed for static, or normal loading conditions, and for pseudo static conditions, representing earthquake loading conditions (Tierra Group 2021). The TSF embankment and TSF Buttress were analyzed to determine factors of safety for two potential failure surfaces: 1) full height failure of the downstream slope of the TSF Buttress such that the failure surface intersects the TSF dam crest and

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			<p>Tierra Group study uses the Site-Specific Seismic Hazard Analysis performed by URS (2013) as the basis for its seismic stability calculations. That study has been superseded by the Site Specific Seismic Hazard Assessment (Golder (2021)). Even though the Golder study reduces the calculated peak ground acceleration that it predicts could be experienced at the site, it is not clear that the spectral accelerations associated with the lower peak ground acceleration are less than those associated with the 2017 Tierra Group peak ground acceleration. The issue of spectral acceleration differences from the Tierra Group is not addressed by Golder. In addition, Golder notes that the only bedrock conditions were used for the ground motion conditions in the pseudostatic modeling (Golder 2021, p. 7). The center portion of the dam will be constructed on alluvial/glacio-fluvial valley sediments, with the left and right abutments bedrock (Golder 2021). It is not clear from the Golder-Tierra discussions why pseudostatic modeling is appropriate for a dam with several different foundation conditions, and whether two-dimensional modeling might better reflect the different dam foundation conditions.</p> <p>In addition, the Tierra 2017 analysis, where the current static and seismic factors of safety were developed, did not cite an actual tailings dam design report as the basis for developing the model it used to conduct the pseudostatic analysis. As with the information provided for tailings dam design in the SDEIS, we do not know where the engineering specifications for the dam design come from. It appears that some actual engineering design work has been done, but there is no reference to it. We do not know what specifications have been required, for example the type of fill, and the quality assurance requirements that will be enforced. We do not know what assumptions were assumed in the factor of safety calculations. The level of design information presented for the tailings dam is insufficient to adequately review the dam design information used to calculate the factors of safety.</p> <p>The use of pseudostatic analysis for dam of this size is questionable, even though pseudostatic analysis is often used for tailings dams. One of reasons for its wide acceptance is that it is less expensive to run than a two dimensional model. Although widely accepted, there are a number of long-recommended cautions about using pseudostatic modeling.</p> <p>In 2005, the Federal Energy Management Agency published a report titled “Federal Guidelines for Dam Safety Earthquake Analyses and Design of Dams” (FEMA 2005). These guidelines, which are still current, contain a thorough discussion of dam modeling techniques. It has this to say about pseudostatic models:</p> <p>“A pseudostatic analysis (sometimes called seismic coefficient analysis) should only be considered as an index of the seismic resistance available in a structure not subject to build-up of pore pressure from shaking. It is not possible to predict failure by pseudostatic analysis, and other types of analysis are generally required to provide a more reliable basis for evaluating field performance.” (FEMA 2005, p. 35) and; "Pseudostatic methods are generally discouraged and should only be used for screening from further consideration those dams where a seismic stability failure is highly improbable. ... Dynamic timehistory analyses are used to determine the displacements and stresses experienced by the dam and foundation. Evaluation of the results is used to determine if there is a risk of a stability failure.” (FEMA 2005, p. 38) Cost is a paramount consideration for a tailings dam. A tailings dam does not produce revenue for a mine, it is an operational cost. Mines are always looking for ways to minimize the cost of waste disposal. The only reason for using upstream-type and centerline-type dam construction is to lower the cost of dam construction. Tailings dams are designed by engineering consulting companies, not by the mining companies themselves. As consultants, engineering consulting companies want to minimize cost to their clients. It is in their economic interest to do so. While this does not mean they would adopt dangerous practices, it does mean that lacking clear guidance to utilize the safest practices in the design, construction, operation, and closure of tailings dams, “site-specific” considerations do often lead to the employment of what would otherwise be considered suboptimal practices. Examples of these suboptimal practices include upstream-type dam construction, the use of saturated tailings impoundment closures to minimize cost, and pseudostatic analysis.</p>		<p>thereby causes a potential loss of tailings or water containment; and 2) TSF dam failure, similarly, intersecting the crest, but assuming the buttress was not present. Analyses were developed for a variety of events up to and including the design event (the MCE). Results for static conditions, the 2,475-year event, and the MCE are reported in the Final EIS as a revised Table 4.2-1.</p>

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Samuel Penney (Chairman)	19396	335	<p>Multiple avalanches and landslides have caused extensive damage to the McCall-Stibnite Road over the last decade. Similar events are likely to occur again, not only for the McCall-Stibnite Road, but also for sections of the proposed Burntlog Route and Johnson Creek Route where roads are adjacent to steep terrain.</p> <p>Wildfires, new road construction, pit highwalls, devegetation of the Project site will cause additional mass wasting events that impact streams with ESA-listed fish species. The FEIS needs to analyze risk of landslides using more rigorous methods, such as landslide susceptibility or landslide hazard modeling.</p>	GEO	The baseline condition of geologic hazards potentially affecting the 2021 MMP is described in Section 3.2.4.7 of the SDEIS. The potential geologic hazards along the proposed Johnson Creek Route Alternative are described in Section 4.2.2.3 of the SDEIS. Effects to topography caused by the 2021 MMP are described in the Topography subsection of Section 4.2.2.2. The potential impacts of geologic hazardous to the 2021 MMP are described in the Geotechnical Stability subsection of Section 4.2.2.2. It is disclosed that these natural features could potentially be destabilized by the construction and operations but that these impacts would be minimized by incorporating designs, construction quality, operational maintenance, and monitoring to deal with any geotechnical instability impacts. The potential risk of any one of these locations is site specific and dependent on the final designs. The impact of any instability is described as being localized and are expected to be short-term and moderate intensity.
Samuel Penney (Chairman)	19396	336	<p>Additionally in the FEIS, the location of potential mass wasting areas should be described and their risks to ESA- listed fish species fully addressed.</p>	GEO	Geologic hazards for the operations area and access road alternatives were described in Section 3.2.4.7 of the SDEIS. The potential impacts of landslides and rockfall on the operations and access road alternatives are described in Sections 4.2.2.2 and 4.2.2.3. These sections describe that the impacts of geotechnical instability are expected to be localized and that unstable areas would be addressed by stabilizing designs during construction activities. Therefore, effects of these landslide and rockfall areas on fish habitat is expected to minor. Impact of sediment and turbidity on aquatic habitat is present in Section 4.12.2.2 of the Final EIS.
Samuel Penney (Chairman)	19396	339	<p>Stochastic Events Not Fully Analyzed</p> <p>In addition to roads, the SDEIS does not adequately address climate change and blasting with explosives as it relates to stochastic events near Endangered Species Act-listed fish at the Project site. The SDEIS only states that "Current climate change trends, such as increased heavy precipitation events and more precipitation falling as rain instead of snow, could lead to increased soil erosion and change in land cover, which could potentially impact slope stability in the analysis area. Damage due to seismic activity in the area also could be exacerbated by climate-induced instability in the analysis area." However, the SDEIS omits any analysis of this potential instability or the increased risk of erosive events in light of climate change</p>	GEO	Current sediment loading in the area streams is caused by erosion of natural and mining-disturbed surfaces in the proposed operations area. Section 1.3 describes that significant areas of legacy mining disturbances adjacent to the local streams will be reclaimed under the ASAO to reduce impacts to surface water quality. Section 2.4.5.6 describes that other legacy mining wastes, which are current sources of surface water impacts, would be removed during construction and early operations. Section 2.4.5.10 of the SDEIS describes how surface water flow through the operations area would be managed to avoid erosion of the stream channels. Of particular note is the description of the stream stabilization and restoration of the Blowout Creek watershed, which is a legacy source of much stream sediment in the past. Closure and reclamation of the proposed facilities is described in Section 2.4.7. The disturbed surfaces and stream channels would be reclaimed in a manner to control erosion and transport of sediment from the area. Baseline erosion and sediment transport conditions are described in Section 3.9.4.4. Section 4.9.2.2 discusses the effects of the proposed mining operations on surface water quality. Contact water derived from runoff over the mine disturbances would be routed to a number of contact water ponds. Management of the water in the contact water ponds would be in compliance with the IPDES stormwater and individual permit requirements for sediment and turbidity control. Narrative related to impacts by sediment and turbidity is presented in Section 4.12.2.2 of the Final EIS. Blasting would occur within the open pits and the underground exploration mine. Any excess water from within these areas directly affected by blasting would be pumped to contact water ponds for management and would not be directly released to area streams. The potential changes from climate change on the affected environment of the Project Area is described in Section 3.4.
Samuel Penney (Chairman)	19396	340	<p>Furthermore, the SDEIS notes that blasting will occur, but does not analyze the increased risk of erosive events. Unfortunately, all stream reaches in the headwaters of the EFSFSR subwatershed are already at unacceptable risk for sediment/turbidity for Chinook salmon, steelhead, and bull trout. The risk of erosive events associated with the Project needs to be analyzed, and synergistic agents such as climate change and blasting should be included in the models.</p>	GEO	Current sediment loading in the area streams is caused by erosion of natural and mining-disturbed surfaces in the proposed operations area. Section 1.3 describes that significant areas of legacy mining disturbances adjacent to the local streams will be reclaimed under the ASAO to reduce impacts to surface water quality. Section 2.4.5.6 describes that other legacy mining wastes, which are current sources of surface water impacts, would be removed during construction and early operations. Section 2.4.5.10 of the SDEIS describes how surface water flow through the operations area would be managed to avoid erosion of the stream channels. Of particular note is the description of the stream stabilization and restoration of the Blowout Creek watershed, which is a legacy source of much stream sediment in the past. Closure and reclamation of the proposed facilities is described in Section 2.4.7. The disturbed surfaces and

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					stream channels would be reclaimed in a manner to control erosion and transport of sediment from the area. Baseline erosion and sediment transport conditions are described in Section 3.9.4.4. Section 4.9.2.2 discusses the effects of the proposed mining operations on surface water quality. Contact water derived from runoff over the mine disturbances would be routed to a number of contact water ponds. Management of the water in the contact water ponds would be in compliance with the IPDES stormwater and individual permit requirements for sediment and turbidity control. Narrative related to impacts by sediment and turbidity is present in Section 4.12.2.2 of the Final EIS. Blasting would occur within the open pits and the underground exploration mine. Any excess water from within these areas directly affected by blasting would be pumped to contact water ponds for management and would not be directly released to area streams. The potential changes from climate change on the affected environment of the Project Area is described in Section 3.4.
Samuel Penney (Chairman)	19396	341	There is no assessment of geologic hazards on any of the mine access roads, including the existing Warm Lake highway, Johnson Creek road, Stibnite Road, or the newly proposed Burntlog Road. There are landslides, avalanches and mass wasting events on the existing streamside roads nearly every spring. These roads are mostly located on the Idaho batholith, which is granitic, known for decomposing easily, and not being competent or well suited for road bases.	GEO	Geologic hazards for the operations area and access road alternatives are described in Section 3.2.4.7.

Air Quality

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Elizabeth Barnes	6652	10	Table 4.3-3 Why is ammonia not measured in air quality analysis?	AIR	Table 4.3-3 is specific to EPA criteria pollutants. Ammonia is not a criteria pollutant. Hazardous pollutants and Idaho state regulated toxics are discussed in Section 4.3.4.2 and the Air Quality Specialist Report. Ammonia is regulated by the Idaho state air quality Idaho Admin Code 58.01.01.585 - Toxic Air Pollutants Noncarcinogenic increments. The SDEIS air quality analysis determined the ammonia concentration is below the Idaho DEQ screening emission level limit. Additionally, total dry nitrogen deposition is outlined in Section 3.3.4.4 whereby ammonia deposition is a portion of the total Nitrogen. General ammonia deposition is also addressed in that section. The Air Quality Specialist Report Section 6.1.4.1 also discusses this.
Lehrer, Laura	16878	5	The lack of air quality monitoring.	AIR	The USFS agrees that the high emission control factor of greater than 90% is difficult to verify. The facility was issued Idaho Air Quality Permit P2019.0047 that required the facility to develop a Fugitive Dust Control Plan(FDCP) with multiple methods to control dust. Additionally, records are required to be kept. Dust monitoring is required using EPA Reference Method 9 and records are required. The USFS would include additional requirements for monitoring with may include EPA Federal Reference Methods or Federal Equivalent Methods using equipment such as such as Esampler and E-Bam. Additionally, multiple purple air sensors may be deployed to assess periods of high PM2.5 emissions and EPA method 9/method 22 visible emissions monitoring would be part of the monitoring in all mining areas and haul roads that are included in the DSEIS. The operators would keep records of monitoring and dust control plan and using the Idaho DEQ forms for fugitive dust control. This is incorporated in Section 4.3.5 of the Final EIS.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	6	TIFO comments include rudimentary material balances for the DEIS and SDEIS Alternatives. Table SD1a contains the Pit-specific and historic waste material COC distributions for Development Rock DR, Ores, and Historic Materials from the SRK (2017) SGP Baseline Geochemical Characterization Report. Tables SD1b and SD1c, combine the COC distributions with mining production estimates from M3 (2014), (2019) and (2021) Stibnite Gold Project Feasibility Technical Study Reports supporting the MoDPRO and MoDPRO2 Alternatives. These Tables contain probability distributions of COC production for mined materials for the DEIS and SDEIS, respectively. Table SD2 summarizes overall	AIR	The commenter submitted quantitative re-evaluation of the chemical characterization data in the 2020 DEIS to prepare elemental material balances for the different ore and waste materials of the operations. However, the elemental material balances are not solely indicative of potential environmental effects or how these effects compare to existing regulatory limits and guidance. These elemental material balances are not typically used in NEPA analyses of proposed mining operations. The impact analyses included in the SDEIS do utilize typically

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			<p>DEIS and SDEIS Pit-mined COC production. Table SD3 summarizes COC production and DR COC disposal for the SDEIS Alternative.</p> <p>The lack of material balances has been noted in several reviews including the DEIS and several IDEQ PTC submittals regarding the SGP. It is unusual that credible material balances are excluded in such complex environmental systems analyses. IDEQ has responded that material balances are “helpful but not required,” and has been unwilling to request SGP to supply the accounting. The Nevada Department of Environmental Protection (NDEP), that regulates the only comparable gold refinery operations in the United States, does require material balances. Despite the Forest Service Air Quality Expert Report 2022 citing the NDEP requirements as exemplary, the Forest Service has not completed material balances for either the DEIS or SDEIS. As demonstrated below, COC sources, concentrations and distribution differ significantly for the DEIS and SDEIS.</p> <p>The Forest Service should require material balances for toxic contaminants in future Supplemental analyses.</p>		acceptable data and methods to predict chemical impacts to environmental media and then compares these projected impacts to existing regulatory requirements and guidance.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	14	<p>Arsenic Emission Rates are Underestimated: Use of inappropriate Emission Factors (EF)s in the 2021 MMP combine to significantly underestimate arsenic emission rates in the SDEIS. The most critical EF selections are associated with Mining Fugitive Dust and include underestimated i) arsenic concentrations in Pit roadbeds, ii) silt content in on-site gravel roadbeds, and ii) percent control levels for application of dust suppressants. Each is discussed below.</p>	AIR	The emission factors used are described in Section 4.3.1.2 and were based on regulatory and industry technical documents as detailed further in the Air Quality Specialist Report.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	15	<p>Arsenic Dust Concentrations: Fugitive Mining Dusts in the three Pits will reflect the changing arsenic production and concentrations noted in Table SD6. The new 2021 MMP Preferred Alternative analyzed in the SDEIS does not include these changes. The DEIS characterized all Haul Roads using the median concentration of site-wide rock samples of 667 ppm As. The 2021 MMP uses 667 ppm to calculate mining fugitive dust arsenic emissions for Pit Haul Roads and substitutes 90 ppm for “CR: clean rock - used to cap haul roads outside of the pits and DRSFs.” The 2021 MMP modification should have included substituting the Pit-specific arsenic concentrations noted in Table SD6 for in-Pit Haul Roads. This oversight underestimates in-Pit arsenic emissions by 1.3 times for the WEP, 3.4 times for YPP, and 5.2 times for HFP. Table SD7 shows the calculation adjusting for the weighted in-Pit Arsenic concentrations from Table SD6.</p>	AIR	A median arsenic concentration was utilized to assess aggregate dust emissions from Project traffic which travels variable routes depending on the daily mining activity. There would be areas of higher arsenic concentrations and lower arsenic concentrations compared to the median value, but that value is characteristic of the overall distribution.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	16	<p>Haul Road Silt Content: Pit Haul Road (HR) Fugitive Dusts are the largest source of total particulate (PM) and arsenic emissions, accounting for 83% of PM as calculated in the 2021 MMP Preferred Alternative. HR PM emissions are grossly under-estimated due to unrealistic assumptions regarding the silt content of the roadbeds and the level of control assumed for dust suppressants.</p> <p>The Forest Service cites USEPA AP-42 guidance as the basis for HR Dust emission estimates. Table 13.2.2-1 from the cited guidance summarizes 272 gravel road samples from 53 sites at 18 different industries. Ten (10) sites and 58 samples were obtained specifically from Haul Roads. Haul Roads silt content ranged from 5.8% to 24%, averaging 11.6%. The minimum mean silt content from any one site was 4.3% for all gravel roads and 5.8% from Haul Roads. Table SD8 summarizes the USEPA AP-42 results for all roads. (USEPA 2022.)</p> <p>The SDEIS uses a 4% silt content, lower than any value observed by the USEPA. The 4% value is referenced to "Soil Resources Baseline Study, Stibnite Gold Project." Reid, Samuel B., Assistant Geology Supervisor, Midas Gold, Inc., April. (Midas Gold 2015). The Appendix to this document notes <75 micron fractions for 28 on-site sieved soil samples, but it is unclear how the 4% value was selected. Although the guidance indicates the importance of locally collected data, the 4% silt content cited by Midas are most relevant to “dirt roads” operating on native soils. The in-Pit Haul Roads at SGP will be constructed from Development Rock crushed gravels from within the Pits and with “CR: clean rock - used to cap haul roads outside of the pits and DRSFs.” The silt content of industrial constructed gravel haul roads is generally designed and maintained at higher levels for stability reasons, as indicated in Table 13.2.2.1 of the AP-42 document (i.e., mean values ranging from 5.8% to 24%). Substitution of 8% and 24%, as a more appropriate range, for roadbed silt content into the Emission Calculations in the</p>	AIR	The silt content of gravel roadways was predicted based on the analysis of site materials as described in the cited baseline report. Therefore, the value was used as characteristic for the site.

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			Appendices relied on for the SDEIS, increases uncontrolled PM emissions by 1.6 to 3.5 times, respectively. Table SD9 shows these calculations applied to the On-site Hauling fugitive dust Maximum production scenario in Table SD4 (i.e., 2901.3 tons/yr.).		
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	17	<p>Particulate Control: The SDEIS also relies on 93.3% particulate control achieved by a combination of chemical dust suppressants and watering. The AP-42 Guidance (AP-42) also discusses the effectiveness of both technologies. As Perpetua’s control strategy relies largely on chemical dust suppressants, it is important to note the following excerpt from AP-42 that concludes: “Past field testing of emissions from controlled unpaved roads has shown that chemical dust suppressants provide a PM-10 control efficiency of about 80 percent when applied at regular intervals of 2 weeks to 1 month” (p 13.2.2-12). This suggests the proposed 93.3% control assumptions are suspect and will more likely range from 80% to 90%. Controlled emissions would be 1.5 - 3.0 times greater at 90% and 80% control, respectively. Table SD9 also shows that using 8% and 24% silt content increases the required PM control from 93.3% to 96.4% and 98.7%, respectively. These values are not achievable even for paved roads.</p> <p>Table SD10 shows combined correction factors for the several emission factors underestimated by IDEQ and accepted by the Forest Service. In combination, correcting for the arsenic concentration and silt content in roadbeds and percent control for dust suppression underestimates indicate that arsenic emissions are likely 7.5 - 33 times greater from the YPP, 14 - 60 times greater for HFP, and 3 - 14 times greater for the WEP, than those estimated in the SDEIS. These changes alone would result in exceedance of cancer risk criteria. Unfortunately, specific calculations of the ambient estimates cannot be developed, as the link to the electronic support documents cited by the Forest Service cannot be accessed.</p>	AIR	The fugitive control management compliance requirements would be rigorous due to the high dust control proposed by Perpetua. The 93.3 percent control has been accepted by IDEQ and adopted for assessment of emissions by the USFS based on the use of chemical suppressants and water application.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	18	<p>Airborne Arsenic Carcinogenic Risks Are Underestimated: Carcinogenic risk is determined by appropriately estimating emissions from SGP proposed activities, conducting air quality modeling to estimate ambient air arsenic concentrations and exposures, and comparing the exposures to carcinogenic risk criteria. The analyses the Forest Service relies on understates arsenic impacts in each of these steps. Objective correction of these dilutions results in cancer risks exceeding acceptable levels. These serial dilutions significantly underestimate carcinogenic risk for average conditions. Estimating risk at the average exposure implies half the receptor population has a greater cancer risk. Carcinogenic risk should be evaluated at both mean and reasonable maximum exposures (95th%tile) to ensure protectiveness for the more vulnerable receptor population. Neither the Forest Service, nor IDEQ, has performed responsible risk assessment calculations. This is one basis for the current Administrative Appeal of the PTC. The serial dilutions are described in the following paragraphs.</p> <p>The SDEIS cites a Perpetua consultant’s report (Air Sciences 2021b) that alleges compliance with the 10-6 cancer risk criteria by comparing a calculated maximum equivalent 70-year exposure of 0.00015 ug/m3 arsenic to the 0.00023 ug/m3 standard. These calculations include a number of questionable dilution steps. Nevertheless, as calculated by the Forest Service, this evaluation implies that the 12 years of the 2021 MMP consumes 65% (0.00015/0.00023) of a receptor’s acceptable 70-year lifetime exposure. Appropriate emission rate estimates are critical to estimating carcinogenic risk associated with the Preferred Alternative. Even by the Forest Service analysis, any correction of the EFs resulting in a > 50% (or 1.5 times) increase in arsenic emissions, would result in exceedance of the carcinogenic risk criteria.</p>	AIR	Section 4.3.4.2 describes arsenic air emissions associated with the Project and compares them to acceptable ambient carcinogenic concentrations in SDEIS Table 4.3-13 which shows them to be below the acceptable concentrations Idaho standards (IDAPA 58.01.01.586).
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	19	<p>Table SD10 summarizes the appropriate correction factors for Haul Road emissions and includes combination factors for As concentration, silt content, and % Particulate Control adjustments.</p> <p>Applying any combination of adjustments >1.5 in Table SD10 would result in excess cancer risk. For example, simply correcting for the minimum increases in arsenic emission rates for the WEP (3 – 14 times) results in airborne arsenic exposures arsenic levels exceeding the applicable carcinogenic risk criteria. That is, 3 x 0.00015 ug/m3 = 0.00045 ug/m3, corresponding to 2 x 10-6 cancer risk. Applying the 14 fold increase indicates a 9.3 x 10-6 cancer risk. Similarly, should either the silt content (1.6 -.3.5) or control level corrections (1.5 – 3.0) apply, excessive cancer risk will result. Correcting for silt content,</p>	AIR	Section 4.3 describes the site data and assumptions utilized to forecast arsenic air emissions and their comparison to acceptable ambient carcinogenic concentrations. The parameter values proposed by the comment were not adopted in the approved air quality modeling.

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			percent control and pit-specific concentrations for all Pits, likely increases to concentrations >10-5 risk levels.		
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	20	<p>Inappropriate Serial Dilution of Exposure Indices: The preceding discussion applies only to underestimated emissions. In addition to diluting emissions, the 0.00015 ug/m3 arsenic chronic exposure cited by the Forest Service was derived using three additional inappropriate dilutions of the air quality modelling results. In total, four levels of inappropriate dilution are: i) the underestimated arsenic emissions, noted above, due to unrealistic particulate arsenic concentrations, roadbed silt content, and control levels; ii) maximum emissions input to the air quality models are five-year averages (not maximums) diluted by different pit production ratios; iii) the predicted model results are diluted by averaging the results of two scenarios, one WEP and one non-WEP related. This averaging incorrectly reduces the WEP maximum annual average by 41%. The Forest Service relies on IDEQ's assertion that this technique is justified on the basis that maximum prediction for the WEP scenarios will not apply during the life of the mine. There are several problems with this reasoning.</p> <p>The five-year average already accommodates this effect. Several of the scenarios are no longer applicable, as the DR repository destinations no longer exist. The adjustments for Pit-specific dust concentrations are much greater for the non-WEP scenarios; and iv) adjusting for the ratio of the 16-year life of the mine to the 70-year lifetime of the receptor dilutes the ambient calculation by an additional 78%. The SGP is not entitled to consume the remaining 54 years of the receptor's 70 year lifetime acceptable exposure during the alleged 16-year life of the mine. (IDEQ 2022b).</p> <p>These serial dilutions are another basis for the IDEQ PTC Administrative Appeal currently under consideration. Correction of these serial dilutions likely increase exposures and cancer risks by an order of magnitude exceeding 10-5 cancer risk criteria.</p>	AIR	Section 4.3 describes the site data and assumptions utilized to forecast arsenic air emissions and their comparison to acceptable ambient carcinogenic concentrations. The alternative assumptions proposed by the comment were not adopted in the approved air quality modeling.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	22	<p>On-site Carcinogenic Air and Dust Exposures: All of the air quality analyses are limited to off-site ambient air. On-site air concentrations are likely an order of magnitude higher. In the interest of worker, site resident and visitor health, the Forest Service should estimate on-site airborne arsenic levels and assess the risk of on-site exposures. The high arsenic content of the dusts is also a health concern due to direct contact exposure, incidental ingestion, inhalation, and skin absorption. Arsenic levels in on-site dusts will range from 580 – 10,000 mg/kg. Total arsenic concentration for growth media range up to 3,000 ppm As, justified on the basis of observing vegetation survival on Hecla reclamation sites. These metals concentrations substantially exceed (by 2 – 3 orders of magnitude) health risk screening and CERCLA cleanup levels for occupational, recreational and residential scenarios. On-site workers and visitors will be exposed to concentrations, potentially, orders of magnitude greater than these criteria. Neither Perpetua, nor the Forest Service or IDEQ have publicly disclosed estimated on-site airborne concentrations.</p> <p>In the interest of Public Health protection, the Forest Service should not defer to the IDEQ PTC assertions under Administrative Appeal. The Forest Service should independently perform the emission calculations, air quality modeling, and risk assessment associated with COC releases from this facility. Resulting COC airborne and dust concentrations, both on-site and off-site estimates should be publicly disclosed. Human health risk assessments should be undertaken at mean and Reasonable Maximum Exposures (RME). Soil cleanup criteria should meet CERCLA guidelines.</p>	AIR	On-site carcinogenic air and dust exposures would be regulated under MSHA requirements for mine operation. Therefore, attainment of standards for worker health would be reasonably foreseeable for the Project. Dust monitoring is incorporated into the Final EIS in Section 4.3.5. For further details see response to comment 16878.5.
Kevin Proescholdt	17616	9	* Figure 3.3-2 erroneously omits the Monument Rock, North Fork John Day, North Fork Umatilla, Wenaha-Tucannon, Welcome Creek, Rattlesnake, and Jim McClure-Jerry Peak Wildernesses from the map and fails to label Cecil D. Andrus-White Clouds and Hemingway-Boulder Wildernesses all within the Far Field Boundary.	AIR	Figure 3.3-2 has been revised to add omitted Class II wilderness areas.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	2	Monitoring for fugitive dust and particulate matter air emissions, assessing airborne arsenic impacts, confirming consistency across proposed state and federal air quality measures, and addressing possible underestimations of mercury deposition.	AIR	As outlined in comment response 16878.5 dust monitoring would be incorporated into the Final EIS as a mitigation measure under Section 4.3.5. Arsenic impacts have been determined for potential sources and compared to the IDEQ acceptable ambient carcinogenic concentrations. Mercury deposition expectations were established using the REMSAD model;

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					while the data is somewhat dated (2000-2006), it is likely a conservative measure due to more recent regulatory controls.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	12	Idaho Department of Environmental Quality (IDEQ) Air Quality Permit to Construct (PTC) The DSEIS indicates on June 17, 2022, IDEQ issued a final PTC and Statement of Basis (SOB) stating that the Stibnite Gold Project (SGP) will not require a Title V permit. Further that “[a] determination was made by the State of Idaho that the SGP satisfies the requirements of the PTC program, based on demonstration of the SGP’s potential emissions and controls. This was based on the complete air emissions inventory of stationary sources that was submitted by Perpetua as part of its application to the IDEQ for an air quality permit.” EPA formally commented during the public review process for IDEQ’s draft air quality PTC that the draft PTC did not appear to sufficiently limit annual emissions to allow the SGP to avoid being subject to the Title V and Prevention of Significant Deterioration (PSD) programs and assure compliance with the National Ambient Air Quality Standards. EPA continues to review the final PTC for compliance with the CAA. As a Cooperating Agency for this project’s EIS, EPA shared our March 2022 draft PTC comments with the Forest Service. EPA recommends the FEIS include a summary of EPA’s public comments. EPA is available to meet with the Forest Service and IDEQ, who is also a NEPA cooperating agency, to discuss our concerns and answer any questions.	AIR	This was an inadvertent error. Due to being subject to NESHAP Subpart 7E, a Title V permit is required. The language in the Final EIS has been updated to address this error. The emission controls and enforcement would be outlined in the Fugitive Dust Control Plan to be completed to the satisfaction of USFS prior to construction and other restriction measures throughout the IDEQ permit. It should also be noted that the Final EIS would have generally lower throughputs more representative of typical operating conditions to be incorporated into the Record of Decision. Should the proponent request to increase beyond the proposed throughputs, any change would have to be evaluated and reassessed as appropriate.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	13	Enclosure of Main Ore Processing Facility and Coarse Ore Stockpile The DSEIS indicates the main ore processing facility building and coarse ore stockpile will be enclosed. EPA notes that IDEQ’s PTC does not include stipulations that the main ore processing facility building and coarse ore stockpile will be enclosed. Given the inconsistency, EPA recommends the FEIS clarify whether the main ore processing facility building and coarse ore stockpile will be enclosed, which EPA supports to reduce dust. If the main ore processing facility building and coarse ore stock will not be enclosed, correct its description throughout the FEIS. EPA also recommends adjusting the assessment analysis to account for the change.	AIR	The Final EIS has been updated under the mitigation measures Section 4.3.5 and corrected to clarify that the facilities would be enclosed.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	14	Bag House Dust Collectors The DSEIS indicates water sprays and/or bag house dust collectors will be installed at the ore-crushing system and at ore reclaim feeders that deliver ore to the grinding circuit.6 EPA notes that IDEQ’s PTC does not include baghouse dust collectors within the ore-crushing system and at ore reclaim feeders. EPA recommends that the FEIS clarify the measures that will be taken for the SGP, and adjust any inconsistencies in the FEIS, including the assessment analysis to account for the change.	AIR	The Final EIS requires controls as these were accepted by the proponent. Any inconsistencies have been rectified in the Final EIS. All mitigation measures have been added to Section 4.3.5 of the Final EIS.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	15	Title V Permit Regarding the DSEIS statement “[t]he regulation establishes mercury emissions limitations and work practice standards to control mercury emissions from gold production processes.” EPA recommends evaluating if this regulation would require a Title V permit for the SGP. If so, EPA recommends adding the following sentence in the same paragraph “This regulation also requires that the SGP obtain a Title V permit. See 40 CFR 63.11640(d). This requirement is separate and independent from whether a Title V permit is needed based on the project’s potential air emissions.”	AIR	This was an inadvertent error. Due to being subject to NESHAP Subpart 7E, a Title V permit is required. The language in the Final EIS has been updated to address this error.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	16	Fugitive Dust and Particulate Matter (PM) Monitoring Table 2.4-12 in the DSEIS indicates “[t]he Proponent will prepare a dust mitigation plan with appropriate schedule or triggers for control deemed adequate by IDEQ to achieve the level of control of 93 percent of dust (as submitted in the proponent’s draft application for Permit to Construct from IDEQ). Alternatively, the proponent could employ particulate matter or opacity monitors deemed adequate by IDEQ and the Forest Service and immediately apply water or chemical dust control when PM or opacity monitors reach levels within 10 percent of the threshold determined by IDEQ.” Since the final PTC has been issued by IDEQ, EPA recommends changing the reference to the draft application to a reference to the PTC for the FEIS. PTC permit condition 2.6 requires the proponent to develop and maintain a Fugitive Dust Control Plan (FDCP) and permit conditions 1.2 and 3.2 specifies	AIR	The EIS text has been revised to reflect the status of the IDEQ permitting and preparation of a dust control plan. USFS will prior concurrence with the plan. Additionally, dust control monitoring has been added as a mitigation measure within Section 4.3.5 of the Final EIS.

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			<p>93% dust control must be met for the haul roads. The FDCP was not provided in the PTC before it was issued and has not been available for public review. EPA recommends the FEIS include a draft of the FDCP as an appendix or publicly available reference document.</p> <p>The IDEQ PTC does not contain any requirements for PM monitoring as is stated above in the first paragraph. The EPA has recommended PM10 monitoring in previous cooperating agency NEPA comments and in comments to IDEQ during the draft air permit comment period.</p> <p>For the FEIS, EPA continues to recommend continuous PM10 monitoring at the facility fenceline, as a mitigation measure and integral part of the FDCP, to ensure the project will not cause a violation of the primary and secondary National Ambient Air Quality Standards. Monitoring is justified based on the high range of uncertainty in the estimates of fugitive dust emissions and high potential of potential impacts to resources in the project area.</p> <p>Though the DSEIS modeling indicates that PM10 impacts will be below the NAAQS, the modeling was based on numerous assumptions, including achieving a 93% control efficiency on fugitive dust emitted from haul roads. Small errors and uncertainties in the emission inventory assumptions could lead to significantly more fugitive dust emissions than estimated. In its prior comments to IDEQ, EPA raised concerns about the feasibility and enforceability of achieving the 93% control efficiency. PM10 monitoring would help to verify the estimated emissions in the assessments were correct or provide a measurement tool to gauge the effectiveness of post-project mitigation to address excessive emissions.</p>		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	17	<p>Access Road</p> <p>The DSEIS states “[t]he EPA Region X has indicated that the access road could possibly be excluded from ambient air if sufficient measures are taken to comply with the 2019 revised policy (EPA 2019a).”EPA recommends disclosing that formal EPA policy review of the proposed ambient air boundary was not requested by the state and was not conducted. The EPA does not typically engage in formal review of the ambient air boundary during NEPA review and usually only conducts such a review upon request of the state during air permitting.</p> <p>For the FEIS, EPA suggests the following to add to the paragraph: “Exclusion of the public access road from ambient air protections is a unique case that relies on measures assumed to meet the standards inferred in the 2019 revised ambient air policy. However, a formal EPA policy review of the ambient air boundary for the project has not been conducted nor requested. A formal review is not necessarily required. The EPA did provide formal comment on IDEQ’s air quality PTC recommending a review be requested by the state and that initial measures in the PTC were too ambiguous to determine compliance with the revised ambient air policy.”</p>	AIR	The requested language regarding the EPA position on use of the public access road through the mine site has been included in the EIS.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	18	<p>Arsenic Screening Analysis</p> <p>The EPA continues to have concern that the arsenic screening analysis underestimates cumulative impacts of airborne arsenic to the environment in the vicinity of the project. The results presented on page 4-46 of the DSEIS, and Table 4.3-13 are compared to an annual acceptable ambient concentration for a carcinogen (AACC), the Idaho toxics screening threshold. However, this screening threshold is not necessarily intended to be compared against a 70-year lifetime scenario where 57 years of the period assumes zero exposure. The threshold is an annual average used for screening, prescribed as a de-minimus value based on lifetime risk. Under IDEQ’s hazardous air pollutant program, in practice, project impacts from the maximum year of emissions would typically be compared to the annual average AACC for arsenic.</p> <p>If the impacts were determined using annual average emissions during the period of the project only, the resulting arsenic concentrations would exceed the AACC. There is significant uncertainty in the emission rates of fugitive dust associated with the project such that arsenic emissions could be underpredicted.</p> <p>Based on these concerns, the EPA continues to recommend the FEIS include an expanded cumulative analysis to disclose project airborne arsenic impacts to the environment.</p>	AIR	The AACC were derived from the EPA unit risk factor which is the relative risk of excess cancers from being continuously exposed to 1 microgram of the substance in one cubic meter of air for a period of 70 years and expressed in terms of a screening emission level or an acceptable ambient concentration for a carcinogenic toxic air pollutant. See IDAPA Section 005.125 definition of Toxic Air pollutant Carcinogenic Increments. Also, in communication with IDEQ, it has been determined that this calculation approach is deemed acceptable.

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Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	19	Retort Emissions The DSEIS states “[t]he retort emissions are based on an average of two refinery reports in 2015/2016 (NDEP 2015, 2016). The corresponding calculations are 20 percent of the retort standard of 0.8 lb/ton.” The process by which these emissions are derived is unclear. The two referenced documents (NDEP 2015, 2016) contain emission values for over 25 mining operations in Nevada. Depending on the mine, the emissions can be less than 1 lb/year to greater than 500 lbs/year. For the FEIS, EPA recommends providing information on which two ref	AIR	The retort emissions are based on reported emissions from the autoclave facilities at the Twin Creeks Mine and the Goldstrike Mine as reported through the Nevada Division of Environmental Protection.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	20	Gaseous Elemental Mercury (Hg0) Emissions The DSEIS indicates that gaseous elemental Hg0 emission sources at the SGP will be controlled by activated carbon absorbers. If Hg0 emissions are controlled by the activated carbon absorbers, EPA recommends the FEIS clarify if this means that the 13.6 lb/year of Hg released from the SGP project will consist of particulate bound and oxidized Hg. EPA further recommends clarifying for the AERMOD assessment, if all 13.6 lbs of Hg are included in this modeling.	AIR	The analysis included all mercury species. The sources included propane combustion, the autoclave system, refinery sources, process dust, mine fugitive dust and mercury flux. This is incorporated in the 13.6 lbs/yr. Depending on the activity, the speciation is either all Hg0, Hg2 or HgP. Appropriate clarification language has been added to the Final EIS where appropriate.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	21	Underestimations of Total Hg Deposition The DSEIS states “[t]his analysis indicates a maximum estimated increase in Hg deposition rate of 0.4 percent or less of the existing background rate. However, it should be recognized that this rate underestimates the total Hg deposition, as the mechanism of Hg0 flux is not included in the screening model.” While we appreciate the inclusion of the sentence indicating a reason why this percent increase is underestimated; the reason listed is only part of the reason for the underestimation. As mentioned in a previous section, the background Hg deposition values based on data from more than 10 years ago is also biased high due to subsequent emission controls. Therefore, the 0.4% increase underestimates Hg deposition because 1) it does not include Hg0 deposition; and 2) the background deposition rates are overestimated for current conditions. Generally, when developing an EIS on the impacts of a proposed mine, the preference is to develop conservative estimates of potential impacts and provide caveats as to why these impacts may be overpredicted. For this SEIS there are several instances where impacts are underpredicted and then caveats are added indicating that there is a low bias in the analysis. The problem with this approach is that impacts may not be identified and properly mitigated. EPA suggests adjusting the Hg deposition assessment for the FEIS to conservatively estimate the potential impacts and then provide caveats as to why these impacts are likely overpredicted.	AIR	The estimates for total Hg deposition are based on the information available at the time of developing the SDEIS. The analysis discloses uncertainties in its forecasting and the use of potentially non-conservative assumptions to provide context for its forecasts and estimates. The background deposition rates for the area have not been remodeled or re-estimated to assess the effects of emission controls on deposition.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	22	Contribution Above Estimated Hg Background Table 4.3-18 SGP Contribution Above Estimated Hg Background indicates that SGP will result in Hg deposition of 0.056 g/km2/year. However, an earlier Table (4.3-6) indicates that the mine will release 13.6 lbs per year of Hg. The previous statement that Hg0 emissions will be controlled suggests that 13.6 lbs represents releases of oxidized and particulate bound fractions which will be deposited relatively locally. Of the 6,200 grams of Hg released (which is mostly or entirely Hg2+ and HgP according to the previous statement in the SEIS), AERMOD predicts only 0.056 g/year is deposited with a square km. There seems to be a disconnect between the species of Hg emitted, the amount of Hg emitted, and the amount being deposited locally within this analysis. EPA recommends reevaluating these analyses, making appropriate corrections for the FEIS, and if potential significant deposition is identified, mitigating to reduce impacts.	AIR	The EIS has been revised to clarify the characterization of the Hg emissions including its mass, speciation, and local deposition.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	71	Air Quality • The SDEIS indicates deposition of mercury, and nitrogen and sulfur species were predicted to be less than Significant Impact Levels (SILs). EPA notes that SILs are air quality screening thresholds not	AIR	SIL terminology has been updated in the Final EIS. The recommended SIL language has been added to the Final EIS. Far-field language has been added. CFR reference updated. All other recommended editorial changes have been made. Also, Table 3.3-11 numerical errors have

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			<p>applicable to deposition of pollutants, so this statement is incorrect. For the FEIS, EPA recommends replacing this term with “applicable screening thresholds,” or another appropriate term.</p> <ul style="list-style-type: none"> • The DSEIS states “SILs are defined concentrations of criteria pollutants in the ambient air that are considered inconsequential in comparison to the NAAQS. A project impact shown to be below a SIL can be presumed to not cause or contribute to the violation of a NAAQS.” <p>The first sentence in this paragraph is misleading. For the FEIS, EPA suggests the following language replace the first sentence: “SILs are screening thresholds of criteria air pollutant concentrations considered by the EPA as a level of de minimis impact to air quality. SILs are primarily used in air quality modeling assessments, where a project impact shown to be below a SIL can be presumed to not cause or contribute to the violation of a NAAQS.”</p> <ul style="list-style-type: none"> • EPA recommends the FEIS clarify or note in Section 3.3.2 why the much larger “far-field” region’s scope is of importance to the Tribes, given the potential impacts of poor ambient air quality to wilderness areas of Tribal and cultural significance. • The DSEIS states “[t]he New Source Review process requires facilities to undergo an EPA pre-construction review if they propose building new facilities or modifying existing facilities that would result in a “significant increase” of criteria pollutants per 40 CFR § 52.2376.” For the FEIS, EPA recommends changing the regulatory cite from “52.2376” to “52.21” and “criteria pollutants” to “regulated NSR pollutants.” • The DSEIS states “[a]pplicability of the PSD program to the SGP depends on the magnitude of annual emissions for criteria pollutants.” We recommend the FEIS revise this sentence to be more precise: “Applicability of the PSD program to the SGP depends on the project’s potential to emit regulated NSR pollutants. Applicability is determined using maximum potential annual potential emissions of the project for each NSR pollutant.” • The DSEIS states “... the 2021 MMP analysis did include an assessment of the significance of SGP air quality impacts by comparison to the Class II PSD increments.” EPA suggests the FEIS add an additional sentence to disclose why the PSD increment is selected as a threshold to assess the significance of air quality impacts. For example, additional language could state: “The PSD increments may provide a reasonable significance threshold for NEPA assessment because, under the Clean Air Act, significant air quality deterioration is recognized to occur when the amount of new air pollution from a new or modified source would exceed the applicable PSD increment.” • The DSEIS includes a statement “...consistent with best available control technology for new surface mining and processing operations” which is incorrect. The project did not go through BACT review under the IDEQ PTC process because it did not go through major-source PSD permitting. EPA recommends removing the reference to BACT in the FEIS. A similar statement is included at the top of page 4-59 which EPA recommends revising to remove the reference to BACT. • EPA suggests the FEIS revise the second sentence on page 4-38 to read “As shown in Table 4.3-4, IDEQ determined that these emissions are less than the annual threshold of 100 tpy that would trigger Title V or 250 tpy for PSD permitting status.” • Regarding DSEIS statement on page 4-43 “...it also is unlikely the SGP would cause or contribute to a violation of a PSD increment” and Table 4.3-9 column heading “PSD Increment Compliance”, it is important to disclose that comparison to the PSD increment threshold in the EIS is not to determine compliance to the standard (this is not a full regulatory assessment of increment consumption) but as a measure of the significance of project impacts to air quality for purposes of NEPA review. Therefore, we recommend the FEIS add a sentence to state the results instead indicate the project does not cause a significant deterioration of air quality. Also, EPA suggests changing the column header for Table 4.3-9 from “PSD increment compliance” to more appropriate wording such as “Results below threshold” or something similar to show the comparison is used to judge significance of project impacts rather than compliance with a regulatory threshold. 		<p>been remedied. A PSD classification discussion has been added to the Final EIS in Section 3.3.3.</p>

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			<ul style="list-style-type: none"> • For the DSEIS statement “[t]he most recent measurements were between 2007 and 2010 and are provided in Table 3.3-10 to serve as an estimate of historical Hg deposition in the region surrounding the SGP area,”⁸⁰ EPA recommends the FEIS add the word “wet” before deposition to specify that these data do not include dry deposition. • For Table 3.3-10 Historical Annual Average Concentration and Mercury Deposition Rates – Three Idaho MDN Sites, EPA recommends the FEIS add “in precipitation” to this Table title. • The DSEIS indicates the nearest geographic site to the SGP area is no longer active but was active from December 2008 to August 14, 2017. For the FEIS, EPA recommends specifying that the nearest site is over 500 km away. • EPA notes that the Table (3.3-11) Annual Average Mercury Concentration – Salt Lake City AMNet Site contains an important error. The Table reports that the overall mean gaseous elemental mercury (GEM) concentrations is 12.91 ng/m³. This value is not accurate. All yearly averages shown above in the Table are less than 2.5 ng/m³; and if taking an overall mean of the annual means the value would be 1.88 ng/m³ which is much lower than the 12.91 ng/m³ value currently included in the Table. It appears that the values for particle bound mercury (PBM)_{2.5} and GEM were switched, because the PBM_{2.5} value listed is lower than all of the annual reported concentrations. EPA recommends the FEIS correct the error accordingly. • Regarding the DSEIS statement “[e]stimates of these emissions were based on regulatory compliance emission test results available for several gold mines in Nevada that use the same type of extraction process (Nevada Division of Environmental Protection 2006, 2015, 2016),” for the FEIS, EPA recommends the FEIS add whether the mercury content of the ore was significantly different in the comparison between Stibnite and the Nevada mines. • The DSEIS states “[f]urther speciation of the particulate forms of Hg is possible such as fine [particle-borne Hg (HgP)], which is analogous to filterable and condensable PM₁₀. Essentially, the PM₁₀ associated with HgP is the mercury bound within the particles of the particulate smaller than 10 microns. Appropriate particle distribution of mercury can be established using proper test methods and techniques, but the overall percentage of HgP compared to total Hg is small, with HgP PM₁₀ being even less (~14.1 percent vs 2.4 percent from a coal boiler as an example) (Peng 2021). However, as discussed below, and in further detail in Section 4.3.4.2, the approach applied for this analysis did not speciate HgP.” EPA notes that this statement appears superfluous, given that particulate bound Hg was not further speciated in the analysis. EPA suggests the FEIS include some context for why this information is included or consider removing it. 		
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	16	The SEIS indicates a claim that the Project can contain over 90% of all emissions from operations, and that there are metrics for controlling those emissions from the operations over the life of the mine. While this may be factual, there will not be any requirement to actually engage in monitoring for air quality so there won't be any data to confirm these statements. At a minimum, the Tribes request that monitoring for Air Quality be required for all components of the Project as a condition of this permit and that those results be measured against established parameters for air quality; with the requisite fines associated with violations during operations.	AIR	Dust monitoring has been added to the Final EIS as mitigation. Please refer to Section 4.3.5 of the Final EIS and Section 7.3 of the Air Quality Specialist Report.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	35	The lime kiln should be permitted by the Idaho DEQ.	AIR	The current IDEQ PTC does permit the lime kiln (known as the parallel flow regenerative kiln in PTC). The throughput limit is PC 5.5. PC5.12 is the development of the baghouse O&M manual. PC 5.18 are the monitoring requirements. 5.23 is the baghouse monitoring requirements.
Small, Nathan (Chairman, Fort Hall Business Council,	18903	36	Mercury emissions of any kind or amount are unacceptable. Please eliminate the retort step or whatever is necessary to eliminate all mercury emissions.	AIR	Mercury emissions would be mitigated as much as possible. There would be a non-zero amount, but the retort is subject to NESHAPS 40 CFR Part 63, Subpart 7E, which requires the

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Shoshone-Bannock Tribes)					retorts to meet certain mercury limits. The limits in the subpart are 0.8 lb Hg/ton concentrate for new carbon processes mercury retorts.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	40	The Tribes may request permission to place their own air monitors in and around Meadow Creek during mine operations.	AIR	The Tribes are welcome to place their own monitors.
Brooke Dunnagan	18894	3	The studies conducted for the SDEIS lacks significant data collection and I am asking for their to be an in-depth investigation to claims such as being able to control 93% of the dust from roads when regarding air quality effects, which is an inaccurate claim as the Forest Service and Perpetua has been unable to prove this claim.	AIR	The Final EIS includes a monitoring measure to verify dust control by the Project.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	127	" <i>NAAQS for O3, (i.e., annual fourth-highest daily maximum 8-hour average) was 67 ppb ...</i> " Please change "67" to "69" to match with Table 3.3-3.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	128	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	129	The first (12.91) and the third (1.88) overall mean values are switched.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	130	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	131	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	132	" <i>to determine total estimated SGP ozone impacts for...</i> " Please replace "ozone" with "respective." This sentence is referring to both secondary PM2.5 and O3.	AIR	Edit has been made.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	133	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	134	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	135	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	136	<i>"In AERMOD, the mine pit sources were modeled as rectangular volume sources (OPENPIT routine), with individual lateral dimensions and release heights for each pit used to calculate initial vertical dispersion parameters. In CALPUFF, the pit sources were modeled as square area sources located with a release height at the top of the pit opening, with the pit located from the AERMOD lateral dimensions.</i> " Please delete this statement. It was initially proposed in the Protocol. The pits were modeled as "AREA" sources therefore this change was not needed. Please see the (Air Sciences 2018a).	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	137	<i>"During operations, public access..."</i> Please add "restricted" before "public access..."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	138	<i>"For the 2021 MMP, emission control devices and designs would be put in place to abate emissions of particulate matter, Hg, and criteria pollutant emissions from internal combustion engines."</i> Please delete. Controls are used for various ore processing and refining sources.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	139	"(e.g., stationary internal combustion new source performance standards, 40 CFR 60, Subparts IIII and JJJJ)." This discussion is related to mobile off-highway vehicles, therefore, 40 CFR 89, 90, and 1039 would be the appropriate examples here.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	140	"(e.g.,40 CFR 60, Subparts IIII and JJJJ)." This discussion is related to mobile off-highway vehicles, therefore, 40 CFR 89, 90, and 1039 would be the appropriate examples in b 6.	AIR	Edit has been made.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	141	The HCN (tpy) process (r 2, c 2) and fugitive (r 3, c 2) emissions are switched.	AIR	Edit has been made - confirmed with 2018 Emissions Inventory.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	142	"The results illustrate that the overall impact from the associated HAPs would be moderate, but well below the IDEQ permitting thresholds." This should be described as "minor" because the AACC are screening level thresholds. Modeling is conducted at the project boundary, not for sensitive receptors - and no risk analysis is required for impacts less than the AACC. Also, IDEQ allows impacts to be 10 times higher if you install T-RACT controls. SGP is installing T-RACT controls and demonstrates compliance with AACC without taking the 10x credit, i.e., impacts are minor.	AIR	Context language added along with recommended edit to less than significant.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	143	The ug/m3 values in r 3, c 3, 4, 5 are incorrect. Correct values are 3.0, 118, and 120 at 25C and 1 atm.	AIR	The original comment references Table 7.13 of AQ SR. The first row values in that table are taken from ASI 2021a; Table 8. There is no third row, but the second row does have an error. Based on a conversion of ppb x 1.96 = ug/m3 (based on a MW of 48 g/mol and a conversion factor of 24.45), the row has been updated. The values are 2.7, 117.8, and 120.5.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	144	Please correct to "east" to "west" in r 2, c 1.	AIR	Edit has been made - confirmed with ASI 2018a, ASI 2021a.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	145	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	146	Please correct reference "Air Resources 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	147	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	148	"Using the same stringent Class I criteria for the Class II wilderness areas included in this analysis demonstrates that the level of regional haze impact in these areas is predicted to be minor. " This should be described a "negligible." Per the FLAG (2010) document: "After CALPUFF is run, CALPOST is used to evaluate whether the proposed source or modification will be below the Agencies' threshold for concern (i.e., 5% change in light extinction)." Therefore, impacts below the "threshold of concerned" should be considered "negligible."	AIR	Edit has been made to less than significant. This is appropriate as the results are well below extinction threshold.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	160	"In AERMOD, the mine pit sources were modeled as rectangular volume sources (OPENPIT routine), with individual lateral dimensions and release heights for each pit used to calculate initial vertical dispersion parameters. In CALPUFF, the pit sources were modeled as square area sources located with a release height at the top of the pit opening, with the pit located from the AERMOD lateral dimensions. " Please delete this statement. It was initially proposed in the Protocol. The pits were modeled as "AREA" sources therefore this change was not needed. Please see the (Air Sciences 2018a).	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	165	"For the 2021 MMP, emission control devices and designs would be put in place to abate emissions of particulate matter, Hg, and criteria pollutant emissions from internal combustion engines. " Please delete. Controls are used for various ore processing and refining sources.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	166	"(e.g., stationary internal combustion new source performance standards, 40 CFR 60, Subparts IIII and JJJJ)." This discussion is related to mobile off-highway vehicles, therefore, 40 CFR 89, 90, and 1039 would be the appropriate examples here.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	167	"(e.g.,40 CFR 60, Subparts IIII and JJJJ)." This discussion is related to mobile off-highway vehicles, therefore, 40 CFR 89, 90, and 1039 would be the appropriate examples in b 7.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	170	"The results illustrate that the overall impact from the associated HAPs would be moderate, but well below the IDEQ permitting thresholds. " This should be described as "minor" because the AACC are screening level thresholds. Modeling is conducted at the project boundary, not for sensitive receptors - and no risk analysis is required for impacts less than the AACC. Also, IDEQ allows impacts to be 10 times higher if you install T-RACT controls. SGP is installing T-RACT controls and demonstrates compliance with AACC without taking the 10x credit, i.e., impacts are minor.	AIR	Edit has been made to less than significant.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	177	"Using the same stringent Class I criteria for the Class II wilderness areas included in this analysis demonstrates that the level of regional haze impact in these areas is predicted to be minor. " This should be described a "negligible." Per the FLAG (2010) document: "After CALPUFF is run, CALPOST is used to evaluate whether the proposed source or modification will be below the Agencies' threshold for concern (i.e., 5% change in light extinction)." Therefore, impacts below the "threshold of concerned" should be considered "negligible."	AIR	Edit has been made to less than significant. This is appropriate as the results are well below extinction threshold.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	180	"SGP air quality impacts would be less than NAAQS because emissions and under deposition significance levels." Incomplete sentence in r 2, c 5.	AIR	Edits made as well as more context added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	181	"Far Field Air Quality Impact Analysis. " Please change to: "Midas Gold Far-Field Air Quality Impact Analysis Protocol for the Stibnite Gold Project."	AIR	Edit has been made.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	149	Please change " <i>Access route...</i> " to " <i>Restricted access route...</i> " in r 2, c 3, b 5	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	150	Please change " <i>Public access...</i> " to " <i>Restricted public access...</i> " in r 3, Operations b 4.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	151	" <i>The 2021 MMP was characterized in AERMOD...</i> " Please add "the Burntlog Route" before "was characterized..."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	152	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	153	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	154	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	155	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	156	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	157	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	158	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	159	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	161	Please correct the footnotes for PM10, PM2.5, and O3.	AIR	Footnote #1 for PM10 is consistent with ASI 2018a (2nd high value). See Table 17 of ASI 2018a. Footnote #3 and #6 for PM2.5 24-hr and annual, respectively is also consistent with ASI 2018a. The ozone footnote is also consistent with ASI 2018a Table 17. Also, the value itself (60 ppb) is accurate per ASI 2021a. Changes not made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	162	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	163	The first (12.91) and the third (1.88) overall mean values are switched.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	164	" <i>During operations, public access...</i> " Please add "restricted" before "public access..."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	168	" <i>Please refer to Section 7.2.2.2 for further details.</i> " Please correct reference to "Section 7.2.2.3."	AIR	Edit has been made.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	169	The HCN (typ) process (r 2, c 2) and fugitive (r 3, c 2) emissions are switched.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	171	The ug/m3 values in r 3, c 3, 4, 5 are incorrect. Correct values are 3.0, 118, and 120 at 25C and 1 atm.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	172	Please correct to "east" to "west" in r 2, c 1.	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	173	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	174	Please correct reference "Air Resources 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	175	"Table 7-20" reference is incorrect. Please change to "Table 7-21."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	176	Please correct reference "Air Sciences 2018b" to "Air Sciences 2018a."	AIR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	178	Please change "suppressant" to "treatment" in b 3, 5.	AIR	Revision not made. The current text provides an appropriate description of the proposed activity.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	179	Please change "IV" to "Tier 2 certified or better" in b 18.	AIR	Change made as the 2021a Emissions Inventory does apply Tier 2 emission factors for the emergency units. Note that the fire pump emission factors are derived from 40 CFR Part 60, Subpart IIII Table 4. All engines must meet IIII, See PC 2.22 of the final IDEQ PTC.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	626	"Transport from far more distant urban regions, even overseas, may contribute to local air conditions (eTransport from far more distant urban regions, even overseas, may contribute to local air conditions (e.g., ozone) but are not in the scope of a cumulative effects analysis. " - This is incorrect. The impacts from distance sources should be disclosed in the No Action. If it truly is affecting local air quality, it needs to be disclosed in the cumulative effect, although it might not be able to be quantified. They certainly are within the scope of the analysis. Maybe this meant to say they are not quantified.	AIR	Text update made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	627	"The ambient air data for CO, NO2, SO2, and on-site data for PM10 and PM2.5 indicate the existing impacts from off-site sources on air quality near the SGP area was reviewed for this analysis (Section 3.3). These background ambient air measurements offer the best indication of cumulative effects due to current emissions sources. Although some background measurements of ozone in the Boise urban area are above the NAAQS, the ozone baseline value for this assessment recommended by the IDEQ is compliant with the NAAQS. The monitored baseline values used for the SGP air quality impact assessment were obtained at locations that are more developed than the SGP area. By comparison, the cumulative effects in the analysis area due to current activities and air emission sources would be minor. " Recommend these sentences be moved to the No Action section.	AIR	Moved to Section 5.3.1 (No Action).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	628	"There are no other permitted sources of HAP emissions in the vicinity of the SGP area. One source, the Tamarack Mill, LLC is 75 miles from the SGP, and has reported minor source level emissions to IDEQ. The HAP emission inventory in the vicinity of the SGP area is unknown; however, given the absence of large HAP emission sources near the SGP area, it can be assumed that the baseline HAP cumulative effects are low. " Recommend these sentences be moved to the No Action section.	AIR	Moved to Section 5.3.1 (No Action).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	629	"RFFAs Considered Regarding Cumulative Air Quality Effects for Specific Planning Projects " Please provide information about whether these projects will be concurrent with SGP.	AIR	Expected timing for planning projects are described in Table 5.1-2. Although subject to scheduling changes, these projects are currently expedited to be concurrent with the Project.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	630	"Natural Emission Events: Wildland fires " This is not an action. Please delete.	AIR	Revision not made. Inclusion of wildfires as an RFFA is appropriate.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19235	6	Technical reviewers of Sections 3.3, 4.3 and the Air Quality Specialist Report indicate that the SDEIS accurately reflects the updates and revisions provided to the United States Forest Service (USFS) in previous reviews. Perpetua Resources appreciates the USFS' attention and consideration of comments on prior versions of the report, and general observations are that applicable sections of the SDEIS, and the Air Quality Specialist Report in particular, represent an accurate description of work completed to assess the air quality impacts. Attachment A includes minor technical comments to ensure accuracy of the information included in the SDEIS.	AIR	Comment Noted. No further response required.
John Robison	19330	5	Close the site, I am also concerned about air quality, particularly arsenic levels in the dust. The Forest Service should require additional design features to control dust and have real time monitoring of arsenic	AIR	Additionally, the PTC IDEQ permit requires low-arsenic quartzite (90 ppm or less) for haul road capping. The Final EIS includes a dust monitoring requirement.

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			levels around the Operations Area Boundary and along the public road through the mine site to Thunder Mountain.		
John Robison	19330	10	On the eastern end of the project area, I am concerned about how mining activities will affect my wilderness experiences in the Frank Church River of No Return Wilderness on the Middle Fork of the Salmon River. Sunset is one of my favorite times and I am worried that a plume of pollution will mar the skyline or drift over my camp. I also seek out Dark Sky experiences and I am concerned that the lights from mining activities will degrade this experience. The Forest Service needs to develop additional design features to address these visual impacts.	AIR	<p>The associated air quality pollution associated with the Project has demonstrated that the expected emissions meet all national ambient air quality standards, which are protective of human health. The visibility potential has been analyzed using EPA modeling approved methods. The VISCREEN analysis indicates that at the maximum potential operating rate, the SGP emissions plume might be visible for 0.02% of annual daylight hours, under certain viewing conditions. The VISCREEN analysis was performed separately for each hour of the 2014 onsite meteorological data with winds that could potentially intersect with the FCRNRW boundary, a Class II area near the facility. The VISCREEN results were evaluated on an hourly basis. It further indicates that a plume would not be visible most days, and under certain viewing conditions for which the plume would be seen should only last for approximately one hour. The number of daytime and nighttime visible plume hours for each of the eight viewing conditions evaluated in VISCREEN are tabulated in (Air Sciences 2021a), Appendix C.</p> <p>The SGP VISCREEN analysis accounted for the seasonal variation in daytime and nighttime hours; i.e., there is no assumption of 12 hours of daytime and 12 hours of nighttime hours per day. Instead, the daytime or nighttime determination was performed for each hour by comparing to the day-specific sunrise and sunset times. The site-specific sunrise and sunset times were calculated based on the longitude and latitude of the onsite meteorological tower using the EPA regulatory methods found in the MPRM meteorological data processing program.</p>
Jesse Lutz	19386	7	<p>On a clear day one can easily observe a smoke plume on the Nez Perce National Forest clear across the Salmon River from the heights of Sugar Mountain (just above the proposed site of operations and in the Wilderness). That is approximately 40 air miles.</p> <p>What would be the outcome if there were an inversion or wind event?</p> <p>How often and for how long would they occur?</p> <p>Where will the plume settle and How far from the site?</p> <p>Will it settle into the private property of the Monumental drainage (within the Wilderness and Analysis area)? Will it settle in the nearby Edwardsburg Community (Surrounded by the Wilderness and within the Analysis area) and how many acres would it encumber?</p> <p>Will it settle in Yellowpine community (withing the Analysis area) and are the potentials to create thick fog layered with particulates from operations?</p> <p>Will it settle in the mine operations area affecting workers health while outdoors (dead center of the Analysis area)?</p> <p>There are unknowns that are still not addressed in the DEIS. It seems drafted to show 'ideal conditions'. What is the baseline for this information at elevation and location within atmospheric sink zones? Can those be designated to show the general public areas to avoid during weather conditions which could create them?</p> <p>Could you address these outcomes with more specific data and the manner with which it is collected?</p> <p>It will settle on National Forest System lands. How will the users recreating on the forest be influenced by the decrease in air quality produced by the proposed project? Relocation is not a preferred alternative, not only because of air quality or because of the 'visual' influences on developed characteristics from the proposed mining activities but also because of the increase in traffic, on all routes. Opportunities for recreation on National Forest Systems lands and WOTUS is equal to everyone.</p>	AIR	<p>The air quality pollution associated with the Project has shown that the expected emissions meet all national ambient air quality standards, which are protective of human health. The visibility potential has been analyzed using EPA modeling approved methods. The VISCREEN analysis indicates that at the maximum potential operating rate, the SGP emissions plume might be visible for 0.02% of annual daylight hours, under certain viewing conditions. The VISCREEN analysis was performed separately for each hour of the 2014 onsite meteorological data with winds that could potentially intersect with the FCRNRW boundary, a Class II area near the facility. The VISCREEN results were evaluated on an hourly basis. It further indicates that a plume would not be visible most days, and under certain viewing conditions for which the plume would be seen should only last for approximately one hour. The number of daytime and nighttime visible plume hours for each of the eight viewing conditions evaluated in VISCREEN are tabulated in (Air Sciences 2021a), Appendix C.</p> <p>The SGP VISCREEN analysis accounted for the seasonal variation in daytime and nighttime hours; i.e., there is no assumption of 12 hours of daytime and 12 hours of nighttime hours per day. Instead, the daytime or nighttime determination was performed for each hour by comparing to the day-specific sunrise and sunset times. The site-specific sunrise and sunset times were calculated based on the longitude and latitude of the onsite meteorological tower using the EPA regulatory methods found in the MPRM meteorological data processing program.</p>

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	161	2. Airborne arsenic carcinogenic risks are underestimated 192 Table SD10 in the SDEIS summarizes the appropriate correction factors for Haul Road emissions and includes combination factors for As concentration, silt content, and % Particulate Control adjustments. Applying any combination of adjustments >1.5 would result in excess cancer risk. Correcting for silt content, percent control, and pit-specific concentrations for all pits likely increases to concentrations >10-5 cancer risk levels.	AIR	Section 4.3.2.2 compares arsenic dust concentrations to HAP standards. Attainment of standards precludes developing a separate human health risk analysis.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	347	We have repeatedly raised concerns throughout the permitting of the SGP at both federal and state levels regarding the SGP's significant potential air quality impacts. The Idaho Conservation League, Save the South Fork Salmon, and the Nez Perce Tribe are currently engaged in an administrative appeal of the IDEQ PTC (IDEQ Case Docket No. 0101-22-02383). That state air process is important but does not replace the Forest Service's obligation to analyze and mitigate impacts to air quality in the NEPA process. We note that the Forest Service's mandate under NEPA when evaluating impacts to air quality is much broader than IDEQ's mandate in the PTC process under the Idaho Air Quality Rules. Importantly, the Forest Service retains the authority to require certain conditions for the SGP that help minimize and/or mitigate the project's impacts to air quality. Thus, even if IDEQ did not or could not add certain conditions in their PTC for this project, the Forest Service can (and should) include appropriate conditions as part of the FEIS and ROD for the SGP in order to fulfill the agency's obligations under NEPA.	AIR	Noted. Multiple mitigation measures have been added to the Final EIS, see Section 4.3.5 and 7.3 of the Air Quality Specialist Report.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	348	In order to ensure the SGP does not violate the NAAQS for PM and PM10, the Forest Service should require Perpetua to install an arsenic and PM/PM10 monitoring system at the SGP's ambient air boundary to ensure that the arsenic AACC and the PM/PM10 NAAQS are not violated. This kind of monitoring is not a condition of the current PTC issued by IDEQ for the SGP, and therefore is unlikely to happen unless the Forest Service requires it. This practical step is warranted considering the uncertainty surrounding dust control efficiency and emissions factors associated with this project and highlighted in the below comments.	AIR	As part of the Final EIS, a dust monitoring program has been added as a mitigation measure, see Section 4.3.5.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	349	a. Title V Applicability Section 3.3.3, page 3-35 of the SDEIS states, "a determination was made by the IDEQ that the SGP would not require a Title V permit. This was based on the complete air emissions inventory for stationary sources submitted by Perpetua as part of its application for an air quality permit. On February 18, 2022, Perpetua submitted a PTC application and emission inventory. On June 17, 2022, IDEQ issued a final PTC and Statement of Basis (SOB) stating that the SGP will not require a Title V permit." However, this is demonstrably false. Page 32 for the June 17, 2022, SOB states, "Any source subject to 40 CFR 63, Subpart EEEEEEE is a Tier I source as defined in IDAPA 58.01.01.006.122.c" (in the state of Idaho, Title V sources are known as Tier I sources). The gold ore concentration and refining process equipment associated with the SGP is specifically applicable to 40 CFR 63, Subpart EEEEEEE. Accordingly, PTC permit condition 2.23 and 2.24 specifically requires Perpetua to submit a Tier I application to IDEQ within 12 months of start-up of the gold ore concentration and refining process equipment. Based on recent discussions with IDEQ, the agency has not yet determined whether the future Tier I permit will cover only the Tier I applicable equipment (gold ore concentration and refining process equipment) or all equipment/sources covered by the final PTC will be discussed as a matter of IDEQ discretion upon Perpetua's submittal of the Tier I application. The Forest Service should correct the statement on page 3-35 of the SDEIS regarding Title V applicability	AIR	The SDEIS had an error. The requirement of a Title V permit has been incorporated into the Final EIS.
Bonnie Gestring (Northwest Program Director,	17634	350	3. Dust Control Efficiency Both the Forest Service's and IDEQ's fugitive dust analyses in the SDEIS and PTC, respectively, heavily rely on the assumption that Perpetua can achieve a dust control efficiency of at least 93.3% on the SGP haul roads in order to minimize PM10 emissions and achieve NAAQS compliance. However,	AIR	Perpetua provided a technical memorandum to the USFS on March 18, 2021 outlining the rationale for the 93.3% control through use of suppressants. This document discussed several studies whereby the PM10 control of 93.3% plus was attainable. Regardless, of that the Final EIS will agree with the IDEQ PTC that requires records of applicable use of suppressant every 12 hours (PC 2.2) and they must abide by the approved FDCCP. Additionally, dust

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Earthworks) and seven others			<p>neither the Forest Service nor IDEQ have provided sufficient evidence that such a high target is attainable or practically enforceable. In Appendix G of the Final IDEQ PTC Statement of Basis, IDEQ discusses the T-RACT Analysis, including dust control efficiency. We reviewed the references listed in Appendix G, Table 10 of other facilities with determinations of 90% or greater control efficiency for unpaved roads. Upon investigation of these references through the EPA's Clean Air Technology Center database, 387 ICL found that only 1 of the 10 facilities referenced actually has verified compliance of achieving at least 90% control efficiency. The other nine facilities listed in Table 10 had either unverified or unknown compliance with that permit condition. In addition, only one of these facilities is actually a gold mining operation and therefore most of these references should not be used as a point of comparison to the SGP.</p> <p>Listed Facilities in Appendix G, Table 10 AK Donlin Gold Project AK-0084 water/chem 90% unverified/unknown compliance)</p> <p>AR Turk Power Plant AR-0094 water/chem 90% (unverified/unknown compliance) CO Rio Grande Portland Cement Corp. CO-0043 water/chem 90% (unverified/unknown compliance) IN Nucor Steel IN-0034 chem 90% (unverified/unknown compliance) LA Nucor Steel Louisiana LA-0239 water/chem 90% (unverified/unknown compliance) MO Lafarge Corp. MO-0048 chem 90% (unverified/unknown compliance) NV Sloan Quarry NV-0045 chem 98% (compliance verified, but not a gold mine) NV Nellis Air Force Base NV-0047 water/chem 90% (unverified/unknown compliance) OH Unlimited Concrete OH-0126 water/chem 90% (unverified/unknown compliance) OH Unlimited Concrete OH-0131 water/chem 90% (unverified/unknown compliance)</p> <p>The 93.3% level of control which the Forest Service and IDEQ assumed Perpetua could achieve is based on Perpetua's interpretation of EPA's AP-42 Chapter 13.2.22. AP-42 Chapter 13.2.2 discusses the critically important variables surrounding control efficiencies (in particular to chemical suppressants, some of which can reasonably be assumed to apply to water too):</p> <p>"The control effectiveness of chemical dust suppressants appears to depend on (a) the dilution rate used in the mixture; (b) the application rate (volume of solution per unit road surface area); (c) the time between applications; (d) the size, speed and amount of traffic during the period between applications; and (e) meteorological conditions (rainfall, freeze/thaw cycles, etc.) during the period. Other factors that affect the performance of dust suppressants include other traffic characteristics (e.g., cornering, track-on from unpaved areas) and road characteristics (e.g., bearing strength, grade). The variabilities in the above factors and differences between individual dust control products make the control efficiencies of chemical dust suppressants difficult to estimate. Past field testing of emissions from controlled unpaved roads has shown that chemical dust suppressants provide a PM-10 control efficiency of about 80 percent when applied at regular intervals of 2 weeks to 1 month (emphasis added)."</p> <p>None of the above variables, however, have any specific and enforceable permit conditions within the PTC to ensure a 93.3% control efficiency. Instead, the PTC has a permit condition (permit condition 2.6) only requiring the permittee to develop and submit a Fugitive Control Dust Plan (FCDP) and a Haul Road Capping Plan (HRCP), which merely describe how these variables will be addressed 30 days before start-up of the SGP. PTC permit condition 2.6 details what variables contributing to PM10 control effectiveness must be detailed in the FCDP, but the specific details that are so important to control efficiency (e.g., the amount of water or chemical suppressants applied and the frequency of application) are undetermined at present and are left to Perpetua to decide at a later date. A lesser control efficiency, even just slightly lesser, could result in large enough PM10 emissions to violate the NAAQS. In fact, if the SGP were to instead achieve 80% control (as EPA found through past field testing of chemical dust suppressants), then the SGP's PM10 emissions could exceed the NAAQS.</p>		<p>monitoring will be part of the mitigation measures in the Final EIS (Section 4.3.5) and the Forest Service has adopted the 93.3% efficiency for assessment of emissions. The FDCP would be developed and approved prior to commencement of construction.</p>

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			<p>Furthermore, IDEQ itself states on page 22 of the final SOB that “it may prove challenging to consistently and continuously achieve the targeted level of fugitive dust control for emissions from traffic on unpaved roadways, with over 55 miles of haul truck routes within the mining operations boundary, a fleet of 32 haul trucks weighing between 37 and 357 tons, and a targeted dust control efficiency of 93.3% accomplished by application of both dust suppressant and water controls.”</p> <p>The Forest Service should include specific provisions in a revised SDEIS designed to verify whether key dust control efficiency metrics are met during SGP construction, operation, and closure.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	351	<p>4. Haul Road Emissions Calculations</p> <p>In the process of calculating fugitive dust emissions from ore road hauling, Perpetua has again relied on the EPA’s AP-42 Chapter 13.2.2. Equation 1a of AP-42 Chapter 13.2.2 provides an equation that Perpetua used to calculate a particulate matter size-specific emission factor (in pounds per vehicle mile traveled) that is in turn used to calculate total PM2.5 and PM10 emissions that were evaluated in both the SDEIS and IDEQ PTC process. Equation 1a uses three empirical constants (with values provided by AP-42 Chapter 13.2.2) and two variables. These two variables are the silt content of the road traveled and the mean weight of the vehicles traveling the road. IDEQ final PTC permit condition 3.13 requires the SGP to use haul road capping material with a maximum silt content of 4%, thereby constraining the first of the two key variables used in Equation 1a. However, no such permit condition exists in the PTC or the SDEIS to constrain the second variable, mean vehicle weight. In calculating fugitive haul road emissions evaluated in both the SDEIS and IDEQ PTC process, Perpetua assumed an operating scenario using twenty larger CAT 789D and twelve smaller CAT 740D trucks for all ore hauling (see final SOB, Appendix A, Page 5 of 20 Mine sheet) each with a listed hauling capacity and empty weight that are used as inputs to equation 1a. However, if the ratio of larger to smaller CAT trucks is shifted in favor of additional smaller CAT 740D trucks, then calculations will show the particulate matter size-specific emission factor can dramatically increase thereby increasing overall PM2.5 and PM10 emissions.</p> <p>Instead of developing PTC conditions for this critical variable, IDEQ relied on a surrogate limit in the IDEQ PTC (total ore haulage per day, see PTC conditions 3.5) and on plans that have not yet been developed—the FDCP and the HRCP—to claim the PTC ensures enforceable compliance with 24-hour PM10 NAAQS. Without including an IDEQ PTC condition or a FEIS requirement that specifically constrains mean vehicle weight, the SGP may use a combination and number of ore hauling trucks that drastically increases PM2.5 and PM10 emissions, threaten compliance with the NAAQS and underestimate the environmental impacts within the SDEIS analysis.</p> <p>The Forest Service should include requirements within a revised SDEIS stipulating the number and weight of ore haul trucks that may be used in SGP operations such that ore hauling emissions are consistent with the SDEIS assumptions and calculated emissions.</p>	AIR	The emission estimates for the SDEIS/Final EIS are based on the use of the CAT 785D and CAT745C. The current haul truck is based on the weight average of 180 tons (CAT 785D and CAT 745C) based on expected annual operating hours per year for each type of trucks (similar to the PTC weight of 182.6). The calculated total of emissions is based on approximately 5.55x more hours with the CAT785D. If that ratio is increased emissions increase incrementally; conversely, the lower it becomes the lower the emissions. Current PM2.5 emissions are calculated at 20.13 tpy. If 15,000 hrs were added to the 785D (decreased from the 745C), emissions would be ~21.04 tpy. If 15,000 are removed from the 785D and added to the 745C, emissions reduce to 19.17 tpy. Similarly, with an increased weighted average tonnage, the emissions are increased. The Forest Service decision on the proposed mining project includes the proposed mine rate and its associated mobile equipment emissions. An increased mining rate above the proposed tonnages would require additional permitting.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	352	<p>5. Operational Plans</p> <p>As noted in previous comments, operational plans like the FDCP, HRCP, and the Operation and Maintenance manual (O&M) are a particular point of concern. IDEQ has required Perpetua to complete these plans as a condition of the IDEQ PTC for which the SDEIS bases its air quality impacts analysis on. However, despite the FDCP, HRCP and O&M clearly being central to the SGP’s mitigation of air quality impacts, the public will not have the opportunity to review and comment on these plans. Without developing the FDCP, HRCP and O&M before start up of the SGP, and without including all important variables as enforceable IDEQ PTC permit conditions or FEIS requirements, there is no assurance the SGP will comply with the PM10 NAAQS, avoid additional environmental degradation and will not pose a risk to public health.</p> <p>Given that the specifics of the FDCP, HRCP, and O&M are essential to ascertaining exactly how the applicant will achieve the lofty 93.3% dust control efficiency, the SGP should not be allowed to commence construction until a FDCP, HRCP and O&M are submitted to the Forest Service and IDEQ, reviewed by both the Forest Service, IDEQ, and the public, and approved or denied pending modifications. While the IDEQ PTC currently requires Perpetua to submit the FDCP, HRCP, and O&M</p>	AIR	The FDCP and other operating plans such as the Haul Road Control Plan and O&M Manual would be reviewed by USFS with concurrence prior to commencement of construction.

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			<p>for agency review 30 days prior to commencement of operations at the SGP, that process contains no public review process and essentially circumvents the public review process for which the rest of the PTC and its analysis are required to go through. Furthermore, holding agency review of these plans merely 30 days before commencement of operations could be considered little more than an afterthought process. Nearly all other operational aspects of SGP project operations will be finalized at that point, likely allowing for little modification should Perpetua’s proposed FDCP, HRCP, and O&M prove inadequate.</p> <p>The Forest Service should include requirements within a revised SDEIS stating a FDCP, HRCP, O&M must be submitted for Forest Service review and public comment prior to issuance of the FEIS.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	353	<p>6. Modeled Arsenic Emission Rate</p> <p>Section 7.2.2.2 of SDEIS Air Specialist Report discusses the analysis of the modeled arsenic emission rate. Since there are no NAAQS-like equivalent concentrations for Hazardous Air Pollutants (HAPs), the SDEIS analysis of arsenic relies on IDEQ state regulations governing arsenic and their comparison to Idaho state ambient annual carcinogen concentrations (AACC). Due to different operating scenarios used to calculate emissions, modeled SGP arsenic emission concentrations between the IDEQ PTC process and SDEIS differ. However, both analyses average out their respective calculated arsenic emission concentrations over 70 years citing the fact that the annual averaging period AACCs provided in the Idaho rules (IDAPA 58.01.01.586388) were developed “based on the probability of developing excess cancers over a seventy (70) year lifetime exposure to one (1) microgram per cubic meter (1 ug/m3) of a given carcinogen and expressed in terms of a screening emission level or an acceptable ambient concentration for a carcinogenic toxic air pollutant.” However, nothing in the Idaho Air Rules allows for ambient air concentration averaging over 70 years. Rather, the Idaho AACCs are deliberately set as annual averages. IDAPA 58.01.01.586 specifically states, “the screening emissions levels (EL) and acceptable ambient concentrations (AACC) for carcinogens are as provided in the following table. The AACC in this section are annual averages” (emphasis added). The AACC are not noted as being “lifetime” or 70-year averages. Furthermore, the Idaho rules addressed the question of short term sources in a specific but limited nature allowing sources who will operate for no more than five years to increase applicable AACCs by 10 fold (IDAPA 58.01.01.210.15).</p> <p>The probability within the “based on the probability of developing excess cancers over a seventy year lifetime exposure.” definition referenced above is defined by IDEQ as a 1 in 1,000,000 chance of developing cancer (see IDAPA 58.01.01.201.12.d). However, by averaging the SGP’s lifetime arsenic emissions concentration over 70 years, IDEQ is allowing Perpetua to essentially elevate and condense the normally allowable arsenic emissions over 70 years in just 14 years (LOM 3 to 16). In this way, higher pollution exposure is traded for less exposure time. Yet, there is no evidence within Idaho air rules that states or suggests the biological mechanism of carcinogenic exposure translates in a similar way. The development of cancer from carcinogens is linked to several critical variables including concentration, duration, frequency, and at your age at time of exposure³⁸⁹. IDEQ is assuming the variables of concentration and duration are linearly related when they have presented no such proof this is the case. It is possible higher levels of arsenic exposure, although in shorter duration, have a greater impact on cancer development risk than lower level exposure for a proportionally longer duration. If the goal of the AACCs is to prevent the probability of developing cancer in excess of 1 in 1,000,000, there is no evidence to suggest IDEQ’s approach is valid in achieving this goal.</p> <p>The Idaho Conservation League, Save the South Fork Salmon, and the Nez Perce Tribe contend that this action is an abuse of IDEQ regulatory discretion and are currently engaged in an administrative appeal of the IDEQ PTC specifically challenging this issue (IDEQ Case Docket No. 0101-22-02390). To our knowledge, there is no IDEQ air permitting project or source for which IDEQ has applied the same ambient air concentration averaging over 70 years. The Forest Service should not rely on IDEQ’s flawed analysis in evaluating the impact of arsenic emissions from the SGP.</p> <p>The Forest Service should re-evaluate arsenic concentration against Idaho AACC removing the 70-year lifetime averaging.</p>	AIR	As discussed in the SDEIS and the PTC SOB, the AACCs are derived from a 70-year exposure. IDAPA 58.01.01.005.125 states “Those ambient air quality increments based on the probability of developing excess cancers over a seventy (70) year lifetime exposure to one (1) microgram per cubic meter (1 µg/m3 of a given carcinogen and expressed in terms of a screening emission level or an acceptable ambient concentration for a carcinogenic toxic air pollutant.” This is consistent with IDEQ’s stance and because the SDEIS modeling utilized IDEQ standards for comparison purposes, use of the 70-yr exposure is appropriate.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	354	<p>7. Ambient Air Boundary Determination</p> <p>We are concerned that the exclusion of the public access road between Stibnite Road at Sugar Creek and Thunder Mountain Road at Meadow Creek from the regulatory definition of ambient air is inconsistent with Clean Air Act’s definition of ambient air, EPA’s long-standing policy that allows excluding certain areas of a source’s property from ambient air, and EPA’s most recent revised policy for ambient air (Revised Policy). Allowing the public to access this road, even under the conditions of the Stibnite Transportation Management Plan (SDEIS Air Quality Specialist Report, Appendix D), may result in acute exposure of the public to hazardous air conditions.</p> <p>EPA’s long-standing policy has been to exempt “the atmosphere over land owned or controlled by the source and to which public access is precluded by a fence or other physical barriers” from ambient air requirements. In 2019 EPA’s Revised Policy, recognizing advances in surveillance and monitoring capabilities, revised the “fence or other physical barriers element of this ambient air policy while maintaining public health protection” to allow stationary sources to use “other types of measures “to support exclusion of an area from ambient air.”</p> <p>It is important to note the Revised Policy specifically limited its scope stating, “... the sole change to the EPA’s ambient air policy reflected in this attachment is that the EPA no longer considers ‘a fence or other physical barriers’ to be the only type of measure available to a source in order to preclude public access in a practical or physical sense.”</p> <p>Furthermore, the EPA Revised Policy also explains:</p> <p>The EPA’s view is that the general public has legal access to areas that are owned and controlled by parties other than the owner or operator of a stationary source. The EPA continues to view the “general public” to include any person(s) other than those who are permitted access to the property as employees or business invitees of a specific stationary source (including trespassers).</p> <p>The Revised Policy also notes examples of “business invitees” such as “contractors or delivery persons.” In other words, people who are traveling on the Stibnite Road through the mine site to access public (Forest Service) property and who otherwise have no business dealings with Perpetua are members of the general public. Perpetua’s attempt to label the public as “guests of PRI” is disingenuous and should be considered, as stated in the Revised Policy, as an activity that “would expand the exclusion beyond reason and deny the protection of the NAAQS to large numbers of people.” Neither the EPA’s original 1980 Memo on ambient air or the 2019 Revised Memo expound to include semi-restricted members of the public or persons admitted under certain pretexts as those who can be excluded from the general public as Perpetua is attempting to do.</p> <p>The fact that these “guests” would apparently abide by access and safety procedures established by Perpetua is meaningless in terms of protecting the public from exposure to hazardous air conditions. In practical terms, there are no plans for air quality monitors on the road because it has been excluded from ambient air. Thus, it will not be known to those traveling on the road what type of acute exposure to air pollutants will result.</p> <p>Moreover, IDEQ’s own definition of “ambient air” is “[t]hat portion of the atmosphere, external to buildings, to which the general public has access.” The public access road through the project area fits that definition exactly. In addition, IDEQ’s Modeling Guidelines for determining the ambient air boundary demonstrate that this public road should not be excluded from the ambient air boundary:</p> <ul style="list-style-type: none"> ● It shall be assumed that the air within the facility boundaries is ambient air unless the facility can demonstrate that public access is precluded.” Here, although public access might be controlled, it will not be precluded according to the SDEIS. Thus, the road should not be excluded from an ambient air analysis. ● For the purpose of defining ambient air, the ‘general public’ is considered anyone not directly associated with the facility. In general, if someone present at the site would not be subject to OSHA or other worker exposure regulations, then they are considered as the general public.” People passing 	AIR	The USFS is accepting of the IDEQ interpretation of the ambient air boundary. Additionally, the EPA, while not explicitly endorsing this stance, has suggested language changes within the Final EIS to ensure to accurately portray the ambient air boundary definition.

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			<p>through the facility to access public land on the other side of the project area are not “directly associated with the facility” and would not be “subject to OSHA or other worker exposure regulations” and therefore are the general public.</p> <ul style="list-style-type: none"> • Is the general public allowed on site as a part of a right-of-way easement or a common service road? If “yes,” then the right-of-way is determined to be ambient air.” At this time, the public will be allowed access through the site. <p>Nevertheless, IDEQ appears to have contradicted their own rules and guidance and issued the IDEQ PTC excluding the Stibnite Road from ambient air controls. We contend that this action is an abuse of IDEQ regulatory discretion and this issue is currently being challenged in the aforementioned ICL/SSFS/NPT administrative appeal of the IDEQ PTC (IDEQ Case Docket No. 0101-22-02). While having agreement in analysis by all governing agencies regulating the permitting of the SGP is preferred, we do not believe IDEQ’s analysis should preclude the Forest Service from making a different, and more prudent, judgment.</p> <p>Finally, ICL acknowledges the feasibility analysis in which criteria pollutant modeling against the NAAQS was conducted for the Stibnite Road (SDEIS Air Specialist Report, page 80) and showed compliance. However, it is unclear why that SDEIS analysis made the conscious decisions to use the Qian and Venkatram modeling method while the NAAQS modeling analysis conducted for the rest of the SDEIS review used the BULKRN method and why HAP emissions (especially arsenic) were not considered in this analysis. Furthermore, considering the significant concerns associated with emissions calculations discussed above, the modeled impact of criteria pollutants within the Stibnite Road area may be flawed and under-representative of the true emissions.</p> <p>The Forest Service should coordinate with EPA and IDEQ to reassess the ambient air boundary determination and model ambient air concentrations along public access routes for both NAAQS and HAPs.</p>		
David Chambers	17641	5	<p>2.4.5.7 Ore Processing – Oxidation and Neutralization</p> <p>The autoclave is a major component of the ore processing system, yet doesn’t rate even a subtitled paragraph in the SDEIS, just a line here and there under other headings. An autoclave is very expensive to operate, requires pure oxygen from an oxygen plant, and because of the high operating temperature at which it operates, can be a major source of mercury in the exhaust. There is no discussion in the SDEIS about where the oxygen for the autoclave will be sourced. It must either be produced onsite in a local oxygen plant, which has potential hazards of its own, or it must be trucked in from an outside plant, with potential transportation liabilities. More information on the source and risks with oxygen must be provided.</p> <p>The potential for mercury air emissions is acknowledged in the SDEIS, and a short description of the mercury collection system that would be employed is briefly discussed in another section. There is probably potential for other contaminants to be present in the autoclave air emissions, for example particulate arsenic, but there is no discussion of other potential autoclave air emission contaminants.</p> <p>Any mercury in the ore processed in the autoclave is typically vaporized, and must be collected by an exhaust collection system. This collection system must be very efficient, because even at 99% efficiency enough mercury can escape to cause an air emission violation. Mercury was inadvertently discovered by the EPA in the early 2000s to be a major source of mercury emissions in autoclaves and roasters at mines in Nevada. These mines were emitting amounts of mercury equivalent to that from coal fired power plants, and at that time mercury emission controls for mines were not required and were not being utilized, even though the mines knew they were volatilizing significant amounts of mercury.</p> <p>Because the mercury emission control systems must operate at a very high efficiency in order to conform to air quality requirements, monitoring their performance is very important. There is no discussion of the efficiency at which these control systems must operate, or how and when they will be monitored.</p>	AIR	<p>The text has been revised to indicate that the autoclave system would be the equipment used for the oxidation step.</p> <p>Information regarding oxygen supply has been added to the Final EIS.</p> <p>The summary of predicted air pollutions presented in Section 4.3.2.2 includes autoclave system emissions.</p>

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			Autoclave operation needs to be given more importance than it presently receives in the SDEIS, and a thorough discussion of the monitoring for air emissions from the autoclave, mercury and any other potential contaminants, needs to be provided.		
Samuel Penney (Chairman)	19396	14	Clean, clear air is a critical component to ensuring the health and resiliency of the Tribe's treaty-reserved resources. Air pollution reduces visibility, which can impair cultural and ceremonial practices for Tribal members and reduce enjoyment of these special places. Air pollution causes a host of environmental and human health problems, including damage to culturally important plants, sensitive forests, and fish habitat, acidification of lakes and streams, depletion of soil nutrients, aggravated asthma, heart attacks, and premature death. Impacts can be especially harmful to at-risk ecosystems and especially harmful for sensitive human populations such as asthmatics, children, the elderly, people with diabetes, and people with heart or lung disease.	AIR	This comment is noted and the Final EIS describes the requirements here practicable.
Samuel Penney (Chairman)	19396	23	In Table 1.7-2 Key Permits, Approvals, and Regulation Compliance Likely Required, there is a permit missing. Under Idaho Department of Environmental Quality ("IDEQ") permits (on page 1-14), a Title V operating permit will be required once the 40 CFR 63 Subpart EEEEEEE - National Emission Standards for Hazardous Air Pollutants ("NESHAPs") for Gold Mine Ore Processing and Production Area Source Category units start up.	AIR	This was an inadvertent error. The Title V permit requirement has been added.
Samuel Penney (Chairman)	19396	48	To protect air quality after the SGP begins operations, the Forest Service relies on the state of Idaho's monitoring and enforcement of the SGP air permit to construct ("PTC"). However, the state of Idaho lacks the robust compliance assurance, monitoring, and enforcement resources that will be necessary to inspect and regulate such a facility in a remote location and ensure the SGP is meeting permit conditions and not violating the National Ambient Air Quality Standards ("NAAQS"). The minimum inspection frequency required of the air permit is once every five years. Given the extraordinary level of fugitive emissions controls necessary to achieve 93.3% control, and the State's own acknowledgement that this level of control will be very challenging ⁹⁴ , a once every five years inspection frequency is woefully inadequate to ensure NAAQS compliance.	AIR	As part of both the Final EIS and IDEQ PTC, mitigation measures specific to dust control would be required to ensure compliance with the 93.3%. Abatement measures would not be limited and a dust monitoring program is included as part of Final EIS.
Samuel Penney (Chairman)	19396	49	In Table 2.4-12 Prominent Regulatory and Forest Plan Requirements, the listed dust control level is incorrect. The text reads: "The Proponent will prepare a dust mitigation plan with appropriate schedule or triggers for control deemed adequate by IDEQ to achieve the level of control of 93 percent of dust (as submitted in the proponent's draft application for Permit to Construct from IDEQ)." The level of control in the IDEQ PTC is 93.3% to achieve necessary controls to protect NAAQS for Particulate Matter ("PM") ¹⁰ .	AIR	This table was reviewed and updated appropriately.
Samuel Penney (Chairman)	19396	49	Also in Table 2.4-12, there is a statement: "Alternatively, the proponent could employ particulate matter or opacity monitors deemed adequate by IDEQ and the Forest Service and immediately apply water or chemical dust control when PM or opacity monitors reach levels within 10 percent of the threshold determined by IDEQ." ⁹⁷ Employing monitors is not a valid or allowable alternative for controlling dust on haul roads in the PTC. "Alternatively" should be replaced with "Additionally".	AIR	Need to refer to the source of the 93.3% control efficiency. It was determined based upon conservative modeling. Realtime monitoring should be able to confirm whether the 93.3% efficiency is protective, or whether a higher/lower control efficiency is needed/sufficient. Dust monitoring is also being incorporated in the Final EIS as a mitigation measure.
Samuel Penney (Chairman)	19396	50	Also in Table 2.4-12, there is a statement: "Dust abatement chemicals would be used in accordance with the applicable road maintenance Biological Assessment." ⁹⁸ There may be a potential conflict with meeting 93.3% dust control efficiency criteria on haul roads if use of dust abatement chemicals is limited.	AIR	As part of both the Final EIS and IDEQ PTC, mitigation measures specific to dust control would be required to ensure compliance with the 93.3%. Abatement measures would not be limited and a dust monitoring program is included as part of Final EIS.
Samuel Penney (Chairman)	19396	51	Table 2.4-13 Proponent Proposed Design Features lists the environmental design features (EDFs) beyond regulatory requirements that have been proposed and committed to by Perpetua. A "commitment" is not a mitigation requirement unless it's included as an actual, specific mitigation in the EIS and as an actual, specific permit requirement. For example, the first item in Table 2.4-13 is, "Following crushing, the crushed ore would report via conveyor to a dome-shaped, covered stockpile." ⁹⁹ Perpetua withdrew covered stockpiles from its application for the PTC, and covered stockpiles are not included in the PTC, so Perpetua is not required to have covered ore stockpiles as a condition of the PTC. Another EDF is, "Proper dust control would be employed along transportation	AIR	All mitigation requirements are incorporated into the Final EIS in Section 4.3.5. Covered stockpiles are included for ore. The low-grade stockpiles and feed pile prior to the crusher are uncovered. This was included in the table as such. Dust control measures are incorporated into the Final EIS and dust monitoring has been added. This a measure to ensure design features are being met. The Tier IV highway engines are required as mitigation measure.

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			corridors and active mining areas using aquatic safe dust suppression chemicals and methods.”100 The Forest Service does not specify what proper dust control means (by including specific timing of measurement, application of controls, and recordkeeping requirements). Another listed EDF is, “All off highway diesel engines would be EPA Tier 4 or better.”101 The EDFs listed in the SDEIS are unenforceable unless included as mitigation measures and as permit requirements. The Forest Service should include all EDFs as mitigation measures.		
Samuel Penney (Chairman)	19396	54	<p>2.8 Summary Comparison</p> <p>In Table 2.8-1 Alternative Comparison and Impact Summary the Forest Service does not disclose in the SDEIS that the ambient air within the Operation Area Boundary is not subject to meeting the NAAQS. Under the Clean Air Act, air permits and their specific enforceable provisions (e.g. air pollution control equipment, dust control plans, operational limits, etc.) are intended to ensure that NAAQS are not violated, but this only applies outside of a facility’s operations area boundary.</p> <p>Air permits will not protect the Tribe’s treaty-reserved rights and numerous cultural resources within the operational boundary. Trust responsibilities extend to all life, plants and animals that can’t speak for themselves. The SDEIS does not address the issue of NAAQS exceedances inside the operations area boundary.</p>	AIR	As the comment states, the NAAQS are intended to comply at the Project boundary and beyond. While there is no explicit NAAQS compliance within the Project boundary, OSHA compliance is required. Additionally, the permit/Final EIS requires controls to minimize emissions as much as practicable. Following the Project, restoration would occur as well. The treaty-reserved rights are outlined in Sections 3.24 and 4.24 of the Final EIS.
Samuel Penney (Chairman)	19396	72	<p>3.3 Air Quality</p> <p>The public access road between Stibnite Road at Sugar Creek and Thunder Mountain Road at Meadow Creek should not be excluded from the regulatory definition of ambient air. This road is intended to allow public access, not preclude it. EPA’s revised Ambient Air Policy describes conditions by which the public is to be excluded from an area controlled by a source and which would then justify excluding an area for purposes of analyzing the source’s impact on ambient air.</p> <p>Controlling public access through a site is not excluding public access through a site, thus the EPA revised Ambient Air Policy does not apply, and therefore, the public access road should be considered ambient air. As the public access road is ambient air, all emissions, modeling, and controls must be characterized and considered and are subject to the NAAQS.</p>	AIR	IDEQ has deemed the access road to be precluded from the ambient air boundary. This is because Perpetua has complete control over the road and it is not considered "public". USFS has considered IDEQ's determination to be appropriate. Also, the EPA has referenced the application the Revised Policy in their comments to the SEIS. The EPA requested language regarding the EPA position on use of the public access road through the mine site has been included in the Final EIS.
Samuel Penney (Chairman)	19396	73	The statement, “A determination was made by the IDEQ that the SGP would not require a Title V permit” is erroneous. Once 40 C.F.R. 63 Subpart EEEEEEE (NESHAPs: Gold Mine Ore Processing and Production Area Source Category) units start up, IDEQ requires a Title V operating permit.	AIR	This was an inadvertent error. The Title V permit requirement will be added.
Samuel Penney (Chairman)	19396	74	In Table 3.3-4 Visibility Impairment and Deposition-Related Monitoring Sites, the table contains an error. The Tribe’s Clean Air Status and Trends Network (“CASTNET”) site, NPT006, started in 2015 not 2002. Also, the Table 3.3-9 CASTNET Dry Deposition Rates, Annual Average – Two Idaho Sites and Figure 3.3-7 Trends in Dry Nitrogen and Sulfur Deposition Rates, 2006-2015, include data prior to 2015 for the Tribe’s CASTNET site, NPT006. This is not possible because the site was not sampling prior to 2015.	AIR	While the current version of NPT006 was installed in 2015, Stantec communicated with the EPA, CASTNET team. A measurement-model fusion approach for calculating deposition was applied. When measurement concentrations (or fluxes for wet deposition) are available those are used. Otherwise, a modeled value is used. The NPT006 deposition values are from the CMAQ grid for this location from 2000-2015 prior to the site installation. See https://nadp.slh.wisc.edu/committees/tdep/ for more details. That said, the data in Table 3.3-9 doesn't appear to match the information provided on the CATNET site. The data will be updated appropriately in the Final EIS. Also, Table 3.3-7 is the Reynolds Creek site and has nothing to do with NPT006.
Samuel Penney (Chairman)	19396	172	The Forest Service relies on the IDEQ air permit for assuring requirements under the Clean Air Act are met.335 There are several issues with this. First, the Forest Service cannot claim as mitigation measures state of Idaho PTC plans that have not yet been finalized. The PTC’s Fugitive Dust Control Plan, Operations and Maintenance Plan, Access Management Plan, and Haul Road Capping Plan, although referenced in the PTC, have not yet been written, and will not be subject to a public comment process. The Forest Service must clearly identify mitigation measures in the SDEIS necessary to minimize the Project’s adverse impacts to the environment.	AIR	All the various management plans outlined in the PTC will be completed prior to completion of the Final EIS and included or will be required to get USFS approval prior to the commencement of construction. The Final EIS includes numerous mitigation measures not previously outlined in the SDEIS, one of which includes a dust monitoring program.
Samuel Penney (Chairman)	19396	166	Second, the Forest Service does not address fugitive dust control measures on the Project access roads into the mine (outside of the mining operations boundary). The fugitive dust control plan in the Environmental Monitoring and Management Program does not specify dust control requirements (by	AIR	The Final EIS addresses fugitive dust control measures specifically in Section 4.3.5 and 7.3 of the Air Quality Specialist Report. Additionally, the PTC, requires the FDCP to be approved

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			including specific timing of measurement, application of controls, and recordkeeping) and is, therefore, inadequate to protect the NAAQS and avoid sedimentation of adjacent waterways. The Forest should clearly state specific, detailed fugitive dust control requirements for mitigation of adverse environmental impacts.		prior to construction. The USFS will either include the FCDP with the Final EIS or also require approval prior to construction.
Samuel Penney (Chairman)	19396	167	Third, as we have also commented regarding the SDEIS (at 2-136 and 2-137) and the Air Quality Specialist Report (at p.1), under the Clean Air Act, air permits and their specific enforceable provisions (e.g., air pollution control equipment, dust control plans, operational limits, etc.) are intended to ensure that NAAQS are not violated, but this only applies outside of a facility's operations area boundary. Even with a well-developed, data-supported, practically enforceable air permit, within that operational boundary (aside from the specific question the Tribe has raised about the public access road being ambient air), a facility is allowed to exceed the NAAQS. Any air permit, therefore, will not protect the Tribe's treaty-reserved rights and numerous cultural resources within the operational boundary. Trust responsibilities extend to all life, plants, and animals that cannot speak for themselves. The SDEIS does not address the issue of NAAQS exceedances inside the operations area boundary.	AIR	As the comment states, the NAAQS are intended to comply at the Project boundary and beyond. While there is no explicit NAAQS compliance within the Project boundary, OSHA compliance is required. Additionally, the permit/Final EIS requires controls to minimize emissions as much as practicable. Following the Project, restoration would occur as well. Regarding tribal rights issues, please refer to sections 3.24 and 4.24 of the Final EIS.
Samuel Penney (Chairman)	19396	168	The public access road between Stibnite Road at Sugar Creek and Thunder Mountain Road at Meadow Creek should not be excluded from the regulatory definition of ambient air. This road is intended to allow public access, not preclude it. EPA's revised Ambient Air Policy describes conditions by which the public is to be excluded from an area controlled by a source and which would then justify excluding an area for purposes of analyzing the source's impact on ambient air. Controlling public access through a site is not excluding public access through a site, thus the EPA revised Ambient Air Policy does not apply, and, therefore, the public access road should be considered ambient air. As the public access road is ambient air, all emissions, modeling, and controls must be characterized and considered, and subject to the NAAQS.	AIR	IDEQ has deemed the access road to be precluded from the ambient air boundary. This is because Perpetua has complete control over the road and it is not considered "public". USFS has considered IDEQ's determination to be appropriate. Also, the EPA has referenced the application the Revised Policy in their comments to the SEIS. The EPA requested language regarding the EPA position on use of the public access road through the mine site has been included in the Final EIS.
Samuel Penney (Chairman)	19396	169	Table 4.3-20 SGP Public Access Route Receptor Results and NAAQS Compliance Demonstration shows compliance with the NAAQS. The values in Table 4.3-20 come from a 2021 report by Air Sciences, Inc. However, the public access road modeling in the Air Sciences 2018 report showed PM10 and PM2.5 NAAQS exceedances using the site-specific meteorological data set BULKRN. In the SDEIS, the Forest Service has chosen to present only the 2021 modeling results in Table 4.3-20, which had no exceedances and used the Q&V meteorological data set. This is not an accurate representation of modeling results. Both the 2018 and 2021 data sets are valid, so all data should be presented.	AIR	The 2018 AQ Report was representative of the initial ModPro Proposed Action, which was modified in lieu of the 2021 ModPro2 action. ModPro is no longer an alternative being considered. Therefore, use of the 2018 results are no longer pertinent to the Project and its inclusion in the Final EIS is not relevant. Additionally, the projected PM2.5/10 emissions from the worst-case year of ModPro2 are less than those from ModPro. It should be noted that the only potential exceedances from the 2018 analysis occurred along the access road, which was deemed to be excluded from ambient air by IDEQ and accepted by USFS. Lastly, the Q&V method is the default meteorological data (onsite from 2014) approach typically used within AERMOD and acceptable to be applied. The IDEQ Statement of Basis, Section 4.1.4 outlines a "weight of evidence" claim that use on NON-BULKRN is acceptable for numerous reasons. First, the standard is the 2 nd high, but background used assumed the first high. Second, when using BULKRN, the results are limited to a small area and limited period of time. Next, the exceedances are limited to the winter season among other conservative assumptions. Collectively, IDEQ states that they are highly confident that SGP will not contribute to a violation of the NAAQS. Also, the EPA evaluated Adj_U* and Q&V b in a series of studies comparing modeling vs observed. As illustrated in Table 69 of the 2018 ASI modeling report, all locations suggested conservative results. Ultimately, while there may be sporadic receptors using BULKRN that suggest an exceedance, but layers of built in conservatism suggests the results are artificially high.
Samuel Penney (Chairman)	19396	405	5.3 Air Quality On page 5-14 of the SDEIS, the Forest Service states, "Overall, air emissions are expected to increase as a result of the SGP and the past, present, and future actions. However, these emissions would be regulated in accordance with State and federal air permitting requirements." As the Tribe has commented previously in this letter regarding the SDEIS (at 2-136 & 4-35) and the Air Quality	AIR	As the comment states, the NAAQS are intended to comply at the Project boundary and beyond. While there is no explicit NAAQS compliance within the Project boundary, OSHA compliance is required. Additionally, the permit/Final EIS requires controls to minimize emissions as much as practicable. Following the Project, restoration would occur as well. Tribe's treaty-reserved rights" are discussed in Sections 3.24 and 4.24 of Final EIS. Mitigation measures will be outlined in Section 4.3.5 of the Final EIS.

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			Specialist Report (p.1), the Forest Service’s reliance on air permitting requirements is inadequate to protect air quality and the Tribe’s treaty-reserved rights and cultural resources.		
Samuel Penney (Chairman)	19396	431	<p>Air Quality Specialist Report</p> <p>The introduction of the Air Quality Specialist Report does not acknowledge air protection to the environment (secondary NAAQS).⁶⁴⁵ Only human health impacts are discussed (primary NAAQS). The affected environment is then portrayed as near-field or far-field. Under the Clean Air Act, air permits and their specific enforceable provisions (e.g., air pollution control equipment, dust control plans, operational limits, etc.) are intended to ensure that NAAQS are not violated, but this only applies outside of a facility’s operations area boundary. Even with a well-developed, data-supported, practically enforceable air permit, within that operational boundary (aside from the specific question the Tribe has raised about the public access road being ambient air), a facility is allowed to exceed the NAAQS. Any air permit, therefore, will not protect the Tribe’s treaty reserved rights and numerous cultural resources within the operational boundary. Trust responsibilities extend to all life, plants and animals that can’t speak for themselves. The SDEIS does not address the issue of NAAQS exceedances inside the operations area boundary.</p>	AIR	<p>The secondary results shown in Table 4.3-20 demonstrate compliance with both the primary and secondary NAAQS at the project boundary and beyond. The exception being lead and 24-hr PM2.5. There are no expected lead emissions and primary 24-hr PM2.5 standard is met, thus ensuring the secondary is as well. That said, a brief discussion of secondary NAAQS has been added to the Air Quality Specialist Report for context and understanding. In addition, the NAAQS are intended to comply at the Project boundary and beyond. While there is no explicit NAAQS compliance within the Project boundary, OSHA compliance is required. Additionally, the permit/Final EIS requires controls to minimize emissions as much as practicable. Following the Project, restoration would occur as well.</p> <p>“Tribe’s treaty-reserved rights” are discussed in Sections 3.24 and 4.24 of Final EIS.</p>
Samuel Penney (Chairman)	19396	432	<p>The information included in the Air Quality Specialist Report and the SDEIS is inconsistent. Some information about air quality in the Air Quality Specialist Report is not included in the SDEIS, and some information about air quality in the SDEIS is not included in the Air Quality Specialist Report. This can be clearly seen when comparing Tables 2.4-12 and 2.4-13 of the SDEIS with Tables 2-2 and 2-3 in the Air Quality Specialist Report. For example, the Air Quality Specialist Report Table 2-2 Prominent Regulatory and Forest Plan Requirements for Air Quality includes “Deploy a satellite or network connected visibility web camera as part of the FS visibility network aimed from the boundary of Frank Church River of No Return Wilderness (“FCRNRW”) south of mine across to FCRNRW boundary north of mine and/or from north to south on the FCRNRW boundary looking to the opposite boundary to document frequency of plume blight and visibility impacts to the wilderness area”, but this requirement is missing in the SDEIS. Additionally, in the SDEIS Table 2.4-13 Proponent Proposed Design Features, “Dust emission controls would reduce dust from crushing, conveying, and stockpiling” is listed, but is not included in the Air Quality Specialist Report. With these inconsistencies it is not clear what requirements the USFS is really proposing. All requirements should be in both locations.</p> <p>The reference for the Fugitive Dust Control Plan listed on page 13 is not listed in the reference section and Forest Service personnel could not provide the document when asked. The Forest Service must include an actual fugitive dust control plan as a mitigation measure for the project.</p> <p>The statement “On June 17, 2022 IDEQ issued a final Permit to Construct (“PTC”) and Statement of Basis (“SOB”) stating that the SGP will not require a Title V permit”⁶⁴⁶ is not true, see IDEQ 2022, Statement of Basis, Permit to Construct No. P-2019.0047, Project ID 62288, Perpetua Resources Idaho, Inc. Stibnite, Idaho Facility ID 085-00011.</p>	AIR	<p>There will be some variability between the EIS and the Air Quality Specialist Report. The EIS is intended to capture the general tenure of the requirements, while the Specialist Report goes into much greater detail. That said, any inconsistencies amongst the documents will be reviewed and updated as appropriate. The reference of a Title V permit not being required was an error and has been updated. The reference in the SDEIS of the FDCP was an error. At the time of the development of the SEIS, the FDCP was thought to exist and was referenced. However, it was later determined that the document has yet to be developed. It would be developed prior to the commencement of construction with USFS approval.</p>
Samuel Penney (Chairman)	19396	433	<p>The Air Quality Specialist Report states on page 63, “The main ore processing facility building, and coarse ore stockpile would be enclosed.” This is incorrect. There is no requirement in the PTC for the ore stockpiles to be enclosed.</p>	AIR	<p>The Final EIS has that requirement regardless of the PTC requirements. See Section 4.3.5.</p>
Samuel Penney (Chairman)	19396	434	<p>The Air Quality Specialist Report states on page 3-20 of Appendix D, “The EPMS would target maintaining a control efficiency of 90 percent on the on-site haul roads.” This is incorrect. In the IDEQ PTC, the control efficiency for haul roads is 93.3% for haul roads.</p>	AIR	<p>The comment is correct. The Air Quality Specialist Report, Transportation Plan (Appendix D), has been updated.</p>

Climate Change

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Elizabeth Barnes	6652	5	p. 2-145 The loss of wetlands through drawdown or direct disturbance from mine construction (119 acres stated) is not included in the climate change impacts assessment. A low-end estimate of the carbon stored by wetlands is 81 metric tons (The Conservation Fund) per acre. Loss of these 119 acres in the SGP area could contribute up to 9,639 T of carbon, equivalent to 25,000 T CO ₂ , to the atmosphere via leaching, oxidation, and rapid decomposition. Considering a truck emits 160 grams CO ₂ per mile, this loss of wetland-stored carbon is equivalent to driving a truck over 100 million miles, making the climate change assessment, that is based on engine combustion alone, completely irrelevant. Other impacts to climate change not addressed in the analysis are rock blasting, which is a significant source of NO ₂ and CO ₂ not accounted for in the GHG analysis.	CLI	There is variability in carbon storage values of wetlands depending on the location. While the values provided in the comment are mathematically sound it is unclear whether that represents the state of Idaho. Regardless, by the end of the Project, all wetlands would be restored (reclaimed) and eventually the storage amount would be a net zero. Because the effects of climate change is on a much longer timescale it is expected that the increased CO ₂ released would be temporary in nature. That said, this discussion has been added to the indirect emissions section of the Final EIS. The source of blasting emission factor applied should have included methane (EPA AP-42, Section 13.3-1). NO ₂ emissions are determined to be non-detectable. This has been added to the Final EIS. Canada Mining Guidance has a CO ₂ EF of 0.189 kg/kg AFO.
Elizabeth Barnes	6652	23	4-220 Climate change analysis does not include gaseous emissions predicted by the 2 stage alkaline treatment for cyanide reduction. Why not?	CLI	Alkaline treatment for cyanide reduction is a component of the emissions analysis developed for the processing plant and is included in that calculation.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	31	4. CEQ guidance on climate change In addition to the comments below, the Forest Service must incorporate CEQ's recent interim guidance to assist federal agencies in analyzing greenhouse gas emissions and climate change effects of their proposed actions under NEPA. ⁵⁹ As CEQ poignantly reminds all federal agencies: Given the urgency of the climate crisis and NEPA's important role in providing critical information to decision makers and the public, NEPA reviews should quantify proposed actions' GHG emissions, place GHG emissions in appropriate context and disclose relevant GHG emissions and relevant climate impacts, and identify alternatives and mitigation measures to avoid or reduce GHG emissions. CEQ encourages agencies to mitigate GHG emissions associated with their proposed actions to the greatest extent possible, consistent with national, science-based GHG reduction policies established to avoid the worst impacts of climate change.	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change" in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the SGP DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.
Idaho Regulatory Agencies	17718	4	Please provide facts on how closure and reclamation could reduce climate change impacts and improvement of soil quality.	CLI	In its current unreclaimed condition, the site exhibits poor soil and revegetation conditions. Effective reclamation and closure would improve soil and revegetation conditions, allowing for carbon dioxide use by re-established vegetation. The Climate Change Specialist Report discusses reclamation in Section 7.2.2.2. The SDEIS Sections 3.5/4.5 outline soils/reclamation materials. Sections 3.10/4.10 provide discussion on vegetation.
Giles, Robertt (Mayor McCall, ID)	17834	13	Attached is a memo describing the City's concerns with the lack of recognition by the Forest Service of the magnitude of impact from the mine's operations on creation of GHG's and the resulting externality created by not requiring mitigation by the company. Those costs will be shifted onto the local communities working to reduce GHG's. The company's GHG generation will substantially outweigh our local efforts to reduce emissions. The City requests that a second supplemental DEIS identify mitigations to address the mine's impact on our regional climate.	CLI	Comment noted. See the response to comment 17834.35 which provides specific inquiries on GHG generation. Also, for CEQ Guidance, timeline and applicability see comment 17634.31.
Giles, Robertt (Mayor McCall, ID)	17834	35	Summary: McCall is a diverse, small town united to maintain a safe, clean, healthy, and attractive environment. It is a progressive community that is affordable and sustainable. There are specific unknowns that should be addressed within the DEIS Climate Change Specialist Report to allow for the City of McCall and our community to best actualize our vision. This memorandum focuses on the need for a thoroughly conducted analysis of the influence of the SGP on climate change through a greenhouse gas emissions analysis and inclusion of common climate mitigation solutions available to Perpetua/SGP to address the relevance of the following: 1) Data Analysis: There is a need for accurate regional measurements and statistics that can alter the long-range needs for City infrastructure planning - including our own efforts as a municipality to mitigate climate change impacts occurring within our city boundaries and beyond city boundaries – these	CLI	Section 4.4.2.2 analyzes the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action, and (2) the effects of climate change on the proposed action and its environmental impacts. These include energy usage by the Project as a customer of Idaho Power Company and the LCA on antimony transport. Additionally, the Climate Change Specialist report discusses these items in Section 7.2.2.1. Vehicle trips between the mine site and local grocery stores, schools, etc. are not part of the Project as proposed under the 2021 MMP. Site workers would reside on-site through their shifts and road travel off-site would occur under exceptional circumstances.

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			<p>data and mitigation projections are essential to our operations to best serve our residents, businesses and workforce;</p> <p>2) Energy Use & Infrastructure: The impacts anticipated on the local/regional power-grid customers given the large increase in energy demand that is likely to influence rates for city energy users if no additional energy generation infrastructure is provided by SGP/Perpetua to offset the increase in demand estimated within the DEIS Specialist Report. Any new generation requirements should be in the form of renewable energy in order to mitigate climate impacts.</p> <p>3) Climate Mitigation Opportunities: There is some likelihood of lost opportunity for the City and greater community to benefit from climate change impact mitigation, or “environmental design features” on the part of SGP/Perpetua in the 2021 MMP with no mitigation of substance proposed at this time. Reasonable mitigation that aims to be aligned with IPCC recommendations and adequately addresses climate change should likely include investment in off-site emissions mitigation given the scale and intensity of emissions generated by the proposed project (direct, indirect and not-yet-measured); We would respectfully request an inventory of both the “No Action” Alternative and 2021 MMP Alternative, identified as preferred by the USFS.</p> <p>1) Data Analysis: The Climate Change Specialist Report for the SGP DEIS states “the 2021 MMP has the potential to impact public health and safety through the transportation and use of fuel and chemicals, natural environmental hazards, economic impacts, changes to public services and infrastructure, and impacts to the local population” (p. 37, Payette & Boise National Forest, 2022). In relation to climate change, each of these sectors cited to be potentially impacted have measurable climate related impacts that were not adequately assessed through an accurate greenhouse gas emissions analysis including all standard scopes of measurement. As of March 2022, at least 194 gold mines across 35 countries have conducted accurate Greenhouse Gas Emissions Inventories in accordance with the World Resource Institute’s Global Protocol for Corporate GHG Accounting & Reporting (Fimmano, 2022; Ranganathan et al., 2015). At this time, the greenhouse gas emissions analysis conducted has a scope that is limited beyond the accepted methodology for emissions accounting and does not provide the data necessary for the city to measure and mitigate the emissions sources and activities likely to be added to the community by the SGP proposal. Unknowns relating to necessary, measurable data that are essential to the City’s goals of mitigating climate change are summarized as follows:</p> <ul style="list-style-type: none"> · Transportation: The DEIS Climate Report only identifies the Vehicle Miles Traveled (VMT) along the access road from Highway 55 to the Central Mining Site. There is reference to trip generation, vehicle miles traveled, and infrastructure use in regional cities (including the City of McCall), but there is no report or attempt to quantify this usage of McCall/McCall Area Roadways, Service Stations, or other facilities that is acknowledged within this Climate Report. Common metrics in transportation that should be projected would include, but not be limited to: § Frequency and distance travelled of SGP/Perpetua workforce members living on-site traveling to <ul style="list-style-type: none"> · Grocery stores in McCall · schools where workforce members children may attend · activity/recreation areas and offerings in McCall § Frequency and distance travelled of SGP/Perpetua workforce members living off-site, outside of McCall City Limits traveling to <ul style="list-style-type: none"> · SGP Transfer Site off Highway-55 or SGP Main Site · Grocery stores in McCall · schools where workforce members children may attend · activity/recreation areas and offerings in McCall 		<p>Road travel associated with SGP employees during their non-work time is outside the scope of the analysis.</p>

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			<p>§ Frequency and distance travelled of SGP/Perpetua workforce members living off-site, inside of McCall City Limits traveling to</p> <ul style="list-style-type: none"> · SGP Transfer Site off Highway-55 or SGP Main Site · Grocery stores in McCall · schools where workforce members children may attend · activity/recreation areas and offerings in McCall <p>It is also unclear based on the provided Fleet Vehicle and Commuting analysis whether the fuel efficiencies and types analyzed reflect the actual vehicles that are likely to be on the market and road 20-40 years into the future, the proposed lifespan of SGP.</p> <p>2) Energy Use & Infrastructure: The DEIS Climate Report provides a rough estimate of Energy Use/Emissions potential totaling roughly 394,200 MWh (or ~45MW) of energy demand that would be added to the existing Idaho Power grid with no additional generation proposed. This is an approximate annual emissions amount of ~97,000 Tons of CO2e being added to our region’s emissions that does not currently exist (Payette & Boise National Forest, 2022). The ‘Indirect’ energy-use-driven emissions are not identified as actionable for mitigation within the SGP “Environmental Design Features,” however, energy mitigation is one of the most common environmental mitigation actions available to Gold Mines due to the high impact of grid-tied energy on overall project emissions. If the correct GHG Emissions Analysis Protocol cited previously were pursued, these emissions would fall into the category of “Scope 2” emissions (Ranganathan et al., 2015; Chaplin, 2022). For context, the addition of 45 MW of energy demand to the grid we share is the equivalent amount of energy generated by a 280-acre solar-farm.</p> <p>Without addition of energy generation to the Idaho Power Grid to mitigate the additional demand and mitigate resulting emissions, the increase in grid-based emissions would be the responsibility and financial burden of Idaho Power Customers, including the City and its residents to solve.</p> <ul style="list-style-type: none"> · Local Infrastructure Demand: It is unknown at this time to what extent the SGP proposals may increase demand for new housing, transportation, commercial, or public health infrastructure. If these socio-economic variables have been quantified elsewhere, they should be analyzed within the SGP Greenhouse Gas Emissions Analysis as direct additions to the City’s Greenhouse Gas Emissions Inventory for the projected LOM. <p>3) Climate Mitigation Opportunities: Without an accurate, quantitative Greenhouse Gas Emissions Analysis included that addresses the measurable and crucial variables identified above, as well as other sources and activities described within the leading methodologies (including Scope 1 – Direct/Source based emissions; Scope 2 – Indirect/Activity-based emissions; and Scope 3 – Sources & Activities within the complete supply chain) it is likely that common and attainable climate change and greenhouse gas mitigation projects will not be available that would likely benefit the City in efforts to achieve our climate mitigation goals. The (under)estimated total emissions of SGP under the MMP 2021 scenario are cited as at least 301,845 Tons of CO2e per year (mean; average) throughout the LOM. The “Environmental Design Features” proposed by Perpetua/SGP to address climate change appear at present to include only:</p> <ul style="list-style-type: none"> · “All off-highway diesel engines would be EPA Tier IV or better” · “Perpetua would utilize ‘smart grid’ technology to reduce energy consumption, such as auto dimming lights in offices.” <p>These design features do not include a projected amount of GHG Mitigation over the LOM or annually, although it is possible to project these with a complete analysis (p. 9, Payette & Boise National Forest, 2022).</p> <p>It is likely that if SGP/Perpetua were to be required to mitigate GHG Emissions generated by the real Scope 1 and Scope 2 emissions tied directly to emissions that would not otherwise be generated without</p>		

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			<p>SGP (in reference to the No Action Alternative), mitigation should be required through both on-site and off-site strategies to account for the scale of emissions generated (Ranganathan et al., 2015). The City of McCall and other regional entities would seek to gain substantially from a data-driven requirement for off-site climate mitigation strategies such as the generation of new renewable energy to mitigate new energy demand related to SGP; and investment in zero-carbon transportation infrastructure such as funding public electric vehicle charging, provision of electric public transportation and protection of our water supply, stream beds, and regional ecosystems to mitigate emissions beyond those generated by energy use, to name a common few.</p> <p>Conclusion: The Climate Change Specialist Report on the proposed impacts of the Stibnite Gold Project on the local climate system acknowledges there will be greenhouse gas emissions inherent to the operations of the proposed mine. However, it inaccurately suggests that these measurable impacts, some identified and some yet-to-be-identified, are either not worth measuring or not essential to mitigate because climate change itself is a global phenomenon. This analysis does not consider the responsibility and initiative being taken by cities such as the City of McCall, and broader communities such as our own for mitigating the greenhouse gas emissions that we generate directly and indirectly as part of the broader regional, state, federal and global systems that drive and are already impacted by the early effects of climate change. Without the acknowledgement of responsibility for and commitment to mitigating measurable/proposed emissions, the MMP 2021 is likely to at least double the efforts necessary for the City of McCall and broader community to mitigate our regional greenhouse gas emissions if approved, in comparison to the No Action Alternative.</p> <p>It should be clearly stated that without an accurate and comprehensive greenhouse gas emissions analysis for the proposed Lifetime of Mine and subsequent Water Treatment timeline, and without requirement for mitigation of the GHG emissions added to the current levels, it is unlikely that the City of McCall or neighboring communities will benefit from climate & GHG mitigation initiatives that should be provided by Perpetua/SGP. Instead, the addition of these unmitigated emissions (lifetime emissions of at least 4,996,546 Metric Tons CO₂e over the 20 year LOM) to our broader community emissions portfolio, will fall on the shoulders of the City of McCall, neighboring Cities, and the Valley County community at large to address.</p>		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	10	<p>For climate change:</p> <ul style="list-style-type: none"> o Including science-based greenhouse gas emissions reduction targets. o Assessing the social cost of carbon. o Incorporating adaptation in project features, such as stream crossings, reconstruction, and riparian cover. 	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim “National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change” in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the SGP DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	56	<p>NEPA Guidance on Consideration of Greenhouse Gas Emissions and Climate Change</p> <p>On January 9, 2023, Council on Environmental Quality (CEQ) published interim guidance to assist federal agencies in assessing and disclosing climate change impacts during environmental reviews. CEQ developed this guidance in response to EO 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. The interim guidance is effective immediately. CEQ indicated that agencies should use this interim guidance to inform the NEPA review for all new proposed actions and may use it for evaluations in process, as agencies deem appropriate, such as informing the consideration of alternatives or help address comments raised through the public comment process. EPA</p>	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim “National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change” in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the SGP DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the

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			recommends the FEIS apply the interim guidance as appropriate, to ensure robust consideration of potential climate impacts, mitigation, and adaptation issues.		Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	57	<p>Science-based GHG Reductions Targets</p> <p>The analysis in the DSEIS compares project emissions to Idaho state-level emissions as a percentage. EPA recommends the FEIS compare project emissions to science based GHG reductions targets. The United States has established a Paris-agreement target to reduce net GHG emissions economy-wide by 50-52% below 2005 levels, consistent with a pathway to net-zero by 2050. EO 14057 establishes a policy for the federal government to lead by example in order to achieve a carbon-pollution free electricity sector by 2035 and net-zero emissions economy-wide by no later than 2050. These and other policies reflect science based GHG reduction goals to avoid the worst impacts of climate change.</p> <p>EPA recommends the FEIS discussion include whether and to what extent the estimated GHG emissions from the proposed alternatives are consistent with achieving these science based national GHG reduction targets and any relevant state or local goals.</p>	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim “National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change” in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the SGP DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	58	<p>Social Cost of Carbon</p> <p>The DSEIS notes “[f]or purposes of this analysis, qualitative analysis is appropriate because quantifying the relative costs and benefits of the alternatives is not practically feasible and would be subject to high uncertainty as described below.” However, the DSEIS calculates estimates of direct and indirect emissions, and these estimates can be used to monetize those emissions using the Social Cost of Greenhouse Gases (SG-GHG). EPA encourages lead agencies to monetize impacts of GHG emissions using SG-GHG estimates in NEPA analyses. For transparency, EPA recommends the FEIS assess the climate impacts and disclose climate damages of the proposed project using the SC-GHG, which reflect the best available science and methodologies to monetize the value of net changes in direct and indirect GHG emissions resulting from a proposed action to society.</p>	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim “National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change” in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the SGP DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	59	<p>Estimated Emissions Speciated by Gas</p> <p>The SDEIS presents estimates in CO2e and not speciated by gas (CO2, CH4 and N2O). To ensure transparency of the analysis, EPA recommends presenting emissions estimates individually by GHG, as well as aggregated in terms of total CO2e in the FEIS.</p> <p>Additionally, the DSEIS indicates that approximately 99.9 percent of all processing GHG emissions are CO2. Similarly, construction, mining and commuting CO2 emissions comprise approximately 99 percent of the total GHG emissions from those activities.⁵⁸ EPA recommends the FEIS include data to support this statement. Specifically, EPA recommends providing data showing the amount of each GHG emitted from each emission source (i.e., the activities included in Tables 4.4-2a and 4.4-2b).</p>	CLI	The speciation of CO2e estimates has been incorporated into the Climate Change Specialist Report.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	60	<p>Direct and Indirect GHG Emissions</p> <p>EPA recommends including a data table in the FEIS to support the DSEIS statement that the direct and indirect GHG emissions are only a small increase over the current regional GHG emissions. Much of the information to develop this table is already in the SEIS, but it is found in various sections and with differing units (e.g., MMT CO2 (e) vs. tons CO2 (e)). As an example, to produce a table to support this statement, Tables 4.4-2a and 4.4-2b could be augmented to include the estimated indirect emissions and the current Idaho GHG emissions inventory.</p>	CLI	A comparison table has been added to the EIS.

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Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	61	<p>Access Road Alternatives</p> <p>The DSEIS indicates that the magnitude of the GHG emissions difference between the access road alternatives will be small compared to total SGP construction emissions during the construction phase. EPA recommends the FEIS support this statement with data demonstrating that the Johnson Creek Alternative has similar GHG emissions to the 2021 MMP Alternative. Preferably, the emissions data for this alternative would be presented the same as it is in Tables 4.4-2a and 4.4-2b so that the alternatives can be meaningfully compared.</p>	CLI	An estimate of the incremental difference between access route vehicle emissions has been added. Emissions associated with vehicle traffic represent approximately two percent of the total estimated GHG emissions from the Project. While a quantitative estimate has been included, it represents a small difference between the alternatives, within the margin of error for GHG emission estimates.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	62	<p>Integration of Climate Science</p> <p>Flow (quantity and timing), summer air temperatures, and snowpack are likely to be substantially different over the span of this project (i.e., the next 15 to 20 years or longer) due to climate change. Further, conditions from that point in time into the future will be even further from estimates that are based on past conditions. It does not appear that climate change related concepts/forecasting/modeling are incorporated in the relevant sections of the DSEIS beyond the acknowledgement that climate change presents uncertainty.⁶¹ For example, the DSEIS indicates the 100-year flood recurrence interval has been the standard approach in culvert sizing, but it is now important to state future projections of high flow magnitude to conservatively account for climate change; and that modeled flow future conditions are based on historic condition.</p> <p>For the FEIS, EPA recommends incorporating state-of-the-climate science forecasting/modeling to estimate local climate conditions for proposed work that uses estimates of flow, air temperature, and snowpack. Examples of activities that would benefit from sophisticated forecasting would be road crossings design, stream reconstruction, and growth of riparian vegetation for stream temperature attainment. If site specific models and data are not available, consider incorporating climate science literature/information to inform and adjust existing models to conservatively adjust for climate change. Consider climate science projections (knowledge from the literature, forecasting/modeling) in aspects for both ongoing and postmining operations.</p>	CLI	The commenter requests incorporating state-of-the-climate science forecasting/modeling to estimate climate conditions for proposed work that uses estimates of flow, air temperature, and snowpack, if site-specific models and data are available, or to otherwise use climate science literature/information. The climate change literature and information are incorporated into the SDEIS on pages 3-64 - 3-66, where potential impacts to air temperatures and precipitation changes are discussed under the RCP 8.5 scenario. Discussion on other water-related changes, such as river-related flood risk, snowpack, and groundwater are also discussed. More specific information on projected stream temperatures can be found on pages 44 & 107 of the Fisheries and Aquatic Habitat Specialist Report. Additionally, the comment suggests updating the 100-year return interval flood interval to account for climate change. There are no known local models that downscale climate models into hydrological models for prediction, with instead observational detection of trends used to account for climate change impacts. A comprehensive evaluation of flood status and trends has been performed for this area using the flood potential method – these results indicate that floods in this area are generally relatively small, not flashy, and consistent, with trends indicating that floods are becoming more flashy, less frequent, but larger in magnitude for larger-scale floods (>4 year return interval), including the 100-year event. Considering this, Q100 design flood discharges would be increased by 6.4% from base values for all structures being designed at the SGP. The 6.4% increase is based on a hydrologic review conducted by USFS personnel.
Pam Wissenbach	19213	2	My first question is why was climate change not considered in the modeling and the predictions of water temperatures? I especially have big concerns about a rain on snow event. This is a very possible event that could have disastrous results. The hazards to four endangered fish species of increased water temperatures are huge. Climate change must be accounted for in predictions of the impacts Stibnite Mine will have on this area.	CLI	Climate change and predictions for water temperatures are discussed on pages 3-64 – 3-66 of the SDEIS. Potential impacts to air temperatures and precipitation changes are discussed under the RCP 8.5 scenario, along with other water-related changes, such as river-related flood risk, snowpack, and groundwater are also discussed. Specific information on projected stream temperatures can be found in the Fisheries and Aquatic Habitat Specialist Report. It should also be noted that the site water balance accounts for rain on snow events which is used to influence future conditions for the site.
Zack Waterman (Northern Rockies Conservation Director)	19317	4	The SDEIS also notably fails to consider climate change within modeling projections.	CLI	Climate change and climate change within modeling projections are discussed in Section 4.4 (Affected Environment—Climate Change), and extensively in the Climate Change Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	85	"Same as 2021 MMP, except the severity of climate change impacts may be reduced for surface water (quality and quantity), wetlands and riparian resources, vegetation (including general vegetation communities, botanical resources, and non-native plants), fish resources and fish habitat, wildlife and wildlife habitat, and special designations. " The "small incremental differences" noted above in this chapter will not result in these impacts. The effects on all the alternatives considered in detail should be exactly the same for this row.	CLI	The language was removed except for "Same as 2021 MMP."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	631	"Climate Change " Please define the CEA here as it is in Table 5.1-1	CLI	The definition was added.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	182	"Climate change trends are discussed below by resource. " - Recommend this introductory statement be applied more consistently in the consideration of each resource in this section, and avoid venturing into impact analysis.	CLI	Noted, the various subsections are reviewed and adjusted where appropriate.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	183	"Climate Change Area of Analysis " - Recommend that this include a temporal scope stated also, so that people understand the long-term nature of the speculation of the climate trend.	CLI	The temporal scope was added to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	184	"During 2020, approximately 127,214 hectares (314,352 acres) were burned from forest fires (NICC 2021) ." - Please clarify if this value relates to Idaho exclusively, or the entire US.	CLI	This is specific to Idaho. This clarification was added to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	185	Statements such as "Although climate change would not impact the likelihood of a spill, it could potentially impact the severity of a spill " speak to impact analysis rather than a description of affected environment and do not seem appropriate in Section 3. Recommend removing from this section.	CLI	The portion of this section that outlines potential impacts has been removed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	186	"The tribes have specific rights to the affected land ..." - It would be more accurate to state that the tribes have rights "regarding" the affected land rather than "to" the affected land.	CLI	This edit has been made to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	187	"The SGP activities could contribute to factors that influence climate change. " Please reconcile this statement with the following statement in Section 3.4, and how "contribution to factors that influence climate change" will be considered within the context of the Forest Service 2009a which states that: "It is not currently feasible to quantify the indirect effects of individual or multiple projects on global climate change; therefore, determining significant effects of those projects or project alternatives on global climate change cannot be made at any scale."	CLI	The language referenced in USFS 2009a states that the effects could not be reasonably determined on a global scale. The "Issue" outlined in Section 4.4.1 indicates that the Project could contribute to climate change. Further in Section 4.4.1 it states that GHG emissions from the Project would be quantified and could impact resources, but not necessarily the potential impacts on a global scale. Because of this, no changes have been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	188	Recommend that this passage refer the reader to applicable SDEIS sections related to air quality analysis to provide a clearer picture of project emissions, which are only briefly described here and are not comprehensive.	CLI	A reference to Section 4.4.2.2 was added to send the reader to the actual Project GHG emissions.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	189	Recommend that the purpose of providing the emissions factors listed in Table 4.4-1 be clarified in the context of the analysis that is being conducted. Please clarify the analysis, how these emission factors play into it, and how is this information is considered in the rest of this section.	CLI	The clarification has been added to the Final EIS.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	190	"Under the No Action Alternative, the analysis area would continue to be impacted by current climate change trends. The No Action Alternative represents the baseline condition against which potential GHG emission and climate change effects are evaluated for the analysis area." - The text below does not address climate change characterizations for the No Action Alternative for resource areas that they characterize as being cumulative affected by climate change. Please include some characterization of continued impact by current climate change trends for the analysis area.	CLI	Language referring the reader back to Section 3.4.4.2 is added stating that the climate change trends described would be consistent with the No Action Alternative. Also, "unreclaimed" land language was added to describe potential climate change improvements over time.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	191	"Mineral exploration would continue to occur as part of the Golden Meadows Exploration Project, ... " Here and elsewhere, continued exploration is presented as a foregone conclusion for the No Action Alternative. It is not. Please replace 'would' with 'could'.	CLI	This revision has been made to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	192	"While it is possible that processing may differ similar to mine operations, LOM 4 through LOM 18 are assumed to be identical to the maximum year ." - Recommend clarifying that this is a conservative assumption embedded in the emissions inventory and modeling. Thus it should be identified as such and should provide context for the over- estimation of actual emissions.	CLI	This clarification has been made in the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	193	"Therefore, meaningful connection of the 2021 MMP GHG emissions to climate change effects at the state, regional, or global level cannot be provided. " However, they could be presented as a percentage of these global/state/regional emissions, to provide context for the reader. This comparison to state emissions is done elsewhere in the SDEIS.	CLI	This clarification has been made in the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	194	Recommend adding a footnote indicating that, to embed conservatism in the emissions inventory and air modeling, emissions estimates for several ore processing and refining emissions activities are assumed to be constant based on the equipment design capacity; their actual emissions would be lower in Yrs 17 and 18 in particular.	CLI	This clarification has been made in the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	195	Recommend removing this entire paragraph as it includes speculative and inaccurate content. The nature of refinement that would be applied to the antimony concentrate, its inappropriately assigned similarity to gold refining, and assuming IPCO's CO2 emission rate for that refinement are all highly speculative and result in a GHG emissions value that is not reliable.	CLI	The paragraph has been retained but modified to account for a range of Lifecycle Assessments (LCAs) associated with potential GHG emissions from off-site processing options. See also the response to comment 17634.342.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	196	"Changes in landcover and slope stability due to climate change could create conditions that cause more frequent landslides, damaging vegetation and other forest resources. Landslides also could potentially impact surface water resources through increased sedimentation and runoff" - Recommend removing this passage as it is speculative, unsupported, and does not consider the potential variable of less winter precipitation.	CLI	The content is appropriate and was retained.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	197	"Much of this soil is currently poor quality (for example, old tailings piles), ..." - Please remove the reference to tailings as being considered as soil. In the context of the passage it suggests we plan to incorporate them into soil for reclamation activities which is inaccurate.	CLI	This revision has been made to the Final EIS.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	198	<i>Regional climate change could affect the ability of Operations Area Boundary streams to maintain previous flow rates and recharge of water supply due to changes in Idaho snowpack and precipitation patterns (Halofsky et al. 2018).</i> " - Use of this citation here is inappropriate as Halofsky et al 2018 did not address the SGP.	CLI	This revision has been made to the Final EIS. Note that this is a general statement for Idaho, no specifics for the Project.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	199	<i>"Climate change induced changes in precipitation and evaporation could also impact the overall site-wide water balance which could result in significant changes to the amount of water being treated and discharged.</i> " - Please remove or edit this passage as appropriate; it disregards the climate sensitivity analysis that was applied to the Site Wide Water Balance.	CLI	This revision has been made to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	200	<i>"...more vegetation in the SGP area could be lost, creating greater visibility of the SGP and associated impacts to scenic resources.</i> " - Please remove or revise this statement as appropriate; it does not recognize the limited area from which the SGP is visible, regardless of a reduction in vegetation.	CLI	This revision has been made to the Final EIS. The limited view of the SGP is irrelevant to the viewsheds that could be impacted. Therefore, the change was not made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	201	<i>"The Johnson Creek Route Alternative would have the effect of decreasing overall construction phase GHG emissions; however, the construction activities to complete major improvements on the Johnson Creek Route would likely offset the decrease and would likely end up very similar to the 2021 MMP ."</i> - Recommend clarifying this sentence to avoid perceived contradiction.	CLI	This revision has been made to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	202	<i>"...the severity of impacts to wetlands and riparian resources would be less for the Johnson Creek Route Alternative compared to the Burntlog Route "</i> - Recommend removing as this is not a comment on climate change.	CLI	The suggested revision was not made as it provides context between the two alternatives.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	203	<i>"The Burntlog Route would not be constructed under the Johnson Creek Route Alternative, avoiding the construction of approximately 20 miles of new roadway. Although the impacts of climate change would be the same as 2021 MMP, it is expected that not constructing the Burntlog Route would help to reduce the severity of impacts to proposed-threatened plant species (whitebark pine), federally listed fish species, wildlife and wildlife habitat, and IRA s."</i> - recommend removing as this is not a comment and climate change and should not be here.	CLI	The suggested revision was not made as it provides context between the two alternatives.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	204	<i>"However, existing and approved activities (i.e., approved exploration activities and associated reclamation obligations) would continue ..."</i> - Approved exploration activities 'could' continue, but are not guaranteed. Please change 'would' to 'could' throughout this document.	CLI	This revision has been made to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	205	<i>(Knowles and Gumtow 1996).</i> - Recommend an alternative citation. The referenced document is not a scientific study, which makes this statement weakly supported, even though the bull trout is very cold-water adapted.	CLI	Citation has been updated to USFWS 2015.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	206	"Mineral exploration would continue to occur as part of the Golden Meadows Exploration Project." - Approved exploration activities 'could' continue, but are not guaranteed. Please change 'would' to 'could' throughout this document.	CLI	This revision has been made to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	207	"There is very little information on the energy usage, and GHG emissions, of smelting and refining antimony concentrate..." - Recommend removing this entire paragraph as it includes speculative content. The nature of refinement that would be applied to the antimony concentrate, its assumed similarity to gold refining, and assuming IPCO's CO2 emission rate for that refinement are all highly speculative and result in a GHG emissions value that is not reliable.	CLI	This paragraph was not removed but has been updated for clarity and discussion of potentially variability has been added. See also the response to comment 17634.342.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	208	"...however, increased particulate matter and other criteria pollutants as a result of climate change (e.g., potential for increased wildfires and decreased groundcover resulting in more particulates in the air) could persist within the SGP area (Jacob and Winner 2009)." - Recommend a more applicable reference be included here: the cited document is not applicable to assessing particulate matter at the SGP as it predates the project.	CLI	The reference is appropriate; however, explicit discussion of the SGP has been removed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	209	"Much of this soil is currently poor quality (for example, old tailings piles), and would be unlikely to naturally revegetate at a normal rate" - Recommend clarifying this statement, which appears to suggest that legacy tailings will be incorporated into soils used for reclamation. This is not accurate.	CLI	The reference to old tailings piles has been removed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	210	"Climate change induced changes in precipitation and evaporation could also impact the overall site-wide water balance which could result in significant changes to the amount of water being treated and discharged." - This passage should discuss the climate sensitivity analysis on the Site Wide Water Balance that was conducted at the request of the USFS and Stantec.	CLI	This revision has been made to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	211	"Changing climatic conditions are expected to exacerbate the damage and loss of cultural resources and natural areas utilized by tribes for activities such as hunting, fishing, and gathering in the SGP area through increased soil erosion, more frequent and intense wildfires, flooding, degraded water quality, and wildlife and fish habitat impacts." - It is unclear whether this statement speaks to background effects of climate change or project-specific effects. If the latter, this passage should better characterize both negative and positive impacts to the indicated resources.	CLI	The referenced statement pertains only to effects of changing climate conditions on these resources. The Project-specific positive and negative effects pertaining to proposed activities are discussed in the other resource sections of the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	212	"The Johnson Creek Route Alternative would have the effect of decreasing overall construction phase GHG emissions;" - Recommend clarifying that this alternative requires 2 additional years of construction, which would generate additional GHG emissions for additional layback work, (including temporary road installation and drilling), and installation of retaining walls, not to mention limited workdays resulting in additional employee travel to and from the work site.	CLI	The additional descriptive information associated with the alternative has been added to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	213	"This approach is done for ease of permitting". Recommend adding that this approach to developing emissions inventories embeds conservatism into the emissions inventory and resultant modeling and is not necessarily done for "ease of permitting".	CLI	This revision has been made to the Final EIS.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	214	<i>"Ongoing mining activities on patented land Mineral exploration and mining have occurred in several locations around the SGP area.</i> <i>Exploration activities are ongoing for potential future mining development ."</i> - Please clarify what these activities are and where they are occurring consistent with the examples provided for the other project types included here.	CLI	The ongoing and reasonably foreseeable exploration and mining activities are listed in the cumulative effects description in Chapter 5 of the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	215	<i>"Direct and indirect GHG emissions and their associated impacts would be the same under the Johnson Creek Route Alternative as those discussed under the 2021 MMP."</i> - Recommend clarifying that this alternative requires 2 additional years of construction, which would generate additional GHG emissions for additional layback work, (including temporary road installation and drilling), and installation of retaining walls, not to mention limited workdays resulting in additional employee travel to and from the work site.	CLI	This recommended additional information was added in response to comment 19325.212. It was not explicitly added again here.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	216	<i>"Exploration activities associated with the Golden Meadows Exploration Project would continue..."</i> - Continued exploration is not guaranteed. Please replace "would" with "could".	CLI	This revision has been made to the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	7	Comments are provided for Sections 3.4, 4.4, and the Climate Change Specialist Report. The challenge in assessing this resource is inherent in the Forest Service guidance, which states: "It is not currently feasible to quantify the indirect effects of individual or multiple projects on global climate change; therefore, determining significant effects of those projects or project alternatives on global climate change cannot be made at any scale" (Section 3.4.3). Thus, the USFS is bound to inform its decision-making process "...qualitatively describing the type and extent of potential climate change impacts on the physical, social, and biological resources in the analysis area since information is not available to address such effects with quantitative certainty" (Section 4.4.1). Therefore, to support the USFS analysis, our comments focus on technical clarifications to the descriptions of the alternatives.	CLI	Comment noted. No response required.
Jon Robison	19330	11	The fact that the document fails to account for Climate Change is unacceptable, as climate change will likely exacerbate many of the negative effects of the project. Models exist that the Forest Service can use to disclose these risks.	CLI	Potential impacts and effects of climate change on the Project and potential effects of the Project are addressed throughout the EIS and Climate Change Specialist Report in a qualitative manner. Additionally, Project-related GHG emissions are outlined.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	341	T. Climate Change In addition to the comments below, the Forest Service must incorporate CEQ's recent interim guidance to assist federal agencies in analyzing greenhouse gas emissions and climate change effects of their proposed actions under NEPA. As CEQ poignantly reminds all federal agencies: The United States faces a profound climate crisis and there is little time left to avoid a dangerous—potentially catastrophic—climate trajectory. Climate change is a fundamental environmental issue, and its effects on the human environment fall squarely within NEPA's purview. Major Federal actions may result in substantial GHG emissions or emissions reductions, so Federal leadership that is informed by sound analysis is crucial to addressing the climate crisis. Federal proposals may also be affected by climate change, so they should be designed in consideration of resilience and adaptation to a changing climate. Climate change is a particularly complex challenge given its global nature and the inherent interrelationships among its sources and effects. Further, climate change raises environmental justice concerns because it will disproportionately and adversely affect human health and the environment in some communities, including communities of color, low-income communities, and Tribal Nations and Indigenous communities. Given the urgency of the climate crisis and NEPA's important role in providing critical information to decision makers and the public, NEPA reviews should quantify proposed actions' GHG emissions, place GHG emissions in appropriate context and disclose relevant	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change" in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts. Currently, potential climate change impacts are addressed throughout the EIS and Specialist Report in a qualitative manner. Additionally, Project-related GHG emissions are outlined.

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			<p>GHG emissions and relevant climate impacts, and identify alternatives and mitigation measures to avoid or reduce GHG emissions. CEQ encourages agencies to mitigate GHG emissions associated with their proposed actions to the greatest extent possible, consistent with national, science-based GHG reduction policies established to avoid the worst impacts of climate change.</p> <p>The Forest Service has obligated itself to comply with the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA. 36 C.F.R. 220.1(a). Thus, when analyzing the SGP the agency should consider “(1) the potential effects of a proposed action on climate change, including by assessing both GHG emissions and reductions from the proposed action; and (2) the effects of climate change on a proposed action and its environmental impacts.” In addition to quantifying all of a proposed action’s projected GHG emissions or reductions for the expected lifetime of the action, CEQ recommends that agencies also “use the best available social cost of GHG estimates to translate climate impacts into the more accessible metric of dollars” thus allowing “decision makers and the public to make comparisons, help evaluate the significance of an action’s climate change effects, and better understand the tradeoffs associated with an action and its alternatives.” As explained below, the SDEIS completely fails to follow any of CEQ’s recommendations. Not analyzing these highly relevant aspects of the SGP fails to disclose vital information that the public and the decision maker need to ensure informed decision making.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	342	<p>1. The SDEIS fails to provide a comprehensive estimate of greenhouse gas (GHG) emissions for the proposed Stibnite Gold Project</p> <p>The GHG emissions calculation is based on a mine life of 20 years, (p. 4-63), yet the SDEIS (p. 2-8) predicts that long-term water treatment will be required at SGP (mine year 16 through 40), Estimated emissions from these additional activities should be included in the calculation. The Reclamation and Closure Plan indicates that large volumes of compost will be transported to the mine from southeast Idaho for reclamation efforts. The transport of compost and other soil amendments should also be included in the calculations.</p> <p>The SDEIS (p. 4-67) relies on estimates of GHG emissions for antimony refining, based on gold processing using electrolytic refining methods. However, most antimony sulfide concentrates are refined with pyrometallurgy smelting, relying on volatilization roasting in rotary kilns—reduction smelting, which uses much larger amounts of energy. If reduction smelting is anticipated, EISS (2022) estimates the total refining emissions at 24,300-24,600 metric tons CO₂ eq. This is substantially larger than the estimated 4,055 MT in the SDEIS. Perpetua should disclose the expected refining method for the antimony sulfide concentrate, and the SDEIS should include GHG emissions relative to that processing method. The SDEIS also fails to quantify the estimated GHG emissions for transporting antimony concentrate off-site for processing. The SDEIS (p. 4-66, 4-67) states that “Because it is unknown at this time where the concentrate from the mine would be processed, total GHG estimations associated with the transport of antimony concentrate would be speculative.” However, there are reasonable assumptions that can be made about potential off-site processing facilities for antimony concentrate, and therefore a reasonable range of GHG emissions estimates can be calculated. Perpetua states in its materials that, “The concentrate, when sold, would likely be shipped to facilities outside of the United States for smelting and refining because there are currently no such facilities operating in the United States with capacity for refining antimony sulfide concentrate.” Perpetua should be required to provide a short list of off-site processing options for antimony to demonstrate that it can, as it claims, produce antimony for marketable use. This information is reasonably available, and should be used to estimate emissions in the SDEIS.</p> <p>(TABLE)</p>	CLI	<p>Section 4.4.2.2 provides an estimate for off-site antimony processing based on the assumptions referenced therein. Different processing options under different assumptions would result in changes in emissions estimates up to 67,000 metric tons CO₂e based on Lifecycle Assessment of shipping and processing antimony at overseas processing plants.</p> <p>Vehicle transportation accounts for a relatively small component of overall Project GHG estimates (i.e., two percent). Incremental changes in the number and nature of shipments to the Project over its lifespan are within the estimation error of GHG emissions.</p>
Bonnie Gestring (Northwest Program Director,	17634	343	<p>Based on an analysis of potential refining sites, ore grade, likely transport methods, and other factors, EISS (2022) completed a rough estimate of the total global warming potential (GWP) for antimony transport and refining from the SGP to two options: the USAMSA refinery in Mexico and the SPMP refinery in Oman. The analysis (outlined above in Table 4) estimates an additional 30,794 metric tons</p>	CLI	See the response to comment 17634.342.

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Earthworks) and seven others			CO2eq for transport and processing in Mexico and 66,708 metric tons of CO2eq for Oman – a substantial increase in total emissions associated with processing antimony from SGP.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	344	2. The SDEIS fails to take a hard look at the GHG emissions in the proposed alternative According to the SDEIS, direct and indirect GHG emissions and their associated impacts would be the same under the Johnson Creek Route Alternative as those discussed under the 2021 MMP. (ES-10) The SDEIS says that the Johnson Creek Route Alternative would have the effect of decreasing overall construction phase GHG emissions; however, the construction activities to complete major improvements on the Johnson Creek Route would likely offset the decrease and would likely end up very similar to the 2021 MMP. (p. 4-72) However, the SDEIS provides no GHG emissions analysis to support this comparison. The SDEIS should calculate the GHG emissions for the 2021 MMP and the alternative, and provide an accurate comparison.	CLI	An estimate of the incremental difference between access route vehicle emissions has been added. Emissions associated with vehicle traffic represent approximately two percent of the total estimated GHG emissions from the Project. While a quantitative estimate has been included, it represents a small difference between the alternatives, within the margin of error for GHG emission estimates.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	345	3. The SDEIS comes to unsupported conclusions about regional GHG emissions The SDEIS downplays the potential regional increase in emissions from the SGP project by comparing the GHG emissions from the SGP project with all other emissions in the State of Idaho. According to the SDEIS (p. 4-63), “GHG emission inventory for the State of Idaho (represents a basis for comparison with action alternative GHG emission estimates).” It also finds that “Overall, the SGP direct and indirect GHG emissions would be a negligible and long-term increase in regional GHG emissions,” and the “Effects of ongoing climate change in the SGP area following implementation of the 2021 MMP would be largely the same as those that would occur regionally and in Idaho without the SGP.” (SDEIS, p. 4-67) emphasis added. Yet, the SDEIS has not compared the SGP emissions with other regional emissions. It has only compared the SGP emissions with those of the entire state. CEQ guidance to federal agencies directly discourages this type of approach, saying “CEQ recognizes that the totality of climate change impacts is not attributable to any single action, but are exacerbated by a series of actions including actions taken pursuant to decisions of the Federal Government. Therefore, a statement that emissions from a proposed Federal action represent only a small fraction of global emissions is essentially a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether or to what extent to consider climate change impacts under NEPA.” Similarly, comparing SGP emissions to that of the entire state of Idaho is inappropriate. The SDEIS must provide an accurate and reasonable assessment of the regional contributions of the proposed project by considering SGP’s projected GHG emissions with regional emissions.	CLI	The worst case GHG emission year during the life of the mine was evaluated along with the EPA equivalency calculator to provide perspective of the direct GHG emissions. Also, a brief discussion about county GHG emissions was added to the Final EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	346	4. The SDEIS must take a hard look at the potential impacts to mine infrastructure related to the effects of climate change, and the potential environmental consequences. There are an increasing number of reports from industry, regulatory agencies, and academia that identify the increased risks of climate change to the mining industry and the need to incorporate climate change predictions into mine plans and practices. Recent experience shows that abnormally high levels of precipitation can destroy waste dumps, seepage capture systems, and mine access roads; cause impoundments to overflow and dams to be breached; and push water treatment costs over budget or cause releases of untreated water. A recent report from the World Meteorological Organization has found that climate and weather related disasters have surged five-fold over the last 50 years. According to a technical presentation by a BLM geologist, who points to the failure of a seepage capture system that was designed for a 100-year, 24-hour storm event at the Zortman Landusky cyanide leach gold mine in Montana: “The reality is the industry is making closure, reclamation and drainage treatment predictions based on a historic climate that no longer exists.” These impacts underscore the need to analyze and plan for climate change throughout a project’s design, construction, operation and closure. For example, a 500-year storm event at the Stillwater Mine in Montana in June 2022, resulted in severe damage to the access road, preventing access to the site for a number of weeks and causing severe erosion along the road. (See photo from Billings Gazette of mine and access road). The SDEIS should also include an emergency plan in the event of evacuation or damage from wildfires, as recently occurred at the Donlin Gold Mine in Alaska. The SDEIS must analyze the potential impacts of climate change, including more frequent and severe storm events, including those that exceed the design parameters for mine infrastructure, such as stormwater management infrastructure, resulting in more frequent untreated releases and potentially	CLI	The effect of climate change on proposed revegetation efforts and how this relates to soil quality is discussed in the SDEIS primarily on pages 4-68 – 4-69 and in the Climate Change Specialist Report on pages 33-35. The SDEIS notes that activities in the 2021 MMP would involve revegetating areas disturbed by historic mining, construction, and operation activities in the Operations Area Boundary. It notes that activities to improve and revegetate existing poor-quality soils could reduce climate-induced impacts to soils in the short-term by allowing the soil to retain more moisture during the summer; it also acknowledges that climate changes could potentially diminish soil quality over time and affect revegetation efforts in the long-term (SDEIS 4-68; Climate Change Specialist Report). The need to consider climate changes in revegetation is discussed in the SDEIS, which states that climate changes including changes in future weather patterns, precipitation amounts and seasonality, and resilience of species to fire and drought would be considered when identifying reclamation methods and goals (SDEIS 4-69). Potential climate change effects on erosion and on soil/reclamation cover materials are discussed in the SDEIS on pages 3-66 and 3-67, and erosion control best management practices are referenced throughout the document.

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			degrading water quality. The SDEIS must also take a hard look at the potential impacts of climate change on revegetation efforts associated with proposed reclamation, and increased erosion from all mine facilities. The SDEIS comes to unsupported conclusions about climate change. According to the SDEIS (p. ES-10) "Closure and reclamation activities under the alternatives could reduce climate change impacts by improving soil quality and implementing best management practices during all phases of the SGP." Yet, the SDEIS proposes to authorize the use of soils with arsenic concentrations up to 3,000 ppm in root zone material used for reclamation, worsening metal concentrations in soil. There is no data or analysis to indicate that soil quality will be improved in such a way that it will reduce climate change impacts.		
Judy Anderson	17644	1	<p>I know you have suffered with this complex behemoth project. I know you have worked hard and probably had to compromise or ignore things when you did not want to. This is a small town and word gets around and I know you have been under intense political pressure and agency pressure. I am sorry.</p> <p>But I am going to have to put more pressure on you. And it is the pressure we all feel at this juncture watching with growing horror at the chaos unfolding as the result of climate change. Basically, humans, especially Americans, have refused to change and the result has been everything is changing.</p> <p>But the Forest Service, as trusted stewards of our land and waters and the creatures who inhabit them, has got to change. Whereas a few years ago it may have been excusable in an EIS to give climate change short shrift. It is unconscionable now. And especially unforgivable in an agency supposedly guided by science and dealing with a huge industrial gold mine like Stibnite.</p> <p>As Antonio Guterres, Secretary General of the United Nations said several months ago," We are on a highway to climate hell with our foot still on the accelerator.... Humanity has a choice-cooperate or perish." The sense of urgency about the timetable climate change is forcing on us, felt by much of the world and by many here in Valley County, is completely lacking in the DEIS and the SDEIS. Why? The greatest challenge of the 21st century is substantially ignored?</p> <p>The caveats in the SDEIS when it comes to the huge amount of GHG emissions that will be generated by the mine are unacceptable. It claims that the emissions don't really matter because there are no Idaho or Fed regulations so the SDEIS can't "quantify the costs or significance". Does that justify that the Forest Service is not going to analyze them or demand responsibility or mitigation for them? REALLY?</p>	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change" in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the SGP DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.
Judy Anderson	17644	2	And then the SDEIS basically says that, "Aw,heck they aren't that big when you compare them to the whole state or the global emissions" Even though the Council on Environmental Quality makes it clear that Federal agencies cannot ignore impacts of climate change from proposed actions because the emissions only represent a small fraction of global emissions. In fact, they say that comparing emissions of any project to global emissions is a flawed understanding of how climate change works and cannot be used as a basis for deciding not to consider climate change impacts under NEPA.	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change" in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the SGP DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.
Judy Anderson	17644	3	In addition, the calculations of the emissions from the proposed Stibnite mine are problematic as they leave out sectors. Table 4.4, 2a and 2b lists the tons per year but leaves out years 19 through 40. The SDEIS also leaves out emissions from: antimony concentrate transport to a processing plant; a more realistic estimate of emissions from the preferred method of reduction smelting of antimony; the emissions from transport or commuting from the junction of Warm Lake Road to wherever cars or trucks are going or coming from.	CLI	The activities described in Tables 4.4-2a and 4.4-2b would not continue past Year 18. The effects of vehicle travel, off-site power generation, and antimony concentrate are described in SDEIS Section 4.4.2.2 under the Indirect GHG Emissions section.

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			And the SDEIS also leaves out the significant emissions from the massive use of electrical energy as 40% of Idaho Power's energy still comes from fossil fuels not hydro...and hydro is dependent on water flows which are and will be impacted by climate change. There would be an approximate annual emissions amount of 97,000tons of CO2e being added to our region's emissions from Perpetua's electrical use that does not currently exist and is not accounted for in the SDEIS. There is again no mitigation offered. Without an addition of new energy generation to the Idaho Power grid to mitigate the additional demand and mitigate the resulting emissions, the Perpetua increased demand and generated emissions would be the responsibility of Idaho power customers including the City of McCall and its residents to solve and pay for.		
Judy Anderson	17644	4	These unmitigated GHG emissions (those acknowledged in the SDEIS and some ignored) would approximate over the lifetime of the operations 4,992,546 Metric Tons of CO2e . The burden of these emissions, which could almost double what we are emitting now, will fall on the city and the county to address. This will frustrate our present efforts to curtail emissions and frankly is unfair and would be taking all of us in the opposite direction of where we should be going as a region and a society.	CLI	No further response required. General in nature or position statement. It is acknowledged and understood that concerns regarding potential long-term environmental impacts, ecological integrity, and the well-being of potentially affected communities are valid and important to consider. During the decision-making process, the Forest Service will seek to identify the best possible balance between environmental protection, community needs, and sustainable forest management.
Judy Anderson	17644	5	<p>The second horrifying issue involving climate change is the fact that most of the negative impacts of the mine (some of which are admitted in the SDEIS) will be exacerbated, accelerated, and intensified by climate change. (4-67 to 4-72 SDEIS)</p> <p>So whether we are talking about the stress on recharging groundwater; lower stream flows; the difficulty of revegetation and reclamation; high water temperatures; loss of wetlands and riparian areas; vulnerability to floods, landslides, avalanches; air pollution...ALL of these impacts will be exacerbated by climate change and are guaranteed to worsen thru time as climate change gets more chaotic. And any mitigation proposed for any impacts in this mine are completely called into question by the effects of climate change and their increasing extremeness and unpredictability.</p> <p>The SDEIS mentions this possibility but then drops it ...just drops it. There is no comprehensive climate mitigation plan offered. There are no buffers mentioned that could be built into any measurements or models to take into account the inevitable trajectory of climate change.... a trajectory that will affect every aspect of this project and will only intensify.</p> <p>Any mitigation proposed for any impacts in this mine are completely called into question by the effects of climate change and their increasing extremeness and unpredictability.</p>	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change" in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the SGP DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.
Judy Anderson	17644	6	<p>Here we are dealing with complex systems, we are dealing with flawed models like the one for surface water that doesn't even take climate change into account. We are dealing with difficulty quantifying, multisource impacts, possibility of systemic catastrophic consequences...doesn't standard practice call for at least sophisticated buffers and defer to PRECAUTION?</p> <p>Climate Change is the variable that changes everything. It confounds every other variable.</p>	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change" in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the SGP DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.
Amelia Weber	18155	5	The effects of climate change will exacerbate the impacts the SGP will have on the environment and were inadequately incorporated into the SDEIS. While briefly acknowledged, the compounding impacts of a warming climate were not taken into consideration when predicting stream temperatures or other environmental impacts that are intrinsically linked to the climate.	CLI	On January 9, 2023, the Council on Environmental Quality (CEQ) published interim "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change" in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the

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					development process for the SGP DSEIS, and therefore this EIS primarily relies on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.
Samuel Penney (Chairman)	19396	24	<p>In Section 1-27 the proponent noted that EO 13990 (Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis) was revoked and that the Forest Service complies with the requirements of valid EOs when completing NEPA and implementing processes.</p> <p>However, they failed to mention E.O. 14008 (Climate Crisis: Tackling the Climate Crisis at Home and Abroad); or the Justice 40 initiative that both apply to this project. Mining is specifically mentioned in E.O. 14008, but not reviewed in this SDEIS. Also, E.O. 14008 required all federal agencies to prepare Climate Adaptation Plans. In the US Forest Service Climate Adaptation Plan, published in July 2022, a number of recommendations were put forth regarding extreme events, environmental justice, and disproportionate impacts to Tribal Nations that are relevant to the Stibnite SDEIS. Given that the proponent missed these climate change related policies, it is likely others were overlooked.</p>	CLI	Both EO 13990 and EO 14008 are outlined in Section 3.4.3. Further, Section 3.22.3 discusses EO 14008. The Climate Adaptation Plan was not included is incorporated in the Final EIS.
Samuel Penney (Chairman)	19396	43	<p>Table 2.4-13 Proponent Proposed Design Features</p> <p>Climate Change measures are listed in only two MMPs. Previous comments on this matter were not addressed, namely that using LED light bulbs and smart technology for efficiency is a woefully inadequate response to protect the climate. The EPA is in the midst of rulemaking regarding heavy trucks and off-road vehicles, which will go into effect during this project. Climate mitigation measures that could be deployed include things like installing electric vehicle charging stations, powering part of the operation with solar or waste heat, using energy efficient appliances and HVAC equipment, and off-setting emissions through carbon sequestration. Federal incentives and tax credits are now available to deploy clean energy technology and energy efficient infrastructure that lower the cost to transition to fossil free energy, but also reduce operation costs over the lifetime of buildings, vehicles, etc. and increase profitability and shareholder satisfaction, but these measures were not included.</p>	CLI	The suggestions were reviewed. While these options are feasible, they are not an absolute requirement. Therefore, these are not be mandated by the EIS.
Samuel Penney (Chairman)	19396	44	<p>Table 2.8-1 Alternative Comparison and Impact Summary</p> <p>Table states that SGP activities could contribute to factors that influence climate change, and then lists “Maximum LOM 3 200,671 MT (221,201 short tons/yr.) of CO 2e of total annual GHG emissions.” This should be changed to “will contribute an estimated x tons/year of GHG emissions” because ALL GHG emissions affect the climate. Mitigation measures that reduce the amount of annual and cumulative GHG emissions could be proposed per the previous comment. In addition, measures could be proposed to sequester carbon and off-set the GHG emissions produced by this project.</p>	CLI	The revision has been made in the Final EIS.
Samuel Penney (Chairman)	19396	75	<p>3.4 Climate Change</p> <p>Best Science is required for evaluating a project’s likely environmental consequences. The climate analysis relied heavily on the International Panel on Climate Change (“IPCC”) Sixth Assessment and excluded Idaho specific climate literature. It also did not include the IPCC 1.5 Report which explains why limiting global temperature rise to 1.5 °C is necessary to avoid the worst risks associated with climate change and the timeline for which this must be accomplished. The proponent also notes that the Higher greenhouse gas (“GHG”) emissions from this Project add a small proportion to total emissions, skirting the problem that all emissions must be dramatically reduced to avoid the worst effects of climate change. Pleune et al. (2020) expressed this as follows:</p> <p>The hotter the world gets, the graver the forecasted consequences. Observed warming trends reinforce the importance of limiting global warming to 1.5°C to</p>	CLI	Comment noted. The IPCC assessment includes the most up-to-date science. Target dates are encouraged, but not an absolute requirement.

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			<p>avoid catastrophic effects and reduce the severity of unavoidable changes. To achieve this result, the International Panel on Climate Change (“IPCC”) identifies a reduction target for global net anthropogenic carbon emissions of 45 percent by 2030 and a net zero target by 2050 in order to limit warming to a (hopefully) manageable level. At this late stage in the game, the equation is simple. Higher greenhouse gas (“GHG”) emission trajectories lead to higher forecasted global warming with graver environmental and security consequences. In other words, high emissions result in high risk. Failing to reduce GHG emissions is a risk management failure.</p> <p>Again, emissions must be cut by 45% by 2030, and reach net zero by 2050 to limit the rise in global temperature to 1.5 °C. Gold mining is an energy intensive industry that contributes to greenhouse gas emissions. The proposed mitigation measures do not reflect the urgent need to cut emissions from building operation, industrial processes, or transportation. In addition, the omission of information from the IPCC 1.5 report provides an incomplete summary of the risks of climate change or the urgency of a rapid response to the climate crisis.</p>		
Samuel Penney (Chairman)	19396	76	<p>Though the federal government may not currently have standards in place to limit emissions from mines, new buildings, and heavy duty trucks, the EPA is in the midst of rulemaking for heavy duty vehicles, and proposed rules were released in March 2022. The Securities and Exchange Commission has also released proposed rules. As climate impacts intensify, more policy, regulations, legal scholarship, and legal actions can be expected to try to prevent the worst impacts of climate change, and to hold those who fail to do so to account. Climate change is an existential threat to humanity’s existence, creates tremendous risks including the displacement of human beings and wildlife, extinction of 30-50% of animal and plant species by 2050, and 90% of marine species by 2100. It also is a risk to the economy and a serious risk to mining operations. As the planet gets warmer, the potential to trigger tipping points that lead “to significant, policy relevant impacts, including substantial sea level rise from collapsing ice sheets, dieback of biodiverse biomes such as the Amazon rainforest or warm-water corals, and carbon release from thawing permafrost.” In light of the risk, it behooves us all to incorporate mitigation measures into projects that reflect the urgency of the climate crisis, and that address the cumulative need for actions across all sectors and projects, regardless of proportional individual contributions to the problem. In addition, the Inflation Reduction Act has committed millions of dollars in incentives for electrification and adoption of electric vehicles including heavy duty trucks. Though it may not currently be required, it is something that would be truly green and a clear example of a commitment to the environment and the climate, which the proponent purports to care about. It also behooves us all to prioritize where our money, time, and resources are spent in the next ten years. Given that antimony is a critical mineral used in batteries, the benefit may outweigh the cost of this mine for its use in batteries, but only if the contribution of the mine to greenhouse gasses are off-set during operations, not in 23 years. Indeed, with risks so grave, one might argue that the US Forest Service “has a statutory duty to respond to climate change, which includes the duty to avoid exacerbating climate change” as Pleune et al. argue so persuasively regarding the BLM and oil and gas leasing.</p>	CLI	Comment noted. No response required.

Soils and Reclamation Cover Materials

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Daniel S. Kline	16484	2	<p>Soils and Reclamation Cover Materials</p> <p>Total Soil Resource Commitment (TSRC) as defined in the Payette Forest Plan (Forest Service 2003a) and Boise Forest Plan (Forest Service 2010a), is the conversion of a productive site to an essentially non-productive site for a period of more than 50 years¹. Regarding soil productivity the SDEIS makes the following statement.</p> <p><i>“As a rule, the processes responsible for restoration of soil productivity occur over a very long timeframe (centuries to millennia) and do not directly correlate to successful reclamation, which is mainly oriented to short-term objectives. The short timeframe for achievable reclamation measures (e.g., 5 to 10 years) would not be sufficient to establish trends in soil resources and productivity that would take many centuries to millennia to develop within the conditions that pertain to the activity area, especially with respect to the short growing season and harsh winters. Important measures of long-term soil productivity would include: development of a litter layer, biotic crust and/or A horizon (organic matter-enriched surface layer); development of soil structure to support water and air movement; physical and chemical weathering of coarse fragments to add soil fines and nutrients; and development of the soil food web, nutrient cycles, and microbial community, especially the mycorrhizal network. Thus, the recovery of greater than 40 percent soil productivity within a 50-year timeframe is unlikely (Forest Service 2022c).²”</i></p> <p><i>“To conservatively address uncertainty in reclamation success, this analysis of TSRC assumes that all SGP-related disturbances in the PNF activity area would be considered TSRC due to the site-specific challenges and the duration and nature of soil disturbance to support the mining activities.²”</i></p> <p><i>“...recovery of soil productivity to 40 percent of natural background would be on a much longer timescale (e.g., likely hundreds to thousands of years) such that they would be considered permanent TSRC.²”</i></p> <p>These statements imply Perpetua’s reclamation, restoration and rehabilitation plans will not be effective in establishing soil productivity within centuries to millennia let alone the 50-year allocation of the TSRC definition. In conflict with the Payette National Forest (PNF) Land and Resource Management Plan (LRMP) definition of soil productivity, the SDEIS defines measures of soil productivity as:</p> <p><i>“...development of a litter layer, biotic crust and/or A horizon (organic matter-enriched surface layer); development of soil structure to support water and air movement; physical and chemical weathering of coarse fragments to add soil fines and nutrients; and development of the soil food web, nutrient cycles, and microbial community, especially the mycorrhizal network.²”</i></p> <p>While these (and other) metrics are important to assess the capacity of soil to “...support the growth of specified plants, plant communities, or a sequence of plant communities.”, they are not contemplated in the PNF-LRMP as measures of soil productivity. PNF-LRMP defines soil productivity as:</p> <p><i>"Soil productivity includes the inherent capacity of a soil under management to support the growth of specified plants, plant communities, or a sequence of plant communities. Soil productivity may be expressed in terms of volume or weight/unit area/year, percent plant cover, or other measures of biomass accumulation."³</i></p> <p>This more appropriate definition of soil productivity is exemplified in PNF Huckleberry Landscape Restoration Project (HLRP) FEIS⁴. The HLRP FEIS recognizes the value of restoration, reclamation, and rehabilitation in analyzing TSRC as illustrated from the following excerpts.</p> <p><i>“These effects do not completely recover through natural processes, but soil productivity and hydrologic function can be recovered with the implementation of physical treatments, such as decompaction, recovery of topsoil, placement of organic material and revegetation.⁴”</i></p> <p><i>“Alternative 2 proposed activities would initiate recovery of soil productivity and reduce TSRC on 371 through obliteration of unneeded system and nonsystem roads, which accounts for a 0.74% reduction in</i></p>	SOI	The Forest Service assessment of soil conditions concluded that the timing for restoring soil conditions along with uncertainty in that timing warranted a Forest Plan Amendment as described in SDEIS Appendix A.

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			<p>TSRC within the analysis area. The construction of landings, primary skidtrails and new temporary roads (up to 34 miles, approximately 100 acres, 0.2% TSRC) associated with vegetation treatment activities would result in short-term increases in TSRC (<15 years). The required rehabilitation following use of these areas should result in no net gain in long-term TSRC. Additional reductions in TSRC would occur when existing skidtrails, landings, and roads in a TSRC condition are reused and then rehabilitated. New permanent road construction and road reroute construction totaling 17 acres would represent a 0.034% increase in TSRC within the analysis area. The proposed trail reroutes would include stabilization and rehabilitation of the existing trail areas following new construction, thus no net change in TSRC.4”</p> <p>“Restoration of existing roads, skid trails, and landings through obliteration would directly reduce TSRC (and DD) and improve soil conditions, processes, and functions in the harvest or fuels units by decompacting soils and adding CWD and other organic matter to the surface. Lloyd et al. (2013) observed improved infiltration rates and soil bulk densities on obliterated roads recover to values similar to never-roaded areas at 1, 5, and 10 years following obliteration. In this same study and time frame, soil organic matter, total carbon, and nitrogen pools and processes increased to levels similar to never-roaded surfaces. Road, skid trail and landing obliteration following reuse are expected to produce similar beneficial results and would also improve slope stability and decrease long-term erosion.4”</p> <p>Given the SGP reclamation and closure plan utilizes very similar and arguably more aggressive soil restoration and rehabilitation techniques than described in the PNF’s HLRP, the SGP SDEIS should recognize soil rehabilitation efforts as part of the TSRC analysis. Without recognition of the SGP reclamation and soils rehabilitation in the TSRC analysis there would appear to be a negative bias towards the SGP compared to the similar impacts and rehabilitation efforts recognized in the HLRP. Therefore, I request the FEIS TSRC analysis be revised to recognize all applicable aspects of the SGP restoration and reclamation plans. In doing so the PNF may find the SGP will be compliant with existing forest management plan TSRC thresholds of less than 5% and thus avoid a forest management plan amendment.</p>		
Daniel S. Kline	16484	3	<p>Regarding reclamation cover material quantities, the SDEIS notes the following.</p> <p>“The GM deficit is thus estimated at approximately 797,702 BCY (Tetra Tech 2021a). Options being considered by Perpetua for developing additional GM for the SGP include: utilizing materials from off-site borrow areas and supplementing additional salvage of GM through composting.2”</p> <p>The 2021 SGP Reclamation and Closure Plan (RCP) states that Yellow Pine Pit (YPP) glacial till will be used to offset the deficit along with growth media amendment of chipped wood and compost. The 2021 RCP also discredits utilizing offsite soils barrow sources. SDEIS Section 2.4.7.12 and Table 2.4-12 (pg 2-113) also notes the same YPP till source. Therefore, I request the Reclamation and Cover Materials section of the FEIS be revised to describe the correct proposed soils deficit offset found in the RCP and Section 2.4.7.12.</p>	SOI	The Final EIS has been revised per the comment.
Wasley, Dustin (Principal P.E., Haley Aldrich)	17633	4	<p>The closure plans for the project also employ best practices design measures including stockpiling and salvage of topsoil, and use of amendments to increase the volume of reclamation materials needed for closure. Certain conservation groups quoted in the media, such as ICL, have focused on the reclamation material deficit identified in the SDEIS as a major issue. It should be noted that there is currently a significant deficit of topsoil on the site in disturbed areas due to unregulated mining activities and that Perpetua has proposed to bulk up existing topsoil by blending and amending with compost and woodchips to address the shortfall. This approach will be effective and better than leaving the site as it is today.</p>	SOI	Comment noted. No response required.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	131	<p>4. The SDEIS lacks adequate suitability criteria for growth media</p> <p>Sustainable revegetation success depends on the quality of growth media (GM) and subjacent material that comprises the vegetation zone with regard to a number of physical, chemical and nutrient factors. According to the Soils Specialist Report (p. 13), when excavating and storing materials for growth media, “Tailings and contaminated soil and fill material from historical mining activities would be</p>	SOI	<p>Section 4.5.2.2 describes the suitability criteria for growth media.</p> <p>Identification of suitable material for growth media involves screening metal concentrations for comparison to baseline soil concentrations to exclude materials with metal concentrations beyond the range of baseline soil conditions from use as growth media. It is expected that growth media within the range of baseline soil conditions would have comparable leachability</p>

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			<p>identified through testing and visual observation and separated from suitable soils prior to and during soil excavation activities. Testing for contamination would focus on the presence and leachability of metals from these materials (e.g., arsenic, antimony, and mercury) (emphasis added). When encountered during GM/SBM salvage, these materials would be excavated separately and reprocessed, repurposed for construction purposes (if suitable), and/or disposed of into the TSF.” However, the suitability criteria for growth media (Soils Specialist Report, Table 2-3) doesn’t specify leachability criteria. What leachability criteria will be used, and how will it be applied?</p> <p>The SDEIS also lacks phytotoxicity suitability criteria and public health criteria for growth media. The Reclamation and Closure Plan does not include trace metal concentrations as part of the growth media suitability guidelines for plant growth. According to the Soils Specialist Report (p. 76), “Metal concentrations in growth media would be screened for comparison to baseline soil concentrations pre-reclamation per Forest Service requirements.” However, the specific baseline concentrations that would apply are not specified.</p> <p>The SDEIS must specify the baseline concentrations that would be used as suitability criteria for growth media, and whether that may affect the amount of available growth material, and not defer this information and analysis to another time.</p>		<p>and phytotoxicity properties based on the site soil surveys and observations of growth media performance in historical reclamation areas.</p> <p>The upper bounds for soil arsenic, antimony, and mercury concentrations for materials expected to support plant growth and development are provided in the Reclamation and Closure plan and described in Section 4.5.2.2.</p>
Idaho Regulatory Agencies	17718	5	<p>Suggest heading should be: Quantity, Quality, and Suitability of Growth Medium because only Growth Medium is then discussed. Throughout the document "soil" terms are not defined, or not adequately defined. For example, one has to infer that Growth Medium is a Reclamation Cover Material. Also, the document and supporting documents (Tetra Tech, 2020; 2021) use "soil" terms including Growth Media (Growth Medium is preferred); soil, soil bank material, mineral soil, etc. Provided are additional definitions in 7.3 Glossary, based on the supporting documents, and soil science standards in hopes of clarifying.</p>	SOI	Revisions accepted. Sections 3.5, 4.5 and 7.3 have been revised to clarify terminology.
Idaho Regulatory Agencies	17718	6	<p>The soil quantity and quality are both limited and rated as poor to fair. There are several key words in this section of the Executive Summary that are vague:</p> <p>Additionally, there would be a 797,702 bank cubic yards GM deficit at the mine site according to the balance calculations in the Reclamation Closure Plan. This deficit may be partially met with the surplus of material obtained from the Burntlog Route or could be met through....</p> <p>Thus, there is presently some uncertainty regarding the specific source of material to meet the identified GM deficits under either action alternative.</p> <p>However, Perpetua has committed to salvage the appropriate volume of GM and to create the volume of compost necessary as an amendment to provide suitable quality and quantity of the GM to cover the areas to be reclaimed. Perpetua has also committed to performance criteria tied to slope and soil stability, sediment, and vegetation cover, which would need to be met prior to release of a reclamation performance bond.</p> <p>What does “may be partially met or could be met” mean? It sounds as if this topic has not been fully researched and the project could proceed without a definitive plan. The soil quality and quantity will remain an issue throughout this project unless there are strict standards as to the appropriate volume of GM material, (how much is this and it’s already of poor or fair quality) the necessary volume of suitable compost (how much and who deems what is suitable?) this is to be added material to make it suitable for successful revegetation (successful to whom). The quantity and quality should be approved by the cooperating agencies. If it’s not available on site, then it should be hauled in. The cost factor is not a consideration for this NEPA review.</p>	SOI	<p>The SDEIS acknowledges the uncertainty in the sourcing of reclamation cover materials which could be derived from the different sources identified. References to "partially met" and "could be met" refer to the sourcing of materials from a specific source rather than overall attainment of reclamation goals and standards.</p> <p>Suitability of compost would be dependent on its ability to meet the standards established for placement as reclamation cover material and then attainment of reclamation standards for physical stability and revegetation.</p>
Idaho Regulatory Agencies	17718	14	Please define "suitable growth media," or delete "Suitable."	SOI	The "Suitable" adjective has been removed at this location which is a description of stockpile locations. Suitability of growth media is discussed in Section 4.5.2.2.
Idaho Regulatory Agencies	17718	71	Title is incorrect in comparison to the paragraph information, which also needs editing. The quote "productive condition" is not stated in IDAPA, but was copied from the IDL website. Background: IDL has been given the authority to regulate surface mining in Idaho by two legislative proclamations having	SOI	The description of the Idaho Administrative Procedures Act and IDL authority has been revised per the comment.

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			the force of law: Idaho Statutory law (cited as Idaho Code or I.C.), and Idaho Administrative Code via the Idaho Administrative Procedures Act (cited as the acronym IDAPA). Idaho Code, Title 47, Chapter 15, et seq. – Mined Land Reclamation, is a Statutory law passed by the Idaho State legislature. IDAPA 20.03.02 – Rules Governing Mined Land Reclamation is the final rule that must be approved yearly by the Idaho State legislature so that IDL can administer Idaho Code, Title 47, Ch. 15, et seq. Please edit the underlined heading and paragraph to : <i>Idaho Mined Land Reclamation Act and Rules Governing Mined Land Reclamation: The Idaho Department of Lands (IDL) has the authority to regulate all surface mining in Idaho by: Idaho Mined Land Reclamation Act (Idaho Code, Title 47, Chapter 15, et seq.); and Rules Governing Mined Land Reclamation (Idaho Administrative Procedures Act (IDAPA) 20.03.02). Reclamation is the process of restoring an area affected by a mining operation or cyanidation facility to its original or another beneficial use, considering previous uses, possible future uses, and surrounding topography. The objective is to re-establish a diverse, self-perpetuating plant community, and to minimize erosion, remove hazards, and maintain water quality (IDAPA 20.03.02.010.20). To help accomplish Reclamation requires Best Management Practices (BMP), which are practices, techniques or measures developed or identified by IDL and identified in the state water quality management plan which are determined to be a cost effective and practicable means of preventing or reducing pollutants generated from nonpoint sources to a level compatible with water quality goals (IDAPA 20.03.02.010.03). These BMPs have also been published as a manual (IDL, 1992). This manual also is referenced in the Payette Forest Plan management direction (Mineral and Geology Resources) as a guide for evaluating the completeness of reclamation plans with respect to mitigating water quality effects.</i>		
Idaho Regulatory Agencies	17718	72	"Metasediments" is a misnomer. The correct term is <i>metasedimentary rocks</i> , which, at the Project site are types of Paleozoic metamorphic rocks. Metasedimentary rock is used in other parts of the document.	SOI	The term "metasediments" has been replaced with "metasedimentary rock" at locations where it occurs in the text.
Idaho Regulatory Agencies	17718	73	Heading is "Operation Area Boundary" but it is not defined or in Glossary. Please note that a generic operation area is defined by its boundary, but an operation area boundary is NOT an area, but simply the boundary of the area. This error occurs in other parts of the document.	SOI	The header has been modified to "Operational Area". The term Operations Area Boundary has been added to the glossary.
Idaho Regulatory Agencies	17718	74	"Soil Contamination/Chemistry" Please, especially for headings, try and not use the slash. This section should be called <i>Soil Chemistry</i> .	SOI	Section header revised to Soil Chemistry.
Idaho Regulatory Agencies	17718	75	Please define Operations Area Boundary.	SOI	The term Operations Area Boundary has been added to the glossary.
Idaho Regulatory Agencies	17718	80	<p>Comment: It has been documented by Perpetua (Tetra Tech, 2021a, Appendix B, Section 6) and noted by the Idaho Department of Lands throughout the review of technical reports, DEIS, and this SDEIS process, that the quantity and quality of Reclamation Cover Material (RCM) is lacking. Vegetation success has been, is, and will continue to be an ongoing problem to return the disturbed area to productive conditions, if the quantity and quality of RCM isn't addressed properly. This will likely mean hauling in the predicted deficit of a quality material from offsite. This will be an increased cost; however will be needed for successful reclamation. Perpetua continues to claim that the only way to restore the Stibnite area to a productive site is by mining antimony and gold, followed by successful restoration and reclamation (see Perpetua website).</p> <p>Without the quantity and quality of RCM to ensure vegetative success, many parts of the proposed Restoration and Reclamation will fail. One of the areas of great concern is with the predicted water temperatures to ensure fish survival. Without successful revegetation resulting in shading over the streams, temperatures will only rise. While the best seed bank material and growth media on site is to be utilized for reclamation along riparian corridors, many of the streams will not be reclaimed until the end of the project. Both the seedbank and growth media will have been stockpiled for long periods of time, greatly reducing viability (especially of the seed bank material). Revegetation on slopes will reduce erosion and sediment entering the streams, but without quality RCM to provide successful revegetation, erosion and sedimentation will continue to be a problem. Water quality, already poor will continue to be impacted by using poor RCM which contain high amounts of metals, which will continue to leach into seeps and streams. Photos from the Perpetua website portrays extremely optimistic successful restoration</p>	SOI	Implementation of the Reclamation Closure Plan would include revegetation performance monitoring. Further, a reclamation bond would be established and in place prior to construction. This bond would remain in place through the satisfactory completion of reclamation activities including revegetation.

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			and reclamation. However, Perpetua never states how long it will be for successful restoration and reclamation. Perpetua only states that they will “establish vegetation”, which leads the reader to believe it may not reach what is considered “successful revegetation” as per IDAPA 20.03.02, 140.11. a. and b. In reality, it may take many decades to achieve, if it happens at all.		
Idaho Regulatory Agencies	17718	81	"The 2021 MMP consists of a 3-year construction period, approximately 12-year production period, 5-year closure period, and 5-year plus post-closure period. " Comment: Many areas of reclamation will continue for longer than a 5-year plus post-mill operations (Closure refers to cyanidation facilities). Please considered this rewrite to correctly relate the "approximations", etc.: The 2021 MMP assumes that it will take: 3-years for mine construction, 12 years to mine, produce, and concentrate ore; 5 years to decontaminate and remove mine facilities; and 5 years to perform much of the reclamation. However, final reclamation will take at least an additional 40 years, and potentially much longer.	SOI	The text has been revised to read "The 2021 MMP consists of a 3-year construction period, approximately 12-year production period, 5-year closure period, and a post-closure period estimated to be approximately 40 years."
Idaho Regulatory Agencies	17718	82	"All the SGP-related disturbance at the mine site would be subject to reclamation activities, with the exception of approximately 278 acres associated with the Hangar Flats high walls, the West End pit lake and high walls, Yellow Pine pit high walls, the Stibnite Lake feature, plus the Midnight, West End, and Plant Site ponds. These areas would remain a permanent commitment of soil resources (a large portion of which would occur on private patented mining claims). For all other areas in the activity area, disturbance would be subject to the reclamation activities detailed in the Reclamation and Closure Plan (Tetra Tech 2019a, 2021a)." <u>Comment:</u> While the Forest Service may look at the 278-acre disturbances as a total soil resource commitment (TSRC), the IDL will require grading, recontouring and seeding where applicable on all disturbed land. Highwall benches can be reclaimed by hauling in quality Growth Medium and reseeding with grasses, shrubs, and conifers. Ponds and lake banks can be re-contoured, re-graded, and seeded to prevent erosion. Proper drainage systems need to be built into the lake and pond configuration to reduce sedimentation. Please note that the Idaho Department of Lands will require an application for mining operations under Idaho Administrative Procedures Act 20.03.02 – 070: Application Procedure and Requirements For Other Mining Operations Including Hardrock, Underground and Phosphate Mining. The IDL will also require an application under IDAPA 20.03.02 - 071: Application Procedure and Requirements for Permanent Closure of Cyanidation Facilities. Reclamation activities will be subject IDAPA 20.03.02, and not just disturbance subject to the reclamation activities detailed in the Reclamation and Closure Plan (Tetra Tech 2019a, 2021a).	SOI	Comment noted. All applicable IDL requirements would be required to be implemented and adhered to for the Project.
Idaho Regulatory Agencies	17718	83	"The duration of impacts would vary by component based on the disturbance and reclamation schedule. Most disturbances would be initiated during the construction or early production phase and continue for <u>a number of years</u> until final reclamation is initiated. A select number of components would be reclaimed concurrently during active mine operations, so that duration of impacts would be lessened. Nevertheless, this analysis assumes recovery of greater than 40 percent soil productivity of natural background within a 50-year timeframe would not occur (due to the nature of disturbance and the conditions at the site) and, therefore, the duration of impacts would be longer-term, well beyond the 50-year threshold. For the TSF and TSF Buttress, where selected development rock would serve as the rooting zone for reclamation-related planting instead of native regolith, recovery of soil productivity to 40 percent of natural background would be on a much longer timescale (e.g., likely <u>centuries to millennia</u>)" Please provide an estimate of years for the first underlined section. As per the Project Phases, Final Reclamation may not occur for 40 or more years after the mill is shut down. The second underlined section states the consequences of having poor quality Growth Medium. For successful Reclamation, vegetation success is paramount. Please also note that the West End Pit as it remains today, is a precursor to what will be left by Perpetua for other areas, if quality Growth Medium is not made available from a source other than the Project area.	SOI	The text has been revised to read "... or early production phase and continue for an estimated seven years post-closure until final reclamation is initiated for all mine components."
Idaho Regulatory Agencies	17718	84	The correct quantity or quality of Growth Medium is necessary to support reclamation of a mining project to produce the outcome stated on Perpetua Resources website (“Perpetua Resources developed closure and restoration plans with the objective to establish a sustainable fishery with enhanced habitat to support natural populations of salmon, steelhead, and bull trout; improve water quality; establish	SOI	Comment noted. No response required.

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			<p>vegetation; and enhance wildlife habitat, all of which contribute to a self-sustaining and productive ecosystem. Closure, reclamation and restoration activities will achieve post-mining land uses of wildlife and fisheries habitat and dispersed recreation at the mine site..."</p> <p>Reclamation success is more likely to be achieved by suppling the quality and quantity of GM to the SGP from an approved off-site source. The material should not be hauled to the site until needed to avoid setting in a stockpile for 1 to 40 plus years. While some onsite material could be mixed with off site material, the material at the SGP would need to be tested for trace minerals before being mixed and used as GM.</p>		
Idaho Regulatory Agencies	17718	85	Mitigation to cover the predicted gap in RCM is needed to help ensure that the gap is adequately addressed in future reclamation cost estimates. Requiring a specific volume of excess RCM from the Burnt Log Route to be hauled to the site and stockpiled during construction is one example.	SOI	Comment noted. No response required.
Jack McManus	18036	2	<p>The Stibnite Pit obviously needs to be repaired. Despite there being loads of other problems, one of the main holdbacks to current recovery of the historical pit is a lack of carbonic soil available out there. We need big piles of trees, wood chips, pine needles, etc. Luckily, we have a problem with too much of that on our hands already. The County 'Transfer Site' is also trying to deal with a massive growing pile of 'woody debris' in their phacility out by Jug Mountain. Let's see some intergovernmental cooperation, and check one of the boxes along the path to recovery!</p> <p>Lets use the material which has been prepared for us, and go recover that soil!</p>	SOI	Agreements between Perpetua and Valley County regarding the use of woody debris from the county transfer site is outside the purview of the Forest Service.
Lynn Oliver	18565	1	<p>From my experience as a past mine geologist, when reclamation finally commences there always seems to be a shortage of soil. The analysis would be improved if this component could be included within the TSRC analysis area in Section 3.5. It would be good to know how much is actually available on private land.</p> <p>Final Forest Service approval of the Modified Mine Plan should include the ability to bring in suitable soil from private land located off-site if needed. While costs would be excessive, this is a reasonable mitigation that would alleviate public concern for the success of reclamation activities in riparian areas. Hopefully, there is enough stockpiled soil from mining operations that this wouldn't be required.</p>	SOI	<p>Soils on private lands are not included in the TSRC analysis because that metric is for application to effects on Forest Service lands. Instead, information regarding the availability of soils is summarized in the SDEIS references to the Soils Specialist Report and the Project Reclamation Closure Plan (Table 3-8). The private land parcels for salvage of reclamation cover materials are associated with the plant site, Hangar Flats pit, Yellow Pine pit, and West End pit. These total approximately 27% of the planned soil salvage.</p> <p>The Reclamation Closure Plan identifies a sufficient volume of reclamation cover material to meet Project needs. The plan also allows for adaptive management for reclamation cover materials in the future event that the planned materials are not suitable for use or have an insufficient volume.</p>
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	3	Addressing suitability of soils for reclamation and effects of soil contaminants on surface water quality.	SOI	Topic header. No response required.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	23	<p>Reclamation Cover Material</p> <p>Table 2.4.-12 in the DSEIS indicates that reclamation cover material (e.g., growth media) used in places including but not limited to the TSF and tailings storage facility buttress (TSFB) would be evaluated for contaminants prior to use during reclamation. Acceptable metal/contaminant concentrations and sampling and testing would be documented in a sampling and analysis plan developed prior to reclamation.</p> <p>EPA recommends that the FEIS disclose the concentration limits that would be required by the Forest Service since these are directly relevant to the evaluation of environmental impacts for the project, including the analysis of the availability of and suitability of cover material (metals) and the analysis of potential reclamation and closure/post- closure impacts to wetlands, waters, wildlife, aquatic resources, and public health in subsequent EIS sections.</p> <p>We have provided this same comment on previous versions of this section and the NEPA specialist report and reiterate the recommendation to disclose this information to support conclusions regarding impacts and mitigation effectiveness.</p>	SOI	<p>Section 4.5.2.2 describes the suitability criteria for growth media.</p> <p>Identification of suitable material for growth media involves screening metal concentrations for comparison to baseline soil concentrations to exclude materials with metal concentrations beyond the range of baseline soil conditions from use as growth media. It is expected that growth media within the range of baseline soil conditions would have comparable leachability and phytotoxicity properties based on the site soil surveys and observations of growth media performance in historical reclamation areas.</p> <p>The upper bounds for soil arsenic, antimony, and mercury concentrations for materials expected to support plant growth and development are provided in the Reclamation and Closure plan and described in Section 4.5.2.2.</p>

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Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	24	Suitable Soil Types for Reclamation Under Suitable Soil Types for Reclamation, the DSEIS states “[t]he soils in this SMU [soil map unit type halosparists (cTH)] also have elevated antimony, arsenic, and mercury concentrations (Tetra Tech 2021a).” ¹⁵ EPA recommends the FEIS discuss how soils with elevated concentrations of antimony, arsenic and mercury will impact predicted water quality concentrations of these contaminants. EPA also recommends specifying whether these values are elevated when compared to other background soils or in relation to soil criteria.	SOI	Section 4.5.2.2 describes the suitability criteria for growth media. Identification of suitable material for growth media involves screening metal concentrations for comparison to baseline soil concentrations to exclude materials with metal concentrations beyond the range of baseline soil conditions from use as growth media. It is expected that growth media within the range of baseline soil conditions would have comparable leachability and phytotoxicity properties based on the site soil surveys and observations of growth media performance in historical reclamation areas. The upper bounds for soil arsenic, antimony, and mercury concentrations for materials expected to support plant growth and development are provided in the Reclamation and Closure plan and described in Section 4.5.2.2.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	25	Soil Contamination/Chemistry The DSEIS states “[t]he mean concentrations of antimony (14.88 ppm within a range of 0.04 to 2,580 ppm) and mercury (0.972 ppm within a range of 0.005 to 283 ppm) from the samples are high but are still within the highest screening-level phytotoxicity criteria concentrations from various literature references and federal agencies in U.S. and Canada cited in the Reclamation and Closure Plan (Tetra Tech 2021a).” While these concentrations may be below phytotoxicity criteria, EPA recommends the FEIS evaluate how elevated soil concentrations will impact surface water quality in the Environmental Consequences section of the FEIS.	SOI	Section 4.5.2.2 describes the suitability criteria for growth media. Identification of suitable material for growth media involves screening metal concentrations for comparison to baseline soil concentrations to exclude materials with metal concentrations beyond the range of baseline soil conditions from use as growth media. It is expected that growth media within the range of baseline soil conditions would have comparable leachability and phytotoxicity properties based on the site soil surveys and observations of growth media performance in historical reclamation areas. The upper bounds for soil arsenic, antimony, and mercury concentrations for materials expected to support plant growth and development are provided in the Reclamation and Closure plan and described in Section 4.5.2.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	632	" <i>The effects of past mining activities and their long-term impacts to soils would remain except for the removal of legacy mine waste materials under Phase I of the ASAOC.</i> " Please specify what these impacts (effects) are.	SOI	The text has been revised to "The long-term impacts of past mining activities on soil chemistry and metal concentrations would remain ..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	633	" <i>Although none of the RFFAs identified in Table 5.1-3, except for the future geophysical work along the Burntlog Route, would physically overlap with the action alternative disturbance footprints, forest management, motorized use of road systems, fire suppression, prescribed fire and wildfire, dispersed camping, fishing, and hunting activities would continue in the CEA and vicinity, which would continue to utilize dedicated facilities (areas of TSRC) or contribute to incremental DD effects.</i> <i>Under the No Action Alternative, Perpetua would continue to comply with reclamation and monitoring commitments included in the applicable Golden Meadows Exploration Project Plan of Operations and EA, which include reclamation of the drill pads and temporary roads by backfilling, re-contouring, and seeding using standard reclamation practices; however, as described in the Golden Meadows EA, the exploration and subsequent reclamation activities would have an insignificant direct effect to geology and soils and therefore an insignificant cumulative contribution to effects upon soils and RCM.</i> " Please define TSRC, DD, and RCM here for reader.	SOI	Definitions for the TSRC, DD, and RCM acronyms were previously provided in earlier chapters and to be consistent with all acronyms, once they are first used and defined, they are not refined in other sections and/or chapters. No change made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	634	" <i>Although none of the RFFAs identified in Table 5.1-3, except for the future geophysical work along the Burntlog Route, would physically overlap with the action alternative disturbance footprints, forest management, motorized use of road systems, fire suppression, prescribed fire and wildfire, dispersed camping, fishing, and hunting activities would continue in the CEA and vicinity, which would continue to utilize dedicated facilities (areas of TSRC) or contribute to incremental DD effects.</i> " Please clarify the level of incremental impacts, and use defined Impact Definitions in cumulative impact analysis.	SOI	The text has been revised to read "(areas of TSRC) or contribute to measurable but small-scale DD effects in instances where these activities did not occur on existing disturbance."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	635	" <i>however, as described in the Golden Meadows EA, the exploration and subsequent reclamation activities would have an insignificant direct effect to geology and soils and therefore an insignificant</i>	SOI	Insignificant is defined per the criteria for approval of a project under an Environmental Assessment via the issuance of its Decision Record and Finding of No Significant Impact.

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Resources Idaho, Inc.)			<i>cumulative contribution to effects upon soils and RCM.</i> " Please clarify how insignificant is defined, and please use defined Impact Definitions in cumulative impact analysis.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	28	" <i>The DD activity area is the area within the transmission line ROW that would be subject to vegetation clearing only and is estimated at up to 500 acres. It is estimated that SGP-related vegetation clearing could initially result in DD as high as 16 percent of the ROW but would more likely be somewhere between 8 and 15 percent.</i> " Recommend noting that the additional ROW impacts are due to a request from IPCo due to recent fires in California.	SOI	The text has been revised as "The additional ROW impacts are consistent with IPCo requests to mitigate fire potential along the ROW due to recent fires in California."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	217	" <i>The Mined Land Reclamation Act of 1971 and implementing regulations require that land used for surface mining is reclaimed when mining is completed, meaning the mine operation must return the land to a "productive condition" (IDAPA regulations, Section 20.03.02).</i> " This phrasing is not included in IDAPA 20.03.02 Please check the reference and revise.	SOI	The description of the Idaho Administrative Procedures Act and IDL authority has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	218	" <i>growth media and root zone material (Tetra Tech 2020a) and "</i> : There is a more current citation in references cited. Please replace with "Root zone materials (Tetra Tech 2021a), which..."	SOI	Tetra Tech 2021a has also been added as a citation.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	219	The header of column 5 is incorrect. Please correct to: "Recommended Average GM Salvage Depth". Then remove footnote 3, and revise footnotes 4 and 5 accordingly.	SOI	Revision accepted. Column header and footnotes have been revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	220	the number "28" in row mCP, column "solum" should be 0. Please correct.	SOI	Revision accepted. Value has been revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	221	The letter "B" in row AoD+, column "Soil" should be C. Please correct.	SOI	Revision accepted. Soil horizon has been revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	222	Add to footnote 1A: 1C Areas of Previous Disturbance – With GM Salvage Potential"	SOI	Revision accepted. Footnote has been revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	223	Recommend that the title of Section 3.5.4.7 be changed to "Soil Metals" rather than "Soil Contamination", considering the text in the first sentence references " <i>natural background concentrations of some metals</i> ".	SOI	The section title has been revised to Soil Chemistry.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	224	"The mean concentration of arsenic (115 ppm) ...". Recommend adding the range of arsenic concentrations here to be more informative (i.e., "..., with a range of 0.22 to 7380 ppm...").	SOI	The ranges of soil arsenic concentrations has been added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	225	"...creation of growth media through composting (Tetra Tech 2019a)". Throughout this section, this reference should be Tetra Tech 2021a. The 2019 RCP has been superseded by the 2021 version which is revised to the MMP.	SOI	The reference has been added or updated depending on whether the 2019 RCP contains additional information.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	226	"...creation of growth media through composting (Tetra Tech 2019a)". Suggest replacing this passage with: "...to offset the anticipated growth media deficit by using unconsolidated glacial till and colluvium/alluvium from the Yellow Pine Pit (Tetra Tech 2021a)."	SOI	Revision accepted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	227	"SGP-related TSRC within the PNF activity area under the 2021 MMP would total approximately 1,302 acres, with approximately 104 of these acres occurring over areas of existing TSRC". The 104 ac value seems to be incorrect per the table (904 acres). Please correct.	SOI	Revision accepted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	228	"The magnitude of impacts to soil resources within the PNF activity area includes excavation, grading, or filling of 1,457 acres (approximately 120 acres of which are already disturbed...". The 120 acre value seems inconsistent with table and value reported in Paragraph 2 of this page. Please verify and correct if needed.	SOI	Revision accepted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	229	"Final reclamation of the new transmission line corridor from the Johnson Creek Substation to the SGP would occur during the closure and reclamation phase beginning after Mine Year 15". The 2021 RCP states that electrical transmission line will be removed and reclaimed when no longer needed to power the water treatment facilities located at the Project site. This statement regarding mine year 15 is erroneous and should be corrected.	SOI	The timing for reclamation has been corrected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	230	Full paragraph 4 - Reclamation Cover Materials. RCM is not restricted exclusively to GM (and SBM). Instead, RCM will also be composed of one or more of the following materials: development rock, YPP Till, or other materials that are non-PAG/ML and meet the Root Zone Material Suitability Guidelines; development rock, YPP Till, or other materials that are non-PAG/ML and meet the Root Zone Material Suitability Guidelines; natural regolith/random cut/fill; streambed material; and rock armoring layers. This and other sections of the SDEIS should be revised according to the definition of RCM presented in this comment and inferred in the RCP.	SOI	Text has been revised to read "Suitable RCM within the Operations Area Boundary would be salvaged for subsequent use in reclamation. Salvaged soil material would come ... horizons. In addition to soils that would be predominantly used as seed bed material and growth material, other materials used in facility covers would be derived from Yellow Pine pit till and other mined materials that are non-PAG / non-metal leaching and meeting the suitability guidelines. GMSs would be..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	231	Please validate reported growth media volumes with values reported in Tetra Tech 2021a.	SOI	The value of 1,658,075 BCY was revised to 1,657,246 BCY and the value of 797,702 BCY was revised to 796,873 BCY to match Table 3-9 of Tetra Tech 2021a.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	232	"Options being considered by Perpetua for developing additional GM for the SGP include: utilizing materials from off-site borrow areas and supplementing additional salvage of GM through composting ". This statement is a remnant from an outdated RCP and the 2020 DEIS. The 2021 RCP states Yellow Pine Pit glacial till will be used to offset the deficit along with growth media amendment of chipped wood and compost. The 2021 RCP also discredits utilizing offsite soils borrow sources. SDEIS Section 2.4.7.12 and Table 2.4-12 (pg. 2-113) of this document notes the same YPP till source referenced in the 2021 RCP (Tetra Tech 2021a).	SOI	The text has been revised to replace off-site borrow areas with Yellow Pine pit glacial till.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	233	"This small amount of compost is not expected to provide sufficient long-term benefits to the GM that would be important for revegetation ". Please remove. This statement is speculative and is not presented with any supporting scientific data.	SOI	The text has been revised to "This small amount of compost, corresponding to 0.25 inches of compost mixed into 6 inches of GM, is not expected to provide sufficient ..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	234	"These stockpiles would be up to 200 feet tall, and the time between GM salvage and placement would vary greatly between different SGP facilities but could remain in stockpiles for as long as 1 to 42 years... "This is not accurately characterized; all but a few very small areas associated with long-term water treatment will be reclaimed by mine year 24. Additionally, the Fiddle Creek GM stockpile footprint is scheduled to be reclaimed and restored in mine year 23. See 2021 RCP (Tetra Tech 2021a).	SOI	42 years has been replaced with 24 years.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	235	"Metal concentrations in growth media would be screened for comparison to baseline soil concentrations pre-reclamation per Forest Service requirements." All native soils (not previously disturbed) salvaged for use as growth media have an inherent metals concentration which is those soil's baseline condition. Therefore, this SDEIS statement, implies that salvaged soils should be tested to determine if they abide by their own baseline conditions or to determine if they increase in metals concentration between salvage and reclamation (while in the GM stockpile). The intent of such screening should be targeted at non-native (previously disturbed) materials desired to be used as growth media and not the existing undisturbed soils salvaged for future reclamation use. Rephrase as follows. "Metal concentrations in non-native soils would be screened for comparison to native baseline soil concentrations". Also, add a reference for the statement of "...per Forest Service requirement" if this is to be used in the FEIS.	SOI	Revision not accepted. The screening requirement was developed due to the uncertainty in the suitability of reclamation cover materials both inherent and related to mining activity.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	236	"Planned screening of soils for arsenic content would reduce this uncertainty." Planned screening and rejection of some soils with sustainable existing native vegetation based on a screening level criteria set from off-site locations would be detrimental to reclamation success. Please clarify the basis for any proposed soil screening protocol.	SOI	Screening of soils to establish suitability for use as reclamation cover material would be conducted per Forest Service requirements. This basis is described in the preceding paragraphs.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	237	Full paragraph 3. The conclusion here is based on one reference. The conclusions of other peer-reviewed research publications should be considered before discounting the capacity of phosphatic fertilizers to increase plant tolerance to soil arsenic, which is not necessarily synonymous with arsenic solubility in soils. An example of this is Abbas, et. al. (2018) which states: "Many studies have shown that the addition of phosphate to plants under As stress has positive effects on plant growth and as such could increase plant tolerance against As stress. It is well established that both As and Pi have similar chemical properties and use the same carrier molecules for the uptake in plant roots via plasma membranes. Many genetic studies and physiological data from different species have revealed that As(V) and Pi are taken up by the same transporters." Abbas, et. al. (2018) Arsenic Uptake, Toxicity, Detoxification, and Speciation in Plants: Physiological, Biochemical, and Molecular Aspects. <i>Int J Environ Res Public Health.</i> 2018 Jan; 15(1): 59.	SOI	The NEPA analysis is obliged to note the potential effects of phosphate fertilizer usage on arsenic solubility. The text has been revised to acknowledge the Abbas et al. 2018 finding to read "The released arsenic becomes available for uptake by plants, and phytotoxicity has been observed in some instances, even after multiple wetting and drying cycles. In other instances, phosphate addition to plants has the effect of increasing plant tolerance against arsenic stress (Abbas et al. 2018)."

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	239	"All the SGP-related disturbance at the mine site would be subject to reclamation activities, with the exception of approximately 278 acres associated with the Hangar Flats high walls, the West End pit lake and high walls, Yellow Pine pit high walls, the Stibnite Lake feature, plus the Midnight, West End, and Plant Site ponds (Tetra Tech 2019, 2021b)". This statement is inaccurate as presented as all contact water and plant site ponds will all be reclaimed. Similar to streams pit lakes such as West end and Stibnite lake should not be defined as TSRC given there is no pre-mining soils on these areas to be committed and they are on private lands	SOI	The Midnight, West End, and Plant site ponds have been removed from the list.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	238	(Payette Forest Plan GL-37 and 38) - Please define these citations.	SOI	GL-37 and 38 are items within the Payette National Forest Land and Resource Management Plan. The citation has been revised to Forest Service 2003a to reflect the source document.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	8	<p>Comments on Sections 3.5, 4.5 and the Soils and Reclamation Cover Materials Specialist Report are provided and include technical clarifications and recommended language revisions for clarity. A few comments are broadly applicable to these sections of the SDEIS and are provided below: The SDEIS references, in several instances, outdated versions of the Reclamation and Closure Plan (RCP).</p> <p>All references to the RCP should be Tetra Tech 2021a. The 2019 RCP has been superseded by the 2021 version which was revised based on the updated MMP (Refined Proposed Action [ModPRO2]). Section 4.5 of the SDEIS describes a deficit in Growth Media (GM) volumes needed to successfully complete all reclamation and restoration activities associated with the MMP. Inconsistent with previous section statements in the SDEIS, Section 4.5 also describes, inaccurately, how the GM deficit will be offset. To enhance accuracy of the MMP and consistency, all SDEIS references to offsetting the predicted GM deficit using material other than unconsolidated glacial till and colluvium/alluvium from the Yellow Pine pit should be revised to reflect that the predicted GM deficit will be offset using Yellow Pine pit materials as stated in SDEIS page 2-14, 2-90, 2-113.</p> <p>Perpetua Resources recognizes that existing TSRC within the Payette National Forest (PNF) and Boise National Forest (BNF), as calculated in the Soils and Reclamation Cover Materials Specialist Report (USFS, 2022) and illustrated in Section 4.5 of the SDEIS, are below the 5 percent threshold set in the PNF Forest Plan (Forest Service, 2003) and BNF Forest Plan (Forest Service, 2010). Perpetua Resources also recognizes the MMP includes dedicated facilities that will likely cause exceedance of the 5 percent threshold for TSRC, requiring a project specific amendment to the PNF and BNF Forest Plans (Forest Service, 2022). However, Perpetua Resources has developed the RCP so the majority of sitewide reclamation is achieved within a 50-year timeframe. Specifically, reclamation of approximately 20 percent, 40 percent, and 80 percent of the total area of planned new and re-disturbance associated with the Project will be initiated by project years 12, 16 and 25, respectively. The RCP applies a combination of quantitative and qualitative metrics of soil productivity, consistent with the BNF and PNF Forest Plans, that will be monitored to demonstrate that reclamation performance standards and bond release criteria are met. Meeting these standards and criteria defined in the RCP would indicate that the site has been reclaimed and soil productivity, as defined in the BNF and PNF Forest Plans (GL-35), is restored, at minimum, to 40 percent of natural background soil productivity in timeframes that are much shorter than assumed in the SDEIS. Perpetua Resources requests revisions to this section that recognize the value of the MMP reclamation and restoration work in reduction of TSRC as described in the Forest Management Plan's definitions of TSRC and Soil Productivity (PNF, 2003, Amended 2010).</p>	SOI	<p>The SDEIS utilized the 2019 and 2021 versions of the Reclamation Closure Plan in its analysis. Revisions have been made to reflect items where the 2021 version superseded the 2019 version.</p> <p>In Section 4.5.2.2, the analysis recognizes that reclamation activities would achieve their objectives on a shorter time scale (e.g., 5 to 10 years) but that in general, restoration of soil productivity occurs over a very long-time scale (centuries to millennia).</p>

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Ruth Lewinski	19378	6	The soil contaminant (most notably for arsenic, antimony and mercury) values outlined in the SDEIS are significantly different from those in the DEIS. My biggest concern is with arsenic. Arsenic is a known carcinogen. In disturbing any of the soil at these sites, arsenic will be a notable component of the dust generated. This dust generated will not only be an air contaminant, but the silt will travel in stream beds. Onsite roadbeds will have this dust, which will be tracked along transport areas. Additional issues will be present with attempted dust suppression methods, using oil or water, and even road salt and gravel (Ice) as arsenic compounds are likely to form. I believe that the calculation presented underestimates the amount of arsenic contamination that will be present. Arsenic, antimony and mercury have known health risks, including having carcinogenic properties. The Forest Service should independently perform the emission calculations, air quality modeling, and risk assessment associated with arsenic, mercury and antimony contamination, as I do not believe that current estimates are accurate. These values need to be published and available to the public, especially along recreational corridors. Soil cleanup criteria should meet CERCLA guidelines.	SOI	<p>Section 4.3.2.2 describes the presence of arsenic and other metals in dust and Section 4.9.2.2 describes the presence of arsenic and other metals in water resources. These descriptions also inform Section 4.18.2.2 that describes potential health effects associated with arsenic in dust and water.</p> <p>Dust control measures employ application of water and gravel but do not employ application of oil and salt. These applications do not form arsenic compounds.</p> <p>The Forest Service reviewed the predictive models used to assess arsenic and other metal concentrations in dust and water resources and accepted those results for use in the SDEIS. These arsenic and metal concentrations are available through the SDEIS along with their source documents.</p> <p>The Forest Service’s consideration for the Project is based on comparison of arsenic and other metal concentrations to existing site conditions plus Federal and Idaho regulatory standards.</p>
David Chambers	17634-A	12	<p>4.5.2.2 2021 MMP – Reclamation Cover Materials</p> <p>The discussion in this section notes that the amount of cover/ growth material available for reclamation is only 48% of the amount of material that will be needed (p. 4-87). It is then noted that; “Options being considered by Perpetua for developing additional GM for the SGP include: utilizing materials from off-site borrow areas and supplementing additional salvage of GM through composting.”</p> <p>At this point, a commitment to supply the additional planned/required growth material is required. There is a danger is delaying this commitment until a later time, when there will obviously economic pressure to just say the amount of growth material available will be utilized to the “maximum extent possible”, a commitment seen by this reviewer in other EISs. If the plan/promise in the EIS is to provide the remaining cover/growth material, then the commitment to do so should be clear.</p>	SOI	The SDEIS has been revised to clarify the source of reclamation cover material, i.e., mined material from the Yellow Pine pit with addition of soil amendments.
Samuel Penney (Chairman)	19396	77	<p>3.5 Soils and Reclamation Cover Materials</p> <p>The SDEIS discloses that the total amount of new and re-distributed historical disturbance associated with the Project is approximately 1,675 acres, 137 of which 522 acres are highly disturbed. 138 Soils in the Project area are described as young, poorly developed, and occur on steep slopes. The SDEIS focuses on detrimental disturbance (“DD”), total soil resource commitment (“TSRC”), existing soil types, and quality of the reclamation cover materials.</p> <p>The relevant laws, regulations, policies, and plans in the SDEIS fail to include Payette and Boise Forest Plan management directions for soils. Chapter 3.5.3 should include management direction specific to soils, not just reference to achieving desired conditions for wildlife and wildlife habitat. For example, the SDEIS should recognize that the Plan’s desired conditions common to all resources includes that “[s]oils retain all or most of their natural productivity and are in a condition that promotes vegetative growths, hydrologic function, long-term nutrient cycling, and erosional stability.” And that ecosystems on the Forests “[a]re dynamic in nature and resilient and resistant to natural and man-caused disturbances.” The Forest Plans also have specific direction, including goals, objectives, standards, and guidelines outlined across several pages, which should be included in the SDEIS.</p> <p>Both Forest Plans include specific desired conditions that “[s]oil protective cover, soil organic matter, and coarse woody material are at levels that maintain or restore soil productivity and soil hydrologic functions where conditions are at risk or degraded. Soils also have adequate physical, biological, and chemical properties to support desired vegetation growth.” The management direction continues to describe desired conditions for large woody debris, and states that “...management actions result in no long-term degradation of soil, water, riparian, and aquatic resources conditions.” A goal shared by both Forests, but not mentioned in the SDEIS, is to “[m]aintain soil productivity and ecological processes where functioning properly, and restore where currently degraded. Maintain the physical, chemical, and biological properties of soils to support desired vegetation conditions and soil-hydrologic functions and processes within watersheds.” The Forestwide management direction for soils should provide the</p>	SOI	Section 3.5.3 describes the application of the Forest Plans and Forest Service Manuals to the Project. The EIS describes how the Project would not meet Forest Plan requirements regarding the duration of impacts to soils and therefore, would require a Forest Plan Amendment as described in Appendix A of the EIS.

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			fundamental benchmarks for measuring a project's impacts to soils. The Forest needs to better explain how the proposed Project meets Forest Plan direction for soils.		
Samuel Penney (Chairman)	19396	79	The SDEIS also references Forest Service Manual 2550 Soil Management. Contrary to what is stated in the SDEIS, FSM 2550 does not include “[p]ractical methods to ensure that reclamation cover materials are suitable...” FSM 2550 sets the authorities, objectives, and policies for soil quality management and resource inventories at the planning and project levels. Under FSM 2550, the Forest Chief has the responsibility to ensure “...that soils on National Forest System lands are conserved and protected in order to maintain healthy watersheds that provide critical ecological services.” Due to the nature of the existing conditions and what is proposed, the Forest needs to analyze and monitor soil quality to ensure that ecologically sustainable soil management practices are being applied (as pursuant to FSM 2551.12). This includes estimating the type, amount, and degree of change to soil quality that the proposed activities may produce (activities such as, but not limited to stockpiling and adding compost, fertilizer, and any other amendments to the reclamation cover materials). While FSM 2550 does not directly spell out “[p]ractical methods to ensure that reclamation cover materials are suitable”, the Forest needs to draw upon the plethora of restoration and reclamation research generated from its own research and development professionals and collaborators and not rely solely on Perpetua’s proposed actions, most of which are not supported or justified with best available scientific information.	SOI	The text has been revised to remove "Practical methods to ensure that reclamation cover materials are suitable are summarized in the guidelines." Section 4.5.2.2 describes the potential effects of stockpiling, composting, and fertilizer addition as proposed by the Project's Reclamation Closure Plan. Reclamation cover materials would be subject to screening to assess their suitability at the time of closure and performance monitoring post-closure.
Samuel Penney (Chairman)	19396	80	Existing Soil Types The SDEIS describes existing conditions of soil types in the Project area, specifically soil types suitable and unsuitable for reclamation and for soils located across six broad areas of potential disturbance, access roads, and off-site facilities. The Tribe is concerned about legacy mining disturbance and that most soil types contain elevated levels of arsenic, antimony, and mercury. The Tribe understands that the soils in the project area naturally have high concentrations of metals, however, the environmental consequences of the proposed actions coupled with legacy disturbance outweigh concerns regarding natural concentrations. Just because natural conditions appear unsuitable or high does not justify or support the purpose and need. If baseline conditions are such that reclamation would be impossible, the Forest should reject the Project.	SOI	Based on the soil surveys conducted, the Forest Service did not conclude that reclamation would be impossible. However, there are materials on site that are not suitable for use as reclamation cover materials based on observation of their current performance as soil covers resulting in poor revegetation or non-attainment of growth media criteria. Therefore, these materials would be excluded from Project reclamation use.
Samuel Penney (Chairman)	19396	82	The SDEIS should also include an assessment of soil quality with respect to above and belowground biological components. What is the type, amount, and quality of vegetation growing on disturbed and undisturbed soils in the Project area? What is the type, amount, and quality of soil microorganisms in disturbed and undisturbed soils in the Project area? The Tribe feels that this information is necessary to understand the affected environment and environmental effects of each alternative.	SOI	Site soil surveys describe the current soil conditions and vegetation. These surveys quantified soil organic matter as an indicator of biological activity but did not describe microorganisms specifically. As described in SDEIS Section 4.5.2.2., Project activities such as soil salvage and stockpiling are expected to have a negative effect on microbial activity during construction and operations that would need to be addressed with soil management and amendments to stimulate microbial activity during closure and into post-closure. The presence of below-ground biological components is acknowledged in the Reclamation Closure Plan that would collect soil with high organic matter as seed bank material to facilitate the revegetation. The organic contents of soils were quantified via laboratory analyses of samples collected during 2017 and 2020 soil surveys.
Samuel Penney (Chairman)	19396	83	Existing Total Soil Resource Commitment and Detrimental Disturbance The SDEIS should reference the Forest Plan management direction (e.g., Guidelines and Standards) for TSRC and DD in Chapter 3.5 (e.g., Forest Plan Standard SWST03 requires, in an activity area where existing conditions of TSRC are below five percent of the area, management activities to leave the area in a condition of five percent or less TSRC following completion of the activities). Figure 3.5-1 needs to show the extent of existing TSRC and DD and provide information about those specific areas. The SDEIS needs to clarify the existing DD for each Forest.	SOI	Section 4.5.2.2 describes how the TSRC in the Project's activity area within the Payette National Forest would increase above 5% during the Project and how soil would recover over a long period of time. The duration of that recovery time is the subject of a Forest Plan Amendment because that timeframe is expected to exceed Forest Plan guidelines and standards for recovery time. The existing and proposed extents of TSRC are presented on Figure 4.5-1. The text has been revised to clarify the DD present in the Boise National Forest and the Payette National Forest.

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Samuel Penney (Chairman)	19396	84	The SDEIS should also include the number of acres excluded from the TSRC analysis area, but would be impacted by SGP components, including acreage within IRAs, RNAs, Wilderness, and private land. How does the Forest disclose impacts to soils in these areas if they are not captured/categorized as DD or TSRC? Why didn't the Forest perform soil surveys for the existing or proposed transmission line ROW? If field investigations were not performed, how can the Forest determine existing DD and potential DD for each of the proposed actions? The SDEIS states that "[a]reas considered for TSRC are excluded from this (DD) requirement, but DD applies to vegetation clearing for new and upgraded utility corridors in areas that are available for multiple uses on NFS lands." What guidance and/or best available science does the Forest use to decipher whether soil disturbance is TSRC or DD? This guidance and decision-making process should be part of Chapter 3. Why is the TSRC activity area on the Boise NF so large (>76,000 acres), and why are some areas identified as TSRC where no project activities would occur? This would appear to minimize the project-affiliated TSRC. How is the TSRC activity area determined and delineated?	SOI	<p>The area excluded from the TSRC analysis is 2,888 acres.</p> <p>While not accounted for in a TSRC or DD calculation, Project disturbance on these excluded areas is described with regard to its effects on resources including soil reclamation (4.5.2.2), vegetation (4.10.2.2) and wildlife (4.13.2.2).</p> <p>The description of anticipated DD along the powerline route was developed based on an estimate of vegetation clearing (500 acres) and a conservative estimate that soil compaction and puddling would occur on 15% of the vegetation clearing area. The exclusion of TSRC from DD as described in Section 3.5.4.9 was not utilized in the effects analysis in Section 4.5.2.2 and has been removed from the revised text.</p> <p>The TSRC area within the Boise National Forest was defined based on the subbasins where Project-related activity is proposed to occur. In many instances, this Project activity could be limited (e.g., powerline improvement, repeater tower, etc.), however, those subbasins were included because they would experience some level of activity within them.</p>
Samuel Penney (Chairman)	19396	171	<p>4.5 Soils and Reclamation Cover Material</p> <p>Under the National Forest Management Act of 1976 ("NFMA"), all Forests are required to assess the impacts of management actions to ensure that they "will not produce substantial and permanent impairment of the productivity of the land." Perpetua's Project would create permanent adverse damage to soil resources. Under both action alternatives, soil productivity on more than 2,000 acres of land will not recover. This environmental consequence jeopardizes the recovery and health of the Tribe's treaty resources. The Tribe disagrees with Perpetua that they can leave the site in a better post-mine condition. The duration of impacts to soil resources would exceed the 50-year threshold for some actions which will prevent conditions from ever being better than if no further actions at the Project site were to occur.</p>	SOI	These effects are described in Section 4.5.2.2. While extended in duration, the extent of soil effects would be reduced by reclamation activities compared to the current unreclaimed condition of the site.
Samuel Penney (Chairman)	19396	172	The Forest Service Manual directs soil resource management to focus on ecological functions with an objective of maintaining or improving soil quality on National Forest Lands "to sustain ecological processes and function so that desired ecosystem services are provided in perpetuity" and with the policy to "[m]anage ecosystems to maintain or improve soil quality." Under both action alternatives, there would be long-term use of soil resources for mining purposes and the activities would completely remove native soil and there would be permanent loss of soil productivity. Without adequate soil resources, Tribal rights and interests will not be provided in perpetuity.	SOI	These effects are described in Section 4.5.2.2. Effects of reclamation on Tribal treaty rights access are described in Section 4.24.2.2, and are identified as a localized, long term, moderate to major impact.
Samuel Penney (Chairman)	19396	173	The SDEIS fails to evaluate impacts to soils from dust abatement applications and to fully incorporate and analyze components of the mitigation measures and the RCP. Several components of the RCP are not analyzed or considered in the SDEIS for soils, including stockpile locations, conditions, and specifications (e.g., slope construction should be less steep than 2.5H:1V considering the landscape), and the impact of using alternative growth media materials to achieve reclamation goals.	SOI	<p>Dust control applications are designed to minimize their effects on soils, by keeping the applications on the disturbed running surfaces of roadways.</p> <p>Soil stockpiling practices are described in Section 4.5.2.2 which acknowledges the potential for stockpiling to affect soil conditions. The primary location of the soil stockpile would be the Fiddle Growth Media Stockpile along with some smaller stockpile locations around the site (Figure 2.4-2). Best management practices for soil stockpiles to minimize the stockpiling effect on soil productivity are described in Section 4.5.2.2.</p>
Samuel Penney (Chairman)	19396	174	It is concerning that under both action alternatives, the Forests will be violating Forest Plan Standards for soil resources. The action alternatives would violate the following Standards on the Payette National Forest: SWST02, SWST03, MA13 MPC 3.1-1301, and MA13 MPC 3.2-1306. The action alternatives would violate the following Standards on the Boise National Forest: SWST02, MA20 MPC 3.1-2010, MA21 MPC 3.1-2108, MA19 MPC 3.2-1919, MA20 MPC 3.2-2010, MA21 MPC3.2-2113, MA20 MPC3.2-1914, MA20 MPC3.2-2005, MA21 MPC3.2-2108, and MA20 2006. The Forest needs to disclose the standards that will not be met, provide justification for the violations, and explain why the Forest is not proposing project-level amendments (except for SWST03 on the Payette).	SOI	The EIS acknowledges that the Project does not meet the duration requirements for soil impacts under the Forest Plan and proposes a project-level Forest Plan amendment to address that circumstance, recognizing that SWST03 is not met while the other soil standards are met.

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Samuel Penney (Chairman)	19396	175	<p>Total Soils Resource Commitment</p> <p>The Forest needs to clarify whether the TSRC activity area includes IRAs and other special designated areas because the SDEIS includes conflicting statements. The amount of TSRC increases dramatically under both action alternatives. Recovery of greater than 40% soil productivity within a 50-y timeframe would be unlikely on more than 2,000 acres of land under both action alternatives. Development rock and unreclaimed areas (e.g., open pits) would be permanent TSRC. Because TSRC would exceed Payette Forest Plan direction, the Forest is proposing to waive Standard SWST03. The TSRC would increase from 3 to 17% on the Payette (1,457 acres). How can the Forest waive a Standard, and in doing so, what does that mean in terms of reclamation, post-mining land use, meeting Forest Plan management direction, and providing treaty resources in perpetuity? A large portion of the estimated TSRC would occur within the Operations Area Boundary. The SDEIS states that “[a]fter mine closure, hunting, fishing, and gathering areas would be restored through reclamation and revegetation of disturbed areas and wildlife would return.” If this statement is true, the Forest would not need to amend SWST03. The SDEIS also states in several places that “[t]here are no known types of natural resources (or subsistence resources) available for exercise of treaty rights in the Operations Area Boundary that are not available on the surrounding NFS lands.” The SDEIS discloses that the Forest is taking a conservative approach to the uncertainty in reclamation success by categorizing all project-related disturbances as TSRC (with the exception of the transmission line ROW because the Forest has determined this to be DD) and requesting an amendment to exceed the TSRC standard on the Payette. Uncertainty in reclamation success should be a reason for the Forest to reject the Project. The Forest is treating the TSRC impacted areas as sacrifice zones and furthermore, the Forest is uncertain about Perpetua’s ability to restore soil productivity. The Tribe finds the proposed actions and TSRC amendment unacceptable. It is unacceptable to the Tribe for the Forest to exceed a Forest Plan Standard, treat federal land upon which the Tribe has treaty rights as sacrifice areas, and allow a Project to exceed the TSRC Standard at the Forestwide scale (which would have adverse consequences to future foreseeable projects on the Forest). Granting an amendment to TSRC sets the precedent that mining companies can continue to permanently damage soil resources on NFS lands.</p>	SOI	<p>The SDEIS Section 4.5.2.2 specifies that IRAs and other special designated areas are not included in the TSRC calculation.</p> <p>Based in its analysis of soil productivity, the Forest Service proposes a Forest Plan Amendment to address the circumstance where recovery times are expected to be longer than the period specified in the Forest Plans.</p> <p>The Forest Service does not expect impacts to soil productivity to be permanent but does recognize a lengthy soil recovery period.</p>
Samuel Penney (Chairman)	19396	176	<p>Existing conditions detail that the DD analysis area occurs across both Forests, however environmental consequences to DD are only described for the Payette. The SDEIS needs to disclose impacts to DD on the Boise National Forest and clarify any violations of Forest Plan Standards (e.g., standard SWST02). Detrimental disturbance would occur on 500 acres of the transmission line ROW. Vegetation clearing would occur indefinitely along the transmission line and be maintained by Idaho Power Company. The Forest estimates that vegetation clearing in the transmission line ROW could result in DD as high as 16% (which exceeds Forest Plan Standards for DD). How did the Forest estimate this number without having performed a site survey along the existing and proposed utility line corridor? How is the Forest considering DD on timber resource areas when Perpetua has not provided an acreage estimate or indicated the location of forest resources intended for use? If all forested areas in the analysis area meeting the definition of timber resources are assumed to be harvested for sale during the Project’s construction and operations, what is the overlap for consequences to soils (i.e., would these areas fall under DD or TSRC)? What is the extent of DD on areas that have experienced wildfire in the past 20 years? The Project area spans 13 IRAs, and the SDEIS discloses that 740 acres of vegetation clearing would occur within six IRAs. How many of these acres are analyzed as DD?</p>	SOI	<p>A description of the distribution of DD between the Payette and Boise National Forests was added to the EIS. Of the total DD analyzed, 88% occurs in the BNF while 12% occurs in the PNF.</p> <p>The description of anticipated DD along the powerline route was developed based on an estimate of vegetation clearing (500 acres) and a conservative estimate that soil compaction and puddling would occur on 15% of the vegetation clearing area.</p> <p>SDEIS Tables 4.14-1 and 4.14-2 describe the locations where Project activities would remove timber. While merchantable timber may be sold, the Project Reclamation and Closure Plan utilizes salvaged timber for use as reclamation soil cover material. Therefore, timber resources are not assumed to be harvested for sale.</p> <p>The DD areas that have experienced wildfire in the past 20 years are along 22.7 linear miles off the DD areas or 54% of the area analyzed.</p> <p>Of the 740 acres of vegetation removed within six IRAs, 37 acres associated with 3.1 linear miles were analyzed as DD.</p>
Samuel Penney (Chairman)	19396	177	<p>Reclamation Cover Materials</p> <p>The Project would disturb approximately 3,564 acres of land (NFS and non-NFS land combined) under the preferred alternative. The Tribe is concerned about the reduced quantity and quality of reclamation cover materials. Project-related disturbance at the mine site under both action alternatives would be subjected to reclamation activities, except approximately 278 acres associated with the Hangar Flats high walls, the West End pit land and high walls, Yellow Pine pit high wall, the Stibnite Lake feature, plus the Midnight, West End, and Plant Site ponds. Soil productivity of un-reclaimed disturbance would be reduced to zero on 278 acres. For all other areas, disturbance would be subject to reclamation, which</p>	SOI	<p>The Reclamation Closure Plan sets suitability criteria for materials to be used for reclamation soil cover. Details on the specific properties of the amendments that would be used to achieve reclamation requirements from the Reclamation Closure Plan Sections 3.3.3.4, 3.3.3.5, and 3.3.4 have been added to the Final EIS.</p>

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			requires approximately 1,650,075 bank cubic yards ("BCY") of suitable soil material. Under both alternatives, there would not be enough suitable soil materials for reclamation (the deficit is >790,000 BCY). Perpetua proposes to use off-site materials (e.g., commercial compost from beef and dairy feedlots, weed-free alfalfa hay, straw mulch, "potentially other soil amendments", fertilizer and on-site materials (e.g., from food waste composting) to both replace the deficit and improve the quality of the reclamation cover materials. The SDEIS, however, lacks any analysis or best available science in regards to the proposed soil amendments and how they would comply with regulations, policies, and plans.		
Samuel Penney (Chairman)	19396	178	The Forest needs to determine the ecological and economic impacts of bringing off-site materials to a high-elevation landscape with naturally thin and poorly developed surface and subsurface layers.	SOI	Soil amendments would result in reclamation cover material characteristics that meet suitability criteria for use in site reclamation. These suitability criteria were based in part on site conditions. Therefore, use of the amendments would target reclaimed soil conditions that align with existing ecological and economic conditions associated with site soils. Amendments would need to meet Forest Service requirements (e.g., certified weed free).
Samuel Penney (Chairman)	19396	180	Perpetua also proposes to stockpile off-site compost—a counterproductive measure knowing that stockpiling can reduce soil quality.	SOI	Section 4.5.2.2 acknowledges the effects of stockpiling on soil productivity and describes Project practices to minimize those effects.
Samuel Penney (Chairman)	19396	181	The Tribe is also concerned about the elevated levels of metals (e.g., arsenic, antimony, and mercury) in the surface and subsurface soils and requests that the Forest require the screening of metals as part of the growth media suitability guidelines for plant growth. Trace metals are naturally elevated in surface soils in the Project area, which may hinder or limit vegetation establishment and growth. The Forest needs to take a hard look at the feasibility of reclamation and improvement of site productivity to ensure the continued existence of tribal rights and interests. The Forest needs to set the standards for reclamation and take advantage of the wealth and expertise of its own research professionals who have conducted numerous restoration and reclamation studies. Reclamation requirements shall be those reasonable, practicable, and necessary to attain standards. This should include measures of soil health (e.g., plant growth and composition, belowground microbial abundance and diversity, soil organic matter, soil texture, pH, etc.).	SOI	Reclamation cover materials would be screened to ensure that metal concentrations are within the range of existing conditions for the site and that suitability criteria based on metal concentrations are not exceeded. As described in SDEIS Section 4.5.2.2, project activities such as soil salvage and stockpiling are expected to have a negative effect on microbial activity during construction and operations that would need to be addressed with soil management and amendments to stimulate microbial activity during closure and into post-closure.
Samuel Penney (Chairman)	19396	406	5.5 Soils and Reclamation Cover Materials Under all alternatives, cumulative impacts to soils and reclamation cover materials include past and ongoing activities, such as, forest management, mining and mine reclamation, mineral exploration (e.g., Golden Meadows), motorized use, fire suppression, prescribed fire and wildfire, camping, boating, fishing, and hunting. Reasonably foreseeable future actions ("RFFA") include East Fork RAMP and South Fork Plunge Watershed Projects, but should also include projected mineral exploration activities (e.g., Horse Heaven Project and any anticipated exploration plans from Perpetua) that would create additional soil disturbance and add to the reclamation cover deficit within the Project area.	SOI	Section 5.5.2 describes the effects of cumulative disturbance on TSRC and the reclamation requirements for that disturbance. The EIS text was revised to specify the potential for reclamation cover material deficit associated with the reclamation requirements.
John Rygh		2	Where to start? How about the end game - "restoration". A key slogan of the proponent, Perpetua Resources, is "Restore the Site". I haven't heard that much lately. Perhaps they read the SDEIS and the accompanying Soil and Reclamation Specialist Report which make it abundantly clear that post-mining reclamation (much less anything approaching true ecological restoration) success will be extremely difficult if not impossible to achieve. Having thought a fair bit about restoration options out at Stibnite during my tenure with the Payette NF, this comes as no surprise to me. Basically, there is very little soil to work with out there to begin with and what is there is of poor quality. To make matters worse, the Forest Service proposes to amend the Forest Plan to allow the total destruction of 17% of the project area soil (measured by TSRC). Aldo Leopold had this to say about that: "The destruction of soil is the most fundamental kind of economic loss which the human race can suffer."	SOI	Comment noted. No response required.
John Rygh		4	Issue: Available RCM may not be of sufficient quantity or quality to achieve reclamation objectives of returning disturbed areas to productive conditions that sustain long-term wildlife, fisheries, land, and water resources, as defined in the Reclamation and Closure Plan (Tetra Tech 2021a).	SOI	The EIS has been revised to clarify the discussion regarding the use of Yellow Pine pit till as reclamation cover material to address the quantity of reclamation cover material required. The effects of stockpiling on soil quality and measures to minimize those effects are described in Section 4.5.2.2. The section also describes the arsenic, antimony, and mercury

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			<p>This answer to this second issue is uncertain and raises a plethora of questions that are not encouraging. A host of negative factors suggest the ultimate success of reclamation (particularly revegetation efforts) I at the site is very much in doubt.</p> <p>Page 4-85 identifies the primary factors:</p> <p>There are three primary challenges associated with the quality and suitability of available RCM for the SGP: (1) the overall relatively poor existing quality of the upland soils (unit mixed typic cryorthents) that make up approximately 62 percent of the salvageable volume at the SGP and Burntlog Route; (2) the long-term stockpiling of material; and (3) the high background concentrations of metals in the soil.</p> <p>The deficit of salvageable soil is proposed to be addressed by a number of measures to improve both quantity and quality. These measures come up short on both counts. The quantity issue is addressed by bulking up the salvaged soils with wood chips to create what is termed "Growth Media" (GM). Depending upon a multitude of factors, the incorporation of wood chips into soil (particularly in the volumes proposed) can deplete plant-available nitrogen. The effects of anaerobic conditions expected in stockpiled GM (SDEIS, p. 46) on nitrogen cycling, microbial activity, and overall soil health should be evaluated in the context of wood chip addition. Even after addition of wood chips a GM deficit of roughly 800,000 cubic yards remains.</p> <p>The Reclamation Closure Plan (TetraTech, 2021a) proposes to use glacial till and colluvium/alluvium from the Yellow Pine pit to make up the deficit. This solution does not appear to be analysed in either the SDEIS or the Soils and Reclamation Cover Materials Specialist Report (U.S. Forest Service (Forest Service), 2022c). The Reclamation Closure Plan asserts that this material will be non-PAG/ML, but only provides average concentrations for arsenic, neglecting to mention antimony or mercury. Although the chemical suitability of this material is partially addressed, there is no mention of the other suitability criteria which likely rate it as fair to poor. This material would be stored separately from the other GM, but it is unclear how it will be used. If it is blended with the other GM when applied, this is likely to result in further decline in the suitability of already questionable quality GM. There is no explanation why 1.5 million BCV would be stored in the Fiddle GM stockpile when only 797,000 BCV are needed.</p> <p>Stockpiling of the GM is another problem. Two primary factors are at play here. The depth of burial and the time in stockpiles. Both have deleterious effects on soil productivity. The proposed stockpiles are up to 200 feet high with residence times of up to 42 years. Despite a handful of mitigation measures proposed, the SDEIS at p. 4-87 concludes: "Despite these measures the storage of GM within deep stockpiles for years would still result in the loss of soil productivity, which would affect the overall quality of this material at the time of placement. The quality of the usable GM leaves much to be desired from a physical, biological, and chemical standpoint. There is simply no getting around the fact that soils in the area are generally thin and of poor quality. Perpetua proposes to increase the organic matter content of the GM by adding alfalfa hay or compost to the GM (TetraTech, 2021a, p. 3-52). Both would be sourced out of southern Idaho, incurring significant transportation costs and GHG emissions. The Soils and Reclamation Cover Materials Specialist Report (p. 74) throws cold water on this idea, stating: "The RCP identifies 10 tons per acre of compost would be incorporated into the top 3 to 6 inches of GM; however, the volume specified is minimal, translating to less than 0.25 inch of compost to be mixed into 6 inches of GM. This small amount of compost is not expected to provide sufficient long-term benefits to the GM that would be important for revegetation. Fertilizer is considered as another possible means of improving GM quality, however there is disagreement as to how the addition of phosphate fertilizer might affect plant uptake of phytotoxic arsenic. The Reclamation Closure Plan (p. 3-57) suggests bioavailable arsenic could be reduced, while the Soils and Reclamation Cover Materials Specialist Report (p. 77) states that arsenic solubility could be increased. Statistically robust greenhouse testing of the performance of the main reclamation plant species in phosphate amended GM should be required prior to field application of these fertilizers. One consequence of the shortfall in GM and SBM volume is that the reclaimed areas have much less depth of GM spread over them than the depth of native material that is salvaged. For example, comparing numbers in Tables 3-5 and 3-7 in the Reclamation Closure Plan one can note that although salvageable SBM in wetlands extends to depths of up to two feet with another foot of suitable GM below that, the proposed application depth in all but one constructed wetland is a</p>		<p>concentrations in baseline soil materials which would form the basis for comparison for growth media.</p> <p>The Reclamation Closure Plan (Figure 3.4) calls for restored wetland areas to have at least 12 inches combined of seedbed material and growth material to support revegetation of those areas. The six-inch cover that combines seedbed material and growth material would be used to reclaim ancillary facilities such as diversions, roads, and ponds constructed in cut or fill of native material. Therefore, the soil cover is expected to support revegetation of those areas.</p> <p>The Final EIS includes a measure to assess the potential for metal mobilization by fertilizer prior to any application.</p>

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			mere 2 inches of SBM over 4 inches of GM. It seems likely that the productivity and functionality of these thinly veneered wetlands would be significantly reduced from the existing areas, yet no analysis of the influence of soil depth on wetlands function is included.		
John Rygh		5	The Soils and Reclamation Cover Materials Specialist Report (p. 74) states that coarse woody debris would be scattered over reclaimed land but offers no estimate of the total volume required or where it would be sourced.	SOI	Table 3-8 of the Reclamation Closure Plan describes the volume of chipped woody debris that would be sourced from each Project component. A summation and reference to this table has been added to the EIS.
John Rygh		7	<p>Soils throughout the project area contain elevated levels of arsenic, antimony, and mercury which can have phytotoxic effects on plants. Appendix B of the Reclamation Closure Plan (Tetra Tech, 2021) attempts to address this issue and determine element concentration values that would serve to establish chemical suitability guidelines for Root Zone Material (RTZ). Why such guidelines don't appear to be applicable to GM is unclear and should be explained. A statistical analysis of soil samples concludes that:</p> <p>"It is recommended that the upper-quantile values be used to assess whether on-site soils could support plant growth and development; therefore, the Chebyshev rule of inequality value for As, Hg and Sb of 450, 17 and 68 ppm, respectively, would likely provide a realistic yet conservative estimate of upper confidence limits of the mean concentrations in soil (EPA 2015; ITRC 2012) that would be expected to support plant growth and development on site." {p. B- 19}</p> <p>The average mercury and antimony content of proposed RTZ material falls below these limits, however much of the development rock proposed for use as RTZ material greatly exceeds the 450 ppm limit for arsenic. This inconvenient fact is then immediately discounted by noting that vegetation on a previously reclaimed area with higher arsenic levels appears to be doing well. Section 5 of Appendix B then goes on to present a different approach using vegetation survival to justify a much higher arsenic suitability value of 3000 ppm. This conclusion rests on the data from just three soil pits located in one of the oldest reclamation sites in the project area. Why weren't any of the other previously reclaimed sites such as the Spent Ore Disposal Area, the Garnet Pit, or any of the exploration phase test plots chosen as well? Most of these sites are not doing very well as far as vegetation establishment (Soils and Reclamation Cover Materials Specialist Report, p. 77). Absent any rationale for site choice, this approach suggests a strong bias in site selection and sample number.</p>	SOI	Suitability requirements were informed via inspection of reclaimed areas where revegetation has been successful. Inspection of these areas allows quantification of soil conditions where revegetation success was achieved for the purpose of setting quantitative criteria. Inspection of areas where revegetation has not been successful has lessons-learned utility for reclamation planning, but setting quantitative criteria based on absence of success has greater uncertainty than benchmarking based on revegetation success.

Noise

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Paula Schappachet	19138	1	According to a mining official in the business for over 30 years, the blasting from the mine will be heard around the lake!	NOI	<p>Noise effects of from blasting are expected to raise noise levels above the 55 dBA threshold for outdoor annoyance within 0.78 miles of the blasting activity.</p> <p>Warm Lake is more than 12 miles removed from blasting activity, located on the opposite site of an intervening mountain range. At this distance, noise affects from mine blasting are not anticipated to increase noise levels above the 55 dBA threshold.</p>
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	636	" <i>Noise</i> " Please describe the lack of cumulative noise impacts and that only concurrent noise would be cumulative, similar to what was described in the Air section.	NOI	The EIS currently reads that "Cumulative noise impacts typically occur when sensitive receivers are exposed to multiple noise sources at approximately the same time." This description is consistent with only concurrent noise being cumulative.
Alan Haslam (Vice President, Permitting,	19325	637	" <i>Noise related to access traffic and haul roads is of importance to persons along nearby public roads and in nearby residences.</i> " This is a direct impact rather than a cumulative one.	NOI	Revision accepted. This text has been revised to exclude this direct effect from the cumulative effects section.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Perpetua Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	638	"Past actions include activities such as mineral exploration, infrastructure development, and non-mining related actions are unlikely to present current noise impacts. " Please replace " are unlikely " to " would not contribute "	NOI	Revision accepted. This text has been revised to read that past actions would not contribute to current noise impacts.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	639	"The SGP has the greatest potential to contribute to cumulative noise impacts in the vicinity of the FCRNRW. However, given the mountainous topography, cumulative impacts would likely only occur if other ongoing or future actions in the general area occur within the same mountain valley or on nearby ridgelines." If data exists, please include whether the SGP noise added to the concurrent noise would breach any noise thresholds.	NOI	The current baseline noise conditions in the Burntlog Route area are described in Table 3.6-2. A baseline level of 40 dBA at that location reflects general ambient noise levels in the nearby wilderness areas. Direct effects from SGP construction and operations are not expected to raise noise levels in the FCRNRW above the recommended noise level of 55 dBA. Cumulative effects on the FCRNRW would be related to concurrent non-SGP activities that would raise noise levels about 55 dBA when combined with SGP activities.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	240	"Based on the Gazex explosive method, the maximum noise level would be 124.0 dBA at 100 feet away (Table 4.6-2), and at 50 feet away, the maximum noise level would be 130.0 dBA. A single blast at 50 feet away causes for a maximum noise level of 144.0 dBA. " These two values are conflicting dBA levels at 50 feet. Please only report whichever of these two values is correct.	NOI	Revision accepted. This text has been revised to remove "and at 50 feet away, the maximum noise level would be 130.0 dBA."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	241	"There are approximately 7.5 missions per year, limiting the amount of avalanche abatement measures to a narrow timeframe of the year, with long-term , minor, and localized impacts. " Shouldn't this be short- term? Please replace " long-term " with " short-term ".	NOI	Revision accepted. This text has been revised to replace long-term with short-term because the period of avalanche abatement measures would be a short time period.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	9	Comments on applicable SDEIS sections include minimal technical clarifications for Section 4.6 only.	NOI	Comment noted. No response required.
Jesse Lutz	19386	12	<p>A note on noise impacts that were not considered during analysis. Noise - A noise that is 100 db at one meter will have an intensity of only 1/100 as much at ten meters. That's 20 decibels less, since a bel corresponds to a factor of ten. So at 10 meters the sound is 80 db. At 100m the intensity is down to 60 db, and so on. An SPL of 0 decibels roughly corresponds to the softest sound a human with good hearing can hear. So that would mean sound that is 10¹⁰ softer than 100 decibels. Given an inverse square law, that would correspond to 10⁵ times the original distance of one meter, or 100 km; much further than 1.5 miles or 5 miles which was used as a reference bubble to indicate potential sound impacts not only to Wilderness users but to any user of any type on National Forest Lands within and surrounding the project area - including all Wildlife species.</p> <p>Sound studies should be more plentiful, robust, in-depth, and be designed to represent accurate impacts caused by tools used while commencing mining practices - large pneumatic drills, trucks/vehicles of varying sizes and the required back up beeping sounds they create, idling equipment, generators, transmission lines, transformers, large capacity bull dozers and all associated equipment in building and maintaining roads during all weather conditions. Sounds travel differently during different atmospheric conditions and seasons therefore requiring higher levels of consideration and analysis to see honest representations of sound impacts stemming from this proposal.</p>	NOI	<p>As described in Table 3.6-2, a baseline condition of 40 dBA was used for ambient noise in wilderness areas. The 1.5 mile area is associated with the use of the 40 dBA baseline condition.</p> <p>Estimates for average noise levels with and without blasting were developed and described in Section 4.6.2.2 of the SDEIS. These estimates are based on the equipment proposed for project use.</p> <p>As noted in Section 4.6.2.2, ground absorption and atmospheric conditions in the project area were considered in forecasting the distances over which noise from the SGP would attenuate to 55 dBA.</p>

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Jesse Lutz	19386	14	According to the SDEIS - anyone recreating or using NFS lands within 1.5 miles of the proposed project area will be exposed to the sounds of day/night mining operations. How many acres is that compared to the actual acreage of the closed project mining area? Knowing this will represent a comparable percentage table of land impacts used by mining and those not being used by mining activities that are directly impacted at a 24 hour/7 days a week/365 day time frame.	NOI	Section 4.6.2.2 describes that noise from the SGP would attenuate to 55 dBA approximately 0.60 miles from the source of the activity. The area within 0.6 miles of the source of the activity. The area within 0.6 miles of project-related activities is approximately 9,627 acres.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	174	<p>Avalanche paths BKL-7, BKL-9, BKL-12, RC-1, and MCR-1 have anticipated explosive targets that are less than 1500 feet from the Frank Church River of No Return Wilderness boundary line. Not only is noise from helicopter flights to deliver explosive charges to these paths a potential impact but noise from the charges themselves is more apt to travel down slope into the valleys in the east side of Meadow Ridge and into the top of the Indian Creek drainage. As wolverines tend to avoid areas near roadways and individuals in the FCRNRW could be affected by traffic noise at 40 dBA, the proximity of these targets to the FCRNRW and the effect on wolverines in the FCRNRW should be assessed. At least one study has found noise levels above 100 dBA at 4,000 feet from Gazex explosions. Even if Gazex installations are not anticipated for the SGP, the SDEIS may underestimate the noise level attributed to avalanche control work. For instance, DAC (2021), while analyzing noise for case charging with 2 and 4 pounders, also assumes that charges delivered via helicopter will consist of “25 lbs of ammonium nitrate and 2 lbs booster per shot.” DAC (2021), at 47. Although 25-pound sacks of ANFO lobbed out of the side door of a helicopter are an effective tool for triggering large deep slab avalanches, they create a much larger explosion—and therefore higher level of dBA—which may be similar to Gazex explosions. During control missions conducted via helicopter, ANFO may be the preferred charge. Id. at 47. Indeed, Perpetua’s expert recommends “avalanche control via helicopter” Id. at 52. Yet, the SDEIS and Noise Specialist Report are silent on what is the dBA of 25 lbs of ammonium nitrate and 2 lbs booster. See SDEIS 4-114; Noise Specialist Report, at 33 (listing only three types of noise producing avalanche control tools). Nor does the SDEIS assert that such a charge is similar to a Gazex explosion. Because use of this avalanche control method appears likely based on DAC (2021)’s assessment, the SDEIS should quantify dBA for “avalanche control via helicopter” and assess those impacts. Moreover, given the complete silence on noise impacts to wildlife, the SDEIS should assess noise levels from avalanche control that extend into the FCRNRW. Importantly, as noted above, the underestimation of the frequency of control missions and that they are concentrated in specific areas should be considered when assessing the direct effects of noise from avalanche control work on wildlife. In sum, the Noise Specialist Report, which only analyzes impacts to humans, fails to address these points and any potential impacts to wildlife.</p> <p>As noted elsewhere in this letter, the SDEIS omits any analysis of mountain goats as a wildlife species impacted by the SGP. This is problematic with respect to avalanche control along the proposed Burntlog Route because mountain goats are particularly susceptible to disturbance from mechanized devices like helicopters (Côté 1996, Hurley 2004, Goldstein et al. 2005, Côté et al. 2013, Richard and Côté 2016). Explosive use during avalanche control may only exacerbate impacts to mountain goats and therefore must be addressed in the SDEIS. Notably IDFG has observed goats nearby on Murphy Peak, which is connected via a ridgeline to the Meadow Creek Ridge. Additionally, these surveys could underestimate mountain goat populations in the area. IDFG does not perform regular surveys of goats because their populations do not support any type of managed hunt. Mountain goats have also been observed in the area of Pinnacles on the border of GMUs 25 and 26, along the upper ends of Big Creek, Monumental Creek, and in West Fork Monumental Creek in GMU 26 (IDFG Mountain Goat Management Plan, 2019). These areas are near or adjacent to potential avalanche control targets along the Stibnite Road. The SDEIS fails to take a hard look at the actual effects and impacts to wildlife, including mountain goats and wolverines due to avalanche control work that will be necessary to maintain safe access to and from the mine site.</p>	NOI	<p>A description of helicopter avalanche control has been added to the Noise section of the Final EIS with efforts made to quantify noise levels from the use of ammonium nitrate fuel oil in addition to two- and four-pound cast boosters. Avalanche control via helicopter bombing would occur a minimum of one mile from the nearest residents (i.e., Yellow Pine). Based on the location of the SGP and the avalanche paths investigated, the probability of noise complaints would be expected to be low.</p> <p>Additional language was added to the Final EIS to clarify frequency estimates. Specifically, that frequency estimates for each route are an average of all paths on the route, with higher frequency paths likely needing more frequent mitigation than the average listed in Table 4.6-3. The # of charges per year is likely a better estimate of noise impacts.</p> <p>Depending on the location of avalanche control measures, noise at levels greater than 55 dBA could extend into the FCRNRW when controls are located within 2,000 feet of the FCRNRW.</p> <p>Noise effects on wildlife are described in Section 4.13.2.2 of the SDEIS.</p> <p>Mountain goats are not a PNF sensitive, MIS, or federally listed ESA species; therefore, an effects analysis is not required.</p>
Bonnie Gestring (Northwest Program Director,	17634	241	h. Effects of noise are not examined thoroughly or mitigated The SDEIS acknowledges that the Stibnite Gold Project will impact air quality and create noise impacts on the FCRNRW and nearby IRAs: Noise from mine related vehicles on the Johnson Creek Route during construction could decrease remoteness and increase the evidence of humans in Tamarack Creek drainage adjacent to the road. The Burntlog Route would decrease remoteness and increase the evidence of humans within Big Chief Creek drainage	NOI	The noise analysis accounted for ground absorption of sound which is related to topography and vegetation present. Therefore, the noise effects at local areas are reliably forecasted. Increased noise levels about threshold values are expected to be temporary, short-term exceedances related to passing road traffic.

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Earthworks) and seven others			<p>during construction, operation, and closure and reclamation. Burntlog Route cut and fill slopes, repeater site access roads, and mine operation lighting could be visible to wilderness visitors within Big Chief drainage, Summit trail, and at higher elevations within the FCRNRW. Sounds from the construction, operation, and daily maintenance of Burntlog Route also could be audible in these areas. SDEIS 4-633. The Forest Service's noise analysis failed to take into account topography or vegetation which can have significant effects on sound propagation: Sound from SGP activities at recreation sites/areas is based on estimated noise that does not consider the effects of topography or vegetation on noise propagation. Therefore, the noise impacts presented in the analysis may be more extensive than would actually occur given the topography and vegetation present in the analysis area. (Recreation Resource Specialist Report, p. 13). Because these estimates did not consider topography or vegetation, the noise impacts presented in the analysis may also underestimate the actual effects, particularly in places where the topography may channel or concentrate sound or in areas with fewer trees and more grassy slopes or talus. Avalanche paths BKL-7, BKL-9, BKL-12, RC-1, and MCR-1 have anticipated explosive targets that are less than 1500 feet from the FCRNRW boundary line. Not only is noise from helicopter flights to deliver explosive charges to these paths a potential impact but noise from the charges themselves is more apt to travel down slope into the valleys in the east side of Meadow Ridge and into the top of the Indian Creek drainage. In terms of avoiding, minimizing or mitigating these effects, the Forest Service analysis essentially notes that the sound and light is going to go where it goes: The extent where the SGP facilities and access roads could change soundscapes or natural dark sky conditions is influenced by topography and weather. However, the Forest Service fails to note that the primary factor influencing these negative effects is the location of SGP facilities and access roads, which can be sited to reduce impacts. Furthermore, while the Special Designations Specialist Report lists several design features to reduce these impacts, these are listed as discretionary and at the proponent's discretion: To minimize adverse effects of noise to TEPC, MIS, or Sensitive species, where necessary and in accordance with MSHA and OSHA, the proponent could utilize actions in line with, but not limited to, the below:</p> <ul style="list-style-type: none"> ● Construction equipment engines would be equipped with adequate mufflers, intake silencers, and engine enclosures when feasible. ● When practicable, pumps, generators, and engines would be turned off when not in use. ● Temporary wooden structure could be erected around portions of the drill, pumps, and heaters, with acoustic absorbent panels. These temporary structures would not be put in place if they created safety issues related to exhaust vapor build-up. ● When feasible, activities such as helicopter use and blasting, could be scheduled at the same time. These and other important design features should be required. 		Information regarding helicopter use for avalanche control has been included per the response to comment 17634.174.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	359	<p>2. Noise Pollution</p> <p>Increased noise pollution is an expected impact of the proposed Stibnite Gold Project, with both action alternatives creating some short-term periodic noise exceedance impacts at 4 to 5 of the defined noise sensitive receivers in the project area (SDEIS, ES-12). Based on this finding, a suite of mitigation measures should be put in place to minimize noise pollution from SGP activities, including mufflers on construction equipment and drill rigs, scheduling noisy activities concurrently, and turning off noisy equipment when not in use. Furthermore, noise reduction effectiveness monitoring should be implemented to assess if the relevant noise reduction equipment is being used properly and will monitor the effectiveness of the equipment in reducing light and noise levels. The true degree of sound reduction should first be measured with and without the sound baffles before the start of operations.</p> <p>The Forest Service's noise analysis failed to take into account topography or vegetation which can have significant effects on sound propagation: Sound from SGP activities at recreation sites/areas is based on estimated noise that does not consider the effects of topography or vegetation on noise propagation. Therefore, the noise impacts presented in the analysis may be more extensive than would actually occur given the topography and vegetation present in the analysis area." (Recreation Resource Specialist Report, p. 13). Because these estimates did not consider topography or vegetation, the noise impacts presented in the analysis may also underestimate the actual effects, particularly in places where the</p>	NOI	<p>The noise analysis accounted for ground absorption of sound which is related to topography and vegetation present. Therefore, the noise effects at local areas are reliably forecasted. Increased noise levels above threshold values are expected to be temporary, short-term exceedances related to passing road traffic.</p> <p>Information regarding helicopter use for avalanche control has been included per the response to comment 17634.174.</p>

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			topography may channel or concentrate sound or in areas with fewer trees and more grassy slopes or talus. We point out that one of the key characteristics of the FCRNRW is “natural-wilderness ecological systems are substantially free from the effects of modern civilization.” The proximity of the FCRNW and the expectation of hearing only natural sounds highlights the importance of a complete analysis.		
Samuel Penney (Chairman)	19396	185	<p>4.6 Noise</p> <p>Tribal concerns regarding noise include noise health stressors affecting wildlife as well as noise impacts to tribal experiences in traditional use areas. The Forest states in the 2020 DEIS that “...noise in a community can contribute to stressors that may influence health such as”:</p> <ul style="list-style-type: none"> • Reductions in quality of life (potentially work, home, and school life), as noise can disrupt speech and sleep, potentially leading to increases in stress and reduction in productivity. • Effects on cardiovascular health via increases in blood pressure. • Changes in hormone levels related to a stress response. 	NOI	<p>The nearest communities (i.e., Yellow Pine, Warm Lake) are located far enough away from the sources of project-related noise that noise levels at those locations would not be increased above the 55 dBA noise threshold and therefore potential noise health stressors are not anticipated.</p> <p>Locations nearer to operations, within 0.78 miles, could experience noise levels above the 55 dBA threshold on temporary short-term bases, typically related to passing road traffic, but due to the short-term nature of these impacts, noise health stressors are not anticipated.</p>

Hazardous Materials

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Elizabeth Barnes	6652	2	p. 2-101 Use of rodenticides is discussed in table 2.4-12 with no description of which types/brands would be used, what quantities, and no assessment whatsoever of the environmental impact of rodenticides to wildlife, no proposed alternative such as integrated pest management, no disposal plan, and no mitigation strategies are presented. Rodenticides are a major cause of wildlife fatalities among mountain lion, owl, hawks, and other predators who endure long and painful deaths after ingesting one or more rodents containing blood coagulants or other lethal chemicals (van den Brink et al. 2018). There is new research to indicate that rodenticides may also pose significant risk to aquatic systems via sewage (Ajo et al. 2018). Rodenticides do not belong in wilderness areas.	HAZ	There are no specific plans at this time for use of rodenticides at the SGP. The inclusion of rodenticides in the subject reference in Table 2.4-12 was simply to call out the applicable Forest Plan standard and indicate it would apply to the SGP.
Steve Hull (Fire Chief, Cascade Rural Fire Protection District)	10178	3	CRFPD is also concerned with the amount of fuel and hazardous materials that is proposed to be hauled to the Stibnite Gold Project. Currently CRFPD does not have the necessary equipment in the event of an accident hauling these materials. CRFPD would also need additional equipment and training to mitigate a hazardous materials incident. However, based upon the information in Section 3.2.5 Material Transportation Safety Measures, I believe Perpetua has done a good job in outlining their standard operating procedures and understand they are in the process of developing similar hazardous materials transport plans. I do appreciate that all transport drivers will be required to have spill response, safety and resource awareness training before being allowed to transport hazardous material on our back country roads. I also appreciate the additional safety measures that will be implemented to reduce the risk of accidents. Perpetua Resources has taken extra safety precautions to date and their safety record is good. It is my job to make sure it remains that way. The CRFPD has had the opportunity for one joint HAZWOPER training session with Perpetua and we look forward to additional joint hazardous materials training opportunities for our team in the future.	HAZ	No further response required. General in nature or position statement.
Kevin Vivian (President, Agri-Service)	14669	5	<p>All of this is being done with the highest standards of worker and environmental safety in mind. Perpetua has a proven track record of success when it comes to safely managing hazardous materials and environmentally sensitive areas, and the Stibnite Gold Project will be no different.</p> <p>The company is planning to construct all the necessary infrastructure to transport and store any hazardous materials involved in the project in a way that prioritizes safety, and the project will include an on-site hazardous materials response team.</p>	HAZ	No further response required. General in nature or position statement.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Lehrer, Laura	16878	3	The actual likelihood of toxic spills and increased traffic along highway 55 and other non-paved routes to and from the mine site are minimized in the SDEIS. According to the analysts of IHESG, " The DEIS states that there will be 12,775-17,885 heavy vehicle trips every year, many loaded with hazardous chemicals (diesel, explosives, sulfuric acid, and sodium cyanide). Transportation routes north and south of Valley County are along major rivers, including the North Fork Payette River and the East Fork of South Fork of the Salmon River. This could potentially be 255,500+ trips on Idaho's 2nd highest year-round road (Hwy 55) over the course of the mine's operation. Even spill risk of .01% would result in at least 25 spills on roads, crossing sixty-nine waterways. These numbers indicate that the impacts that spills and accidents have on the environment and human safety along the transportation corridor should be seriously and thoroughly considered."	HAZ	The transportation of hazardous materials should be taken in context of the existing traffic pattern in the analysis area. Section 4.16 discusses the relative effects of the SGP-related transportation on the different segments of access roads proposed to be used during the construction and operation of the SGP. Table 4.16-2 shows that all traffic related to the SGP operations (the phase involving the most truck deliveries of hazardous materials) would access the site via Cascade and the Warm Lake Road to the SGLF. Data in the table shows that the total increase in all SGP-related traffic in this road segment would have an AADT of 156, which would be a 3.2% increase over baseline conditions on SH 55. Of this total, about 16% (25 AADT) would consist of heavy vehicles, which would include hazardous materials deliveries. This portion of the total AADT would comprise about 0.5% of the SH 55 AADT during operations, which is a relatively small increase. Section 4.7 of the EIS discusses potential effects of spills or hazardous materials. Table 4.7-1 lists the hazardous materials proposed to be used in the 2021 MMP and shows that the largest quantities would be for diesel fuel, gasoline, propane, ammonium nitrate, and sodium cyanide.
Clouser, Ludmila	17581	2	<p>If approved, the Stibnite Gold Project will require large quantities of hazardous materials to be transported to and from and used at the mine site during the 15 years of mining operations (Table ES-1) and, to a larger extent, for as long as water treatment is necessary.</p> <p>Hazardous materials include fuels, explosives, acids, cyanide, ammonium nitrate, lime, antimony concentrate and other toxic substances. All these are highly poisonous to animals and humans. In total, more than 3,000 loads of hazardous materials would be transported to or from the mine every year during operations (Table ES-1). The loads would include more than 8,300,000 gallons of flammable materials (diesel, propane, gasoline) as part of more than 9,400,000 gallons of hazardous bulk liquids to be brought to the mine site annually. In addition, more than 46,000 tons of hazardous bulk solids would be transported to or from the mine site (Table ES-1). This includes the annual use of 4,000 tons of sodium cyanide, which would be delivered in 167 trips carrying 24 tons each, or roughly one trip every other day.</p> <p>Isn't there be a high hazard should a spill happen along HWY55 and extend into the NF Payette River? This high risk obviously exists along mine access roads into the SFSR, Johnson Creek, and EFSF and its tributaries. One spill could kill 100% of the eggs, fry, juveniles, and spawning adults of up to four species of fish to name just one aspect.</p> <p>I ask: Why are there no project-specific spill risk calculations for numbers of spills and spill probability in the SDEIS? (SDEIS 4-345). Why wasn't HWY55 (through Boise, McCall, and New Meadows), nor HWY95 corridor considered in any transportation analysis? The estimated spill rate per truck mile in the SGP SDEIS is many times lower than should be calculated because the "estimated amount of miles traveled" only assumes mileage from the Highway 55/Warm Lake Road junction. Risk extends from the origin of the reagents to the mine and all the way to the final destination. (SDEIS 5-34).</p> <p>This extends to Environmental Impacts. The proposal violates the Payette and Boise Forest Land Resource Management Plans and fails to minimize all adverse environmental impacts, thus violating two federal laws – the Federal Land Policy and Management Act and the Organic Act. The SDEIS also violates the Clean Water Act and conflicts with established Treaty Rights.</p>	HAZ	A revised incident risk analysis for hazardous materials has been added to Section 4.16.2 of the Final EIS. This includes an analysis of longer transportation routes on existing highways than was included in the SDEIS and examines recorded and predicted incident rates along those highways including incidents involving hazardous materials.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	23	The scope of the effects analyses are also geographically limited. For example, as described in Lubetkin (2022), the transport of hazardous materials to the mine site will involve a much larger geographic area than the transportation route identified in the SDEIS. Instead of only considering the transportation corridor from SH-55 at Cascade to the mine site, the true measure of the communities and environment at risk will extend to the distribution points of the reagents brought to the mine and the destinations of the ore concentrate and wastes taken from it. Spills of hazardous materials may have significant impacts to public health and the environment that must be fully analyzed in the SDEIS.	HAZ	A revised incident risk analysis for hazardous materials has been added to Section 4.16.2 of the Final EIS. This includes an analysis of longer transportation routes on existing highways than was included in the SDEIS and examines recorded and predicted incident rates along those highways including incidents involving hazardous materials.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	118	The SDEIS makes unjustified conclusions about spill risk The SDEIS states: "It is expected the risk associated with a spill large enough to negatively affect fish or aquatic habitat would generally be low." (SDEIS at 4-333). This unjustified conclusion overlooks inevitable cumulative, chronic, and potentially additive effects of multiple spills over time. It underestimates effects on fish habitats because assessments were based on measuring the amount of stream that is a 91 meter distance from the roadway centerline, which is less than half the published distance for a 200-meter impact zone around rural roadways. The conclusion also estimates spill risk rates that are two orders of magnitude lower than rates cited in other large mine DEIS's.	HAZ	Assuming there would be cumulative and additive effects of multiple spills within the SGP area is an unrealistic condition. Section 4.7.2.2 describes the potential sources of any spills of hazardous materials and the EDFs that are planned to largely contain these spills so they are not released to the environment. Spills that might occur outside of secondary containment would be immediately cleaned up and the contamination properly disposed so the environmental effects would not be cumulative or additive.
Idaho Regulatory Agencies	17718	76	The International Cyanide Management Code (which is always referred to in the abbreviated form "Cyanide Code"). It may be that the association with this voluntary initiative is being misrepresented by Perpetua by stating that "Perpetua Resources has indicated their intent to design and operate the cyanidation facility in compliance with the ICMC." Previously under 2.4.5.7, Perpetua states that it will operate "consistent" with the Cyanide Code. Is Perpetua a signatory to the Cyanide Code? If not, why? And is not being a signatory why you use terms such as "in compliance with"? This suggests that Perpetua will not adhere completely to the Cyanide Code. Correct? It possibly misleads the public into believing adherence, and therefore being a signatory, which commits companies to triennial audits conducted by independent third-party auditors. Companies that adopt the Cyanide Code must have their operations that use, transport, or produce cyanide audited to determine the status of Cyanide Code implementation. Those operations that meet the Cyanide Code requirements are then certified. Will Perpetua seek certification? If not, why? Please consider a rewrite to further explain.	HAZ	Yes, Perpetua would be a signatory and participant in the International Cyanide Management Institute's (ICMI) Cyanide Code voluntary certification program, which promotes and helps ensure the safe and environmentally responsible management of cyanide use within the gold and silver mining industries. To maintain certification, every three years Perpetua would be required to undergo compliance audits conducted by qualified, independent third-party auditors that meet ICMI requirements.
Giles, Robert (Mayor McCall, ID)	17834	6	Next, the Deinhard-Boydston route crosses the North Fork of the Payette River, which is identified by Idaho DEQ as a section 303(d) impaired waterway under the Clean Water Act with multiple TMDL's in effect. Significant investments have been made by the City, the Idaho Fish and Game Department, the Idaho Department of Environment Quality, the Valley County Soil and Water Conservation District, the National Park System, private non-profit groups and individuals to restore its health as an important part of the overall watershed in this area for fish habitat, recreation and downstream water quality of Lake Cascade. The water quality regulations imposed on the North Fork Payette by Idaho DEQ are so strict that even our community's treated wastewater isn't allowed to be discharged into it; 100% of our treated wastewater is land-applied on neighboring farmland. A hazardous spill into this waterway would be potentially devastating reversing years of investments and have downstream impacts on river users and the quality of Lake Cascade.	HAZ	Perpetua will continue to coordinate training opportunities with regional Fire Departments (Yellow Pine, Cascade, Donnelly & McCall); Council, Riggins and New Meadows would be included in future training opportunities. Perpetua Resources anticipates positioning a mixed Hazardous Materials Response Trailer at the Valley County Emergency Operations Center in Cascade, Idaho.
Giles, Robert (Mayor McCall, ID)	17834	9	The City is highly concerned about any hazardous material spills in our jurisdiction and specifically into the North Fork Payette River and the Big Payette Lake. The McCall area fire departments do not have a HazMat Team nor proper materials to respond to, contain or clean up a spill. According to the McCall Fire District Chief the closest HazMat Team is a minimum of four hours away and McCall Fire is only equipped to issue evacuation notices and clear the scene while waiting for a HazMat Team to arrive. Four hours is a substantial amount of time for hazardous materials to spread into the North Fork of the Payette River and into the air over a populated area.	HAZ	Perpetua will continue to coordinate training opportunities with regional Fire Departments (Yellow Pine, Cascade, Donnelly & McCall); Council, Riggins and New Meadows would be included in future training opportunities. Perpetua Resources anticipates positioning a mixed Hazardous Materials Response Trailer at the Valley County Emergency Operations Center in Cascade, Idaho.
Giles, Robert (Mayor McCall, ID)	17834	10	Since mine traffic is forecasted to occur 5 days/week for 20 years across this river crossing, the risk of exposure to an accident is high especially during winter conditions. Although the traffic and transportation plan contemplate that mine-related traffic will primarily use the Deinhard/Boydston corridor, there is no prohibition of such traffic from traveling past Big Payette Lake. Big Payette Lake is McCall's sole source of drinking water. Mine-related traffic through downtown past Big Payette Lake is unacceptable for the sole reason of the catastrophic consequences of a hazmat spill. The City previously commented on the importance of protecting Big Payette Lake in its letter to the Forest Service regarding the DEIS dated October 2020.	HAZ	No further response required. General in nature or position statement. See also the response to comment 17834.9.

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Giles, Robert (Mayor McCall, ID)	17834	11	The applicant has demonstrated a willingness to address this type of issue by providing numerous spill kits along roadways such as Johnson Creek Rd to prevent/quickly respond to accidents along the routes into the Stibnite area and along rivers within the project area. The City respectfully requests that the Forest Service include a mitigation measure in a second supplemental DEIS that the same consideration be given to our community and our protected waterways. The Forest Service should require the applicant to provide HazMat response resources in McCall or another nearby location to allow for a timely response. The Preferred Alternative in the SDEIS discusses at length the company's spill protection plan but that is just for the area within the project. It assumes that spills or accidents occurring outside the project area are the responsibility of the carrier and local authorities. If not for the mine project, these hazardous materials would not be coming through our communities and therefore it should be the company's responsibility to ensure that it is not solely the burden of taxpayer funded local agencies to respond to a spill of magnitude.	HAZ	Perpetua has and will continue to offer joint HAZWOPER training and spill response training to all the regional Fire Departments (Yellow Pine, Cascade, Donnelly & McCall). Council, Riggins and New Meadows would be included in future training opportunities. Previously, Yellow Pine and Cascade Fire Departments have taken advantage of this joint training.
Giles, Robert (Mayor McCall, ID)	17834	12	The company's plan includes notifying their own staff of when hazardous materials shipments are scheduled and by what route so as to minimize potential dangers. The City requests that the Forest Service require in a second supplemental DEIS that the company notify local public safety and first responder agencies of scheduled hazardous materials shipments and routes for our situational awareness and preparedness.	HAZ	The 2021 MMP describes the quantities of materials, and anticipated delivery frequency for all materials (hazardous reagents or otherwise) and selected transport routes would be identified by the Forest Service in the final Selected Alternative. All transports under Perpetua's "control" would originate at the Logistics Facility and all deliveries would be required to stop and check in before convoying to the Project site. Perpetua would continue to work with local safety and first responder agencies to define an acceptable method to communicate timing, scheduling and routes for shipments of hazardous materials. We note that this coordination is in process and would continue to be facilitated by Perpetua's Community Partnership Agreements and interactions with community representatives included on the Stibnite Advisory Council.
Giles, Robert (Mayor McCall, ID)	17834	30	The City is highly concerned about any hazardous material spills into the North Fork Payette River. The McCall area fire departments do not have a HazMat Team nor proper materials to respond to, contain or clean up a spill. According to the McCall Fire District Chief the closest HazMat Team is a minimum of four hours away and McCall Fire is only equipped to issue evacuation notices and clear the scene while waiting for a HazMat Team to arrive. Four hours is a substantial amount of time for hazardous materials to spread into the North Fork of the Payette River and into the air over a populated area. Since mine traffic is forecasted to occur 5 days/week for many years across this river crossing, the risk of exposure to an accident is high especially during winter conditions. This is an important impact that should be included in the Final EIS. The applicant has demonstrated a willingness to address this type of issue by providing numerous spill kits along roadways such as Johnson Creek Rd to prevent/quickly respond to accidents along the routes into the Stibnite area and along rivers. The City respectfully requests that the Forest Service include a mitigation measure in the Record of Decision that the same consideration be given to our community and our protected waterways. The Forest Service should require the applicant to provide HazMat response resources in McCall or another nearby location to allow for a timely response. I have attached an email from the McCall Fire Department with recommendations for a HazMat resource and how it could benefit the larger Valley County community.	HAZ	Perpetua will continue to coordinate training opportunities with regional Fire Departments (Yellow Pine, Cascade, Donnelly & McCall); Council, Riggins and New Meadows would be included in future training opportunities. Perpetua anticipates positioning a mixed Hazardous Materials Response Trailer at the Valley County Emergency Operations Center in Cascade, Idaho.
Giles, Robert (Mayor McCall, ID)	17834	32	Summary of impacts City requests be included in the Final EIS The City respectfully requests the Forest Service Identify and analyze impacts to the North Fork Payette River, a 303(d) impaired waterway, from hazardous materials and explosives transported to and from the mine using the Deinhard/Boydston route, including but not limited to, the lack of timely hazardous materials response which will negatively impact human health and the health of other species in the event of an accident.	HAZ	Perpetua will continue to coordinate training opportunities with regional Fire Departments (Yellow Pine, Cascade, Donnelly & McCall); Council, Riggins and New Meadows would be included in future training opportunities. Perpetua anticipates positioning a mixed Hazardous Materials Response Trailer at the Valley County Emergency Operations Center in Cascade, Idaho.
Alan Haslam (Vice President, Permitting, Perpetua)	18649	7	And each day's postponement of the SGP's plan to remove the waste rock and reprocess the ore grade tailings left behind in their unlined state at the Spent Ore Disposal Area is one more day that arsenic will continue to load into Meadow Creek at the rate of approximately 1100 pounds a year.	HAZ	No further response required. General in nature or position statement.

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Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	25	Please explore and re-evaluate any use of Johnson Creek and Stibnite Roads during either construction and/or operation. This reviewer has recently visited the proposed mine site and driven these roads. Risks to the environment from accidental spills, air emissions, and water along these routes are unacceptable.	HAZ	The Johnson Creek road is currently the main access route to the Stibnite site and has been for years. As described in Section 2.4.4.3 of the EIS, until the Burntlog Route is constructed, the Johnson Creek Route would continue to be used to support the construction activities at the SGP. As described in Section 3.7.4.2, supplies, including fuel deliveries, to the Stibnite site have been occurring since 2011 with no recorded spills along the route. The movement of supplies along this route would be improved by the EDFs described in Table 2.4-13 and the practices discussed in the Safety and Emergency Access subsection of Section 4.16.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	39	The Tribes suggest to the USFS that there be no transportation of hazardous waste or hazardous materials to the mine area until the Burnt Log Road is constructed.	HAZ	The Johnson Creek road is currently the main access route to the Stibnite site and has been for years. As described in Section 2.4.4.3 of the EIS, until the Burntlog Route is constructed, the Johnson Creek Route would continue to be used to support the construction activities at the SGP. As described in Section 3.7.4.2, supplies, including fuel deliveries, to the Stibnite site have been occurring since 2011 with no recorded spills along the route. The movement of supplies along this route would be improved by the EDFs described in Table 2.4-13 and the practices discussed in the Safety and Emergency Access subsection of Section 4.16.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	47	Define and identify "appropriate disposal facility". If hazardous waste is expected, then please discuss in more detail.	HAZ	The reference to an appropriate offsite disposal facility is related to the discussion in Section 2.4.5.6 of removal of spent ore and legacy tailings according to the Environmental Legacy Management Plan (Perpetua 2021d). The concern is potentially encountering waste material that is currently unknown and cannot be directly used or reprocessed on site. Such material would be sampled and chemically characterized to determine if it can be handled as solid waste or a waste requiring special handling. The offsite disposal facility would be chosen based on its legal ability to handle the waste characteristics, which is the meaning of this use of the word "appropriate". It would be speculative at this time to be more definitive as to the potential wastes that may be encountered or the offsite disposal facilities that might be utilized.
Joseph Pietri	19062	8	Acid Mine Drainage yet another issue. It is no secret that occurs and accidents happen. Why is AMD not addressed anywhere in the SDEIS? It's existence seems to be ignored. Examples of a few Mining related incident possibilities : A Truck Crash spills more waste from Gold King Mine into Creek-AP July10,2018. Zortman / Landusky Mine Montana Heap Leach Mine, over a dozen Cyanide spills, AMD and an abysmal history. With a bankruptcy leaving a 32 million dollar clean up bill. Mount Polley , Lake Quesnel, Likely, BC, Ca. (Tailings Dam Breach) I'm sure there are many more that can be cited.	HAZ	The presence of AMD in the baseline conditions is discussed in Section 3.9.4 where it is shown that acid rock drainage has not been identified at the site in existing seeps, springs, streams, or groundwater. Data presented in Section 3.9.4.2 related to testing for potential acid generating characteristics shows that the proposed development rock should not be prone to acid generation. Some portions of the ore had more potential for acid generation than the development rock. However, ore mined at the site would be processed through the mill and the tailings eventually disposed of in the lined TSF. Section 4.9.1.1 describes the evaluation of potential leachate water from SGP ore stockpiles, tailings, and development rock and concludes that all these waters would have circum-neutral pHs. The potential for AMD has been evaluated in the EIS and found to not be a problem. The commenter makes references to spills at other mine operations including truck crashes and spills of process waters and tailings. The applicable EDFs for materials handling and the potential for spills of reagents, petroleum products, process water, and tailings is discussed in Sections 3.7 and 4.7 of the EIS.
Joseph Pietri	19062	11	Where is Perpetua's responsibility when a hazardous material truck dumps its load say on Goose Creek Grade? or other hazardous road stretches between the mine and destination	HAZ	Perpetua has committed to responding to spills and emergencies (associated with its Project traffic) starting at the Warm Lake Road and SH 55 intersection all the way out to the Project site. Before this point, it is the responsibility of the transport company, just like all other hazardous materials loads, or nonhazardous materials loads currently traveling throughout Idaho, to respond to and clean up, or contract out cleanup services in the event of an accident or spill.
Karen Balch (North Fork Veterinary Service)	19228	5	Pollution of any sort degrades nature. As a veterinarian, I have unique working knowledge of biological processes across species, including various disease etiologies (or causes) that can present in various diseases. I have professionally investigated real and potential poisoning of domestic animals. With warmer temperatures, we are seeing more cyanobacteria in water bodies that can kill animals quickly by	HAZ	The EIS has evaluated the types of pollution concerns raised by the comment. Section 4.5 of the EIS discusses geochemistry of the soils and reclamation cover materials to be used to reclaim the proposed mining disturbances. Section 4.7 of the EIS discusses the potential environmental impacts of handling and transportation of hazardous materials. Section 4.9 of

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			<p>neurotoxins that have no reversal. I am particularly concerned about “emerging diseases” and zoonotic diseases (diseases that are transmissible between animals and humans). Causes of zoonotic diseases may be fungal, bacterial, viral, endo- or ectoparasitic, infectious, or toxicosis, such as those caused by heavy metals. Currently, bald eagles are dying of lead toxicosis that is excruciatingly painful. In 2017, the Asian Longhorned tick was discovered in the US and is spreading rapidly indicating yet another vector-borne tick on the radar. The impact of human activities year-round with transportation of potentially lethal chemicals inevitably will have an impact on wildlife but I do not believe that exactly how is fully understood.</p> <p>Notably, the level of heavy-metal toxicity associated with historic mining at the Stibnite site is sufficient that the EPA proposed Stibnite as a Superfund site on the National Priorities list in 2001 and a remedial investigation started in 2002.</p>		the EIS discusses the potential environmental impacts on surface water and groundwater quality including all regulated metals and other pollutants. The CERCLA history of the site and immediate response to the CERCLA concerns raised by the commenter is discussed in Section 1.3 of the EIS. Sections 4.12 and 4.13 of the EIS discusses potential environmental impacts to fish and terrestrial wildlife. Responses to the concerns identified in the CERCLA investigations of the property as parts of the 2021 MMP are addressed in Sections 2.4.5, 2.4.7, and 2.4.8 of the EIS.
Olin Balch (North Fork Veterinary Service)	19234	3	<p>Pollution of any sort degrades nature. As a veterinarian – the very definition of a practical biologist, I have unique working knowledge of biological processes across species and have professionally investigated real and potential poisoning of domestic animals. Notably, the level of heavy-metal toxicity associated with historic mining at the Stibnite site is sufficient that the EPA proposed Stibnite as a Superfund site on the National Priorities list in 2001 and a remedial investigation started in 2002.</p> <p>In 2019, the US Department of the Interior and US Geological Survey completed the scientific investigations report titled “Arsenic, Antimony, Mercury, and Water Streams near Stibnite Mining Area, Central Idaho, 2011-17.” In short, this study documents altered stream configuration and habitat in the study area. Dangerous toxin levels for aquatic, avian, non-human mammalian, and human life are directly associated with documented levels of arsenic, free cyanide, lead, mercury, silver, and zinc, and antimony. Even this most recent USGS study, many years after the most recent active mining activity in the Stibnite area ceased, identified harmful levels of arsenic, antimony, and mercury contamination in those local waterways. As a veterinarian, I find this profoundly troubling and indicative of the on-going damage associated particularly with large scale mining, whether historical or contemporary.</p>	HAZ	The EIS has evaluated the types of pollution concerns raised by the comment. Section 4.5 of the EIS discusses geochemistry of the soils and reclamation cover materials to be used to reclaim the proposed mining disturbances. Section 4.7 of the EIS discusses the potential environmental impacts of handling and transportation of hazardous materials. Section 4.9 of the EIS discusses the potential environmental impacts on surface water and groundwater quality including all regulated metals and other pollutants. The CERCLA history of the site and immediate response to the CERCLA concerns raised by the commenter is discussed in Section 1.3 of the EIS. Sections 4.12 and 4.13 of the EIS discusses potential environmental impacts to fish and terrestrial wildlife. Responses to the concerns identified in the CERCLA investigations of the property as parts of the 2021 MMP are addressed in Sections 2.4.5, 2.4.7, and 2.4.8 of the EIS.
Joel Drake	19251	4	<p>Permanently-placed Enhanced Spill Kits at Key Points along the Landmark Grade section of Warm Lake Highway The Plan calls for pilot cars and spill response units to accompany each transport of liquid hazardous materials, but that is not enough. Due to the incline of the Landmark Grade section of Warm Lake Highway and its proximity to the creek, any spilled liquids will quickly drain into and immediately contaminate Warm Lake Creek (ergo, Warm Lake itself). For this reason, extra resources are needed to effectively respond to spills on this section of the transportation route. Permanently-placed spill response kits with sufficient capacity and enhanced capabilities are needed to respond and contain spills up to 10,000 gallons in volume on this section of road.</p> <p>The Plan and Draft EIS need to be revised to acknowledge the need for and describe the planned placement of enhanced spill kits at key points along the Landmark Grade section of Warm Lake Highway.</p> <p>Any Special Use permit issued by the Forest Service for transportation of materials to and from the mine site must specifically require the permanent placement of enhanced spill kits at key points along the Landmark Grade section of Warm Lake Highway.</p> <p>Any permit issued to Perpetua Resources by the IDEQ (Idaho Department of Environmental Quality) concerning water quality and spill mitigation measures must require the permanent placement of enhanced spill kits at key points along the Landmark Grade section of Warm Lake Highway.</p>	HAZ	Perpetua feels placing a dedicated spill kit at this location is unnecessary as this type of spill response equipment and response capacity would already be contained in a response trailer that would be accompanying, and traveling downstream of (i.e., trailing behind the convoy), all hazardous material convoys entering the Project site. The downstream placement and the fact that the response equipment would be traveling with appropriate spill response materials places it in the optimal location to be effective in responding to emergency situations and in the event of a spill.
Joel Drake	19251	10	<p>Spills of Fuel and Liquid Hazardous Materials - Magnified Risk Along a Treacherous Stretch of Road The remote location of the proposed mining site relies on extremely heavy, unprecedented use of transportation infrastructure corridor (roads and bridges) in the National Forest System (NFS). In many sections of the corridor, the road’s alignment and configuration are not designed or constructed to accommodate the proposed level of use or prevent hazardous material spills from immediately flowing to fragile, pristine waterways which flow into Warm Lake and then to the South Fork of the Salmon River.</p>	HAZ	No further response required. General in nature or position statement.

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			Under the Plan, ALL materials and supplies transported to the site and ALL minerals and antimony concentrate extracted from the site would be transported through a single treacherous and regionally notorious 5-mile segment of Warm Lake Road - from Warm Lake to the Landmark summit (Valley County road #10-579).		
Joel Drake	19251	12	Given the Plan's projected volume of liquid hazardous material runs, the road's condition and configuration, and harsh weather conditions during much of the year, spill events are inevitable. The Plan and SDEIS do not even quantify the spill risk over the transportation route, which is common practice. Other similar proposals have included calculated spill risks. Why has Perpetua elected to omit project-specific spill risk calculations in the Plan and this SDEIS?	HAZ	A revised incident risk analysis for hazardous materials has been added to Section 4.16.2 of the Final EIS. This includes an analysis of longer transportation routes on existing highways than was included in the SDEIS and examines recorded and predicted incident rates along those highways including incidents involving hazardous materials.
Joel Drake	19251	14	During the Plan's proposed period of operations, approximately 11,000 truckloads carrying environmentally hazardous liquids would navigate through the precarious 5.1 mile section of transportation corridor described in pages 3 through 6. Within the Plan, Perpetua discloses that fact that they experienced a reportable spill in 2012. They do not specify what substance was spilled. Given the much lower volume of transports conducted prior to and since that date, the incident reported in 2012 represents a spill rate per delivery much greater than 1/11,000. Given the high volume of proposed delivery instances which would occur during all weather and road conditions over the course of each year, one or more catastrophic spills of liquids damaging to water quality are inevitable. As noted earlier, spills within the constricted canyon would rapidly flow to Warm Lake and then to the S. Fork of the Salmon River.	HAZ	It is incorrect that the 2012 spill was related to transportation of hazardous materials by truck. The 2012 spill is described as a diesel spill resulting from an airplane crash. It was cleaned up and no further action was required. There have been no spills of hazardous materials from truck transport related to the Stibnite activities. It is also incorrect that hazardous materials deliveries would occur during all weather and road conditions. The Transportation of Hazardous Materials subsection of Section 4.7.2.2 describes the EDFs and practices that would be employed to reduce the potential for releases of hazardous materials, including considerations of weather and road conditions that would impact safe use of the access roads.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	604	"Hazardous Materials: Bounded by the bordering transportation routes that would provide access to the mine site." This figure has "Roads, Disturbance Areas, Underground Workings, and Patented Claims". It does not indicate any area bounded by the bordering routes. Please revise figure.	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	605	"Hazardous Materials: SGP components including the mine site and access roads." Not included in the CEA description in Section 5.7. Please add.	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	640	"The CEA for hazardous materials is bound by the bordering transportation routes that would provide access to the SGP ." This does not match Table 5.1-1 - please reconcile.	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	641	"The SGP has included transportation of fuel (diesel, gasoline, and jet fuel) to the mine site. This activity occurs on existing County and Forest Service roads ." Please delete or clarify rationale for including this in the absence of spills with persistent impacts.	HAZ	The bulleted list in Section 5.7.2 does not describe impacts of hazardous materials but is intended to describe past and present actions that involve hazardous materials.
Alan Haslam (Vice President, Permitting, Perpetua	19325	642	"however, this project would involve 10,600 acres of treatment over a short period of time, such that the contribution of the action alternatives combined with this, and other similar projects would result in negligible changes to the overall traffic volume ." This conclusion sentence is about overall traffic volume but this section is about Hazardous Materials. Please conclude about Hazardous Materials or make clear connection to Hazardous Materials.	HAZ	Edit has been made.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	242	"In addition, the analysis considers modifications to existing and new access routes and proposed support facilities. " There is no mention of access route modifications in this section. If this addition is geared towards improving safe transport of material, please clarify by stating that here.	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	243	" Grinding media (balls for mill) Tons 8,100 337 600 0 (typically consumed, any residuals recycled offsite) " Not a hazardous material, please delete.	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	244	" Activated carbon Tons 500 23 50 0 (recycled and re-activated)" Not a hazardous material, please delete.	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	245	"Wastes containing mercury from ore processing (carbon canisters, filter packs, gas condensers)Pounds Not quantified Variable Variable Not quantified. Waste would be disposed off-site in permitted facilities." The anticipated mercury generated waste is stated in paragraph 3 of page 4-132 of this chapter as 10.9 tons per year with 10.7 tons consisting of metallic mercury in flasks. Please revise to state this.	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	246	"These oils would be contained within the substation equipment and as per the site-specific SPCC plans " The substation equipment is the responsibility of IPCO and would be included in their SPCC plan, not the site-specific SPCC plan. Please replace " site-specific SPCC plan " with " IPCO SPCC plan "	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	247	" All municipal waste and construction and demolition waste generated by the SGP would be collected in wildlife-resistant containers and hauled offsite for disposal in a municipal waste landfill. " Only municipal waste will be in wildlife resistant containers. Regular C&D waste is fine in standard dumpsters or roll off containers. Please edit to state " All municipal waste generated by the SGP would be collected in wildlife-resistant containers and all construction and demolition waster will be collected in standard dumpsters or roll of containers and hauled offsite for disposal in a municipal waste landfill."	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	248	"This would be determined at the SGP through operational experience during maintenance activities when the autoclave liner was rebuilt. " It is actually determined through a waste determination process outlined in RCRA rules (40 CFR 262.11) not operational experience. Please replace " through operational experience during maintenance activities when the autoclave liner was rebuilt " with " according to RCRA rules (40 CFR 262.11) "	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	249	"Switchbacks and reduced turning radius also may be a challenge for large trucks operating on these roads . " Not a correct statement. The road is specifically designed to accommodate the vehicles & trucks that would be traveling to road. Please delete sentence.	HAZ	Edit has been made. The deleted sentence is redundant in light of the preceding sentences.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	250	"Perpetua has prepared written spill response procedures described in their SGP Emergency Response Program (OHS-008) and SPCC Plan (OHSF-008K) that include: " The SPCC plan is ESOP-028 . OHS-008 is the number of the form for spill response in the ERP. Please replace " OHS-008 " with " ESOP-028 ."	HAZ	ESOP—028 is the formal Spill Prevention Control and Countermeasure Plan as regulated by federal code. OHS-008 (Emergency Response Program) and OHSF-008-K (Spill Emergency Response Plan) and associated documents work in concert with ESOP-028 and are the governing documents related to emergency response and spill response. The documents will crosswalk a little better following the annual update of ESOP-028.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	251	" <i>Though the Burntlog Route includes a greater number of stream crossings</i> " According to the numbers in the same paragraph, the Johnson Creek route has more stream crossings. Please revise.	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	252	" <i>Mine transport begins on Warm Lake Road (CR 10-579) where the risk of spills would be lower, as it is paved and maintained by Valley County and has overall gentler grades with the exception of Big Creek Summit</i> ." Incorrect. Please replace " Big Creek Summit " with " Warm Lake Summit "	HAZ	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	10	Comments on applicable SDEIS sections include minimal technical clarifications for Section 4.7 only.	HAZ	No further response required. General in nature or position statement.
Siegel	19355	3	I have questions concerning the transportation of materials and waste. The northerly route coming through McCall requires analysis and identification of impacts. There will be 20 years of continuous traffic impacts through this corridor which should not have been ignored. The estimated spill rate per truck mile in the SGP SDEIS was 100 times lower than would normally be calculated because the estimated number of miles traveled only assumed those miles are from the State Highway 55/Warm Lake Road junction. Why are there no project-specific spill risk calculations for numbers of spills, and spill probability, in the SDEIS? (SDEIS 4-345) According to SDEIS 5-34 risks extend "from the origin of the reagents, to the mine, and to the destination of the wastes taken away."	HAZ	A revised incident risk analysis for hazardous materials has been added to Section 4.16.2 of the Final EIS. This includes an analysis of longer transportation routes on existing highways than was included in the SDEIS and examines recorded and predicted incident rates along those highways including incidents involving hazardous materials.
Ruth Lewinski	19378	7	3.0 Transport and Traffic Volume Traffic along the Warm Lake Highway, north of Cascade is currently used by residents of the area and for recreational activities. Recreational activities are a primary economic income for the entire region of Valley County. Additionally, proposed transport routes along highway 55, both north and south, are along river corridors. Below are several quotes from the SDEIS: "Current access roads used for the transport of hazardous materials to the mine site include Warm Lake Road (CR 10-579) from Cascade, continuing to Landmark and then on Johnson Creek Road (CR 10-413) to the village of Yellow Pine and Stibnite Road (CR 50-412) to the mine site." (P. 3-99). "The estimated annual average traffic to the SGLF and from the SGLF to the SGP during mining and ore processing operations is also provided in Table 2.4-2. Supplies and deliveries for the SGP during operations would access the SGLF using SH 55 to Warm Lake Road. Approximately two-thirds of all mine-related traffic would originate south of Warm Lake Road and would use SH 55 through Cascade and other communities along SH 55 south of Cascade including Smith's Ferry, Banks and Horseshoe Bend. 8 Approximately one-third of all mine-related traffic	HAZ	No further response required. General in nature or position statement.

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			originating north of Warm Lake Road would use SH 55 through the communities of Donnelly, Lake Fork, McCall, and New Meadows", (P.2-22). "In the event a release was to occur, it would likely be relatively small in volume based on estimated container volumes and would be addressed promptly as per the SPCC Plan and Spill Response Plan. The SPCC Plan would address site-specific spill prevention measures, fuel haul guidelines, fuel unloading procedures, inspections, secondary containment of all on-site fuel storage tanks, and staff training." "In the event that large quantities of hazardous materials are spilled into the environment from a transportation incident, or in the event that a spill is not immediately discovered or addressed, the impact could be more substantial." (P. 4-522).		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	151	<p>J. Transportation and hazardous spill risk The following is the Executive Summary from Susan Lubetkin's 2022 analysis of spill risks related to the Stibnite Gold Project SDEIS (included in the attachments): If approved, the Stibnite Gold Project (SGP) will require large quantities of hazardous materials to be transported to and from and used at the mine site during the 15 years of mining operations (Table ES-1) and, to a more limited extent, for as long as water treatment is necessary. In total, more than 3,000 loads of hazardous materials would be transported to or from the mine every year during operations (Table ES-1). The loads would include more than 8,300,000 gallons of flammable materials (diesel, propane, gasoline) as part of more than 9,400,000 gallons of hazardous bulk liquids to be brought to the mine site annually. In addition, more than 46,000 tons of hazardous bulk solids would be transported to or from the mine site (Table ES-1). This includes the annual use of 4,000 tons of sodium cyanide, which would be delivered in 167 trips carrying 24 tons each, or roughly one trip every other day.</p> <p>The Supplemental Draft Environmental Impact Statement (SDEIS) acknowledged the spills can be harmful and that a Spill Prevention Control and Countermeasures Plan (SPCC) would be developed for the proposed SGP (USFS 2022).The discussion of spill risk was largely limited to the transportation corridor, specifically from the junction of SH-55 with Warm Lake Road to the proposed mine site 70 miles away along two different Action Alternative routes, the Burntlog Route and the Johnson Creek Route. The metrics the SDEIS used for assessing spill risk along the transportation corridor were the quantities of hazardous materials to be transported, used, and stored, and the amount of traffic, as well as descriptions of storage practices and a comparison of the characteristics of the two proposed routes (USFS 2022, p. 4-119). Overall, the assessment of spill risks in the SDEIS suffered from several flaws and presented an incomplete picture of the potential impacts from spills.</p> <p>First, Perpetua held up their current track record on the mine access roads as an indication that spills will not be an issue in the future. The SDEIS reported that in 288 trips with fuel tankers carrying 4,000 to 4,500 gallons in the last 11 years, there have been no spills (USFS 2022, p. 3-99). Those 288 trips over more than a decade are roughly the same number of trips that would be needed to transport hazardous materials into and out of the mine site every month during 15 years of operations (3,337 trips per year/12 months per year = 278 trips per month).</p>	HAZ	A discussion of quantitative risk of spills has been added to Section 4.7.2 of the Final EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	152	<p>Second, no quantitative estimates of the numbers of spills that might occur during the lifetime of the SGP were included in the SDEIS, from transportation or from any other causes. Transporting hazardous materials in trucks is a common occurrence in the United States, and there are several governmental agencies that track what is shipped, how far hazardous materials move, and the safety associated with those shipments. In addition, quantitative risk assessment for the transportation of hazardous materials is an active area of study in the operations research branch of applied mathematics. EISs for other mines and resource extraction projects have included calculations for the expected numbers of hazardous materials spills and the probability of at least one spill. The simple model most often used in other EISs is $N = RT$, where N = the expected number of releases of hazardous materials, R = the release rate per mile traveled by a truck carrying hazardous materials, T = the total number of miles traveled by trucks carrying hazardous materials.</p> <p>This model has precedent of being used in other mining EISs and is intuitive: The more miles traveled by trucks carrying hazardous materials, the higher the expected number of spills.</p>	HAZ	A discussion of quantitative risk of spills has been added to Section 4.7.2 of the Final EIS.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	153	Third, the estimated spill rate per truck mile in the SGP SDEIS was 100 times lower than it should have been. The SGP SDEIS calculated (but did not use) their own estimate of R (USFS 2022). The SGP misused Federal Motor Carrier Safety Administration (FMCSA) data to estimate hazardous material spill rates of 1.4×10^{-9} spills per truck-mile in 2013 and 1.9×10^{-9} spills per truck-mile in 2016. Due to a fundamental math error, these estimates are two orders of magnitude too low. By recreating the math performed in the SGP SDEIS and correcting it, an average spill rate of $R_{spill} = 1.814 \times 10^{-7}$ spills per truck-mile for the period of 2009-2019 based on data from the FMCSA is found. Using the same principles and data, one can also calculate the rate of accidents for trucks carrying hazardous materials as $R_{accident} = 1.34 \times 10^{-6}$ accidents per truck-mile. In doing so, the value of R_{spill} calculated is closer to rates cited in other EISs, including for Pogo Mine, which used an estimate of 1.9×10^{-7} spills per truck-mile, and Pebble Mine, which used an estimate of 2.0×10^{-7} spills per truck-mile for diesel spills >3,000 gallons and 7.8×10^{-7} spills per truck-mile for ore concentrate. This adjusted R_{spill} estimate is lower than the rate from the Pipeline and Hazardous Materials Safety Administration, which estimated that there were an average 3.2×10^{-7} spills of hazardous material per truck-mile (Battelle 2001). (Due to underreporting, it is likely that all these estimated rates are too low, perhaps by as much as a factor of ten (PHMSA 2010).)	HAZ	A discussion of quantitative risk of spills has been added to Section 4.7.2 of the Final EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	154	Fourth, Cascade, Idaho, is not a hub of industrial chemical manufacturing and storage. Therefore, the mine supplies would have to come from other locations. Examining potential distributor locations nearest to Cascade for 22 supplies that would be used at SGP (Lubetkin 2022 Table ES-2). Only six supplies (propane, gasoline, nitric acid, sulfuric acid, hydrogen peroxide, and liquid carbon dioxide) were available in the quantities needed for industrial uses within 100 miles of Cascade. Diesel fuel was available inside a 250-mile radius. For the remaining reagents, distributors were only available from cities that were up 500 or 1,000 miles away. Supplies would travel on SH-55 both north and south of Cascade and could potentially impact any of the communities and environments they pass through. Instead of only considering the transportation corridor from SH-55 at Cascade to the mine site, the true measure of the communities and environment at risk will extend to the distribution points of the reagents brought to the mine and the destinations of the ore concentrate and wastes taken from it (Lubetkin 2022 Table ES-2). The overall exposure will depend on the distances the reagents, products, and wastes need to travel and the number of trips that are necessary for the respective quantities of the hazardous materials. The estimated total miles per year using an average value for the road miles for the two action alternatives from Cascade to the mine site and an educated approximation of the minimum distances for sourcing the reagents. For simplicity, one can use the distance to Boise, Idaho, for all the supplies. This set of origin and destination cities is only an example and likely underestimates the total truck-mile exposure per year because both the number of trips and the number of miles to travel used may be lower than the actual values. Using the total number of heavy vehicles trips with hazardous materials, the expected number of spills and crashes along the SH-55 to mine site portion of the transportation corridor (3,503,850 miles over 15 years) and the full distribution points to mine site distance (at least 14,678,325 miles over 15 years) based on the $N = RT$ model and the probabilities of spills and crashes using a Poisson distribution (Table ES-3). Based on that model, there is a 47% chance of at least one spill from a heavy vehicle loaded with hazardous materials between SH-55 at Cascade and the SGP mine site, and a 93% chance of at least one such incident over the full transportation corridor length. Similarly, there are 4-5 accidents involving heavy vehicles laden with hazardous materials expected along the transportation corridor length considered in the SGP SDEIS and 19-20 accidents along the full transportation corridor. The calculations shown here serve as examples of the general process for estimating spill and crash numbers and likely underestimate the risks. Still, these numbers indicate that the impacts that spills and accidents may have on the environment and human safety along the transportation corridor should be seriously and thoroughly considered. (Table in comment submitted)	HAZ	A revised incident risk analysis for hazardous materials has been added to Section 4.16.2 of the Final EIS. This includes an analysis of longer transportation routes on existing highways than was included in the SDEIS and examines recorded and predicted incident rates along those highways including incidents involving hazardous materials.

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			<p>According to Mary Faurot (personal communication), when asked at a December 6, 2022, community meeting why the SDEIS only considered the distance between SH-55 and the mine site, “Kevin Kneseck (deputy Forest Supervisor) said that the research showed most spills happen on back country roads, so that’s where they did their ‘analysis’.” Terminating the consideration of spill risks at the junction of Warm Lake Road and SH-55 underestimates the risks of transportation spills in two ways: first, as shown above, it dramatically underestimates the length of the transportation corridor and thus the total number of miles over which hazardous materials would be trucked. Second, the R spill used in the calculations is based on national data, which do not capture the specific hazards associated with different portions of the full transportation corridor. Estimates of spill risk per truck-mile based on data collected nationwide are generalized and miss factors that may be relevant to individual hazardous material transportation scenarios. Some risks are dependent on the route chosen (road grade, number of lanes, weather, etc.) and some are route independent (driver experience level, material type, truck configuration, etc.). SGP would have some significant risks (road grade and quality, avalanche/landslide/rockfall, fires, etc.) that would be expected to increase the spill rate if a detailed model were used. While road improvement and speed limits might help abate some of the risks inherent in the analysis area, it is clear that developing a project-specific spill risk per truck-mile for one or more segments of the transportation corridor would likely result in an estimated rate that is higher than national average spill rate per truck-mile.</p> <p>Both the road-specific spill rates and the lengths of the road associated with each rate are important. Consider an analogy: If a pulmonologist knew that a person smoked both a relatively small number of unfiltered cigarettes (spill risk on back country roads) and a much higher number of filtered cigarettes (spill risk on highways), the doctor would not base their estimation of whether the person is likely to develop lung (or other) cancer only on the number of unfiltered cigarettes, much less by assessing the unfiltered cigarettes as having the same hazard level as filtered cigarettes and ignoring the additional risk posed by the filtered cigarettes. In the case of the SGP SDEIS, the Rspill from SH-55 to the mine site is likely much too low, and the value for T also underrepresented the true transportation corridor. The risk of hazardous material spills from truck traffic related to the proposed SGP is therefore dramatically underestimated.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	155	The SGP SDEIS described some mitigating procedures to minimize spill risk associated with the transportation of hazardous materials, such as speed limits and having pilot vehicles accompany convoys of heavy trucks (USFS 2022), but questions remain. For example, what would the spacing of vehicles in convoys be? Would there be an upper limit to the number of vehicles in a convoy? If weather or other natural events make a given route impassable, where and how will vehicles with hazardous materials either wait out the event or temporarily store their cargo?	HAZ	The requested information has been added to the Transportation of Hazardous Materials subsection of Section 4.7.2.2 of the Final EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	156	<p>The SGP SDEIS’s rudimentary attempt at describing the risk of hazardous materials spills was constrained to a limited analysis area and a single source (trucks) of potential spills. This narrow consideration of the possible impacts of the transportation corridor and hazardous materials misses other effects related both to the proposed routes and the possibility of spills from other sources. Transportation impacts extend beyond the risk of spills. The physical structure, use, and maintenance of roads may have effects on fish habitats within a 200 meter impact zone from the centerline of rural roadways (Kravitz and Blair 2019). Other environmental effects to consider are greenhouse gas emissions and dust generation, which will be dependent on the amount of traffic and application of chemicals to the roadway. Therefore, the conclusions in the SDEIS that construction of and/or use of the roadways will have limited if any impacts on fish and the aquatic environment are not justified. Safety is also a concern with accidents, injuries, and fatalities all possible along the SGP transportation corridor.</p> <p>Similarly, conclusions that spills will be rare or small are also unjustified. Mine-related spills of hazardous materials can come from many processes besides transportation. The SDEIS did not examine the probability or potential sizes of spills of either tailings or contact water from pipelines or from mining equipment leaks or mechanical failures. Spills from SPCC facilities may be twice as likely as spills from vehicles (Etkin 2006), but the SGP SDEIS did not discuss the possibility of spills from storage facilities. Even if the modeling had been better done, it is likely that the number of spills that</p>	HAZ	<p>The Final EIS examines a broader geographic area for spill risk.</p> <p>Mine-site related spills are described in SDEIS Sections 4.7.2.2 and 4.9.2.2. The disposal of materials following clean-up of spills is addressed in SDEIS Chapter 2 that describes waste management and disposal of hazardous materials in permitted off-site disposal facilities.</p>

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			<p>would occur would be much higher than the predictions. As shown in a retrospective analysis comparing the spill risks considered in five Alaska mining EISs and their spill records after years of operations (ADEC 2021), the actual number of spills from trucking accidents is much larger than the N = RT model would predict (Lubetkin 2022). (The five mines studied had shorter transportation corridors than described in the SGP SDEIS). The proposed SGP amounts of ore processed per day, annual trips hauling hazardous materials, years of operations, and total miles traveled with hazardous materials all fell within the bounds of the five mines' characteristics. For example, the SGP would be second only to Fort Knox/True North in its daily ore processing (20,000 to 25,000 tons per day at SGP compared to 36,000 tons per day at Fort Knox/True North). Further, the combined 114 spills resulting from truck accidents (rollovers and collisions) are only a small subset of the number of spills attributed to all transportation-related releases, such as leaks, unsecured cargo, overfilling, and human error (1,004 spills). Finally, transportation-related spills are in turn only a small subset of the total number of spills that occur associated with mine operations (8,157 spills recorded across the five mines from 1995-2020)(Table ES-4).</p> <p>Spills are not only common but can also be quite large. Four of the five large mines studied had at least eight releases of more than 1,000 gallons or more than 1,000 pounds of hazardous materials (Lubetkin 2022 Table ES-5). Seventy-five percent of the spill incidents at all five large mines involved non-crude oil, but non-crude oil spills only accounted for 5.2% of the volume spilled (Lubetkin 2022). Most of the spill volume was from releases of hazardous substances (e.g. ore concentrate) and process water, which together represented 94.7% of the volume released, even if they were only 24% of the number of incidents (Lubetkin 2022).</p> <p>(TABLE in comment submittal)</p> <p>(TABLE in comment submittal)</p> <p>Overall, the analysis of the potential impacts from hazardous materials in the SGP SDEIS is inadequate to make an informed decision because it is incomplete and does not offer a way to compare the Action Alternatives against the No Action Alternative. EISs for other mines include expected spill numbers and probabilities, the SGP SDEIS did not. EISs for other mines include spill risk rates that are on the order of 2.0×10^{-7} spills per truck-mile, but the SGP SDEIS estimated a spill rate ranging from $1.4-1.9 \times 10^{-9}$ spills per truck-mile, which is two orders of magnitude lower than rates published in multiple sources. The transportation corridor analysis area did not consider any risks beyond Cascade, Idaho. Using a spill risk rate of 1.814×10^{-7} spills per truck-mile based on FMCSA data from 2009-2019, found the probabilities of spills and accidents for the Action Alternatives for the analysis area considered in the SGP SDEIS and the full length of the transportation corridor. The spill rate used is likely too small as it is an average based on national spill data that may suffer from substantial underreporting and the road characteristics near the proposed SGP would increase spill risks. Without an accurate characterization of the true exposure along the transportation corridor and the spill rate per truck-mile, it is impossible to then make informed statements about spill likelihood and the potential consequences to the environment and to public safety from truck accidents alone, much less any of the other potential sources and causes of spills. Data from five other large operational mines illustrate that hazardous materials spills are frequent, can be sizable, and that transportation spills are only a small fraction of mine-related spills.</p> <p>In short, realistic approach to discussing spill risk would</p> <ul style="list-style-type: none"> ● Include all the hazardous materials being transported (not just diesel or other individual hazardous materials) ● Represent the entire length of the transportation corridor ● Use the correct values for Rspill, possibly by including specific values for different stretches of road with different characteristics ● Recognize the N = RT model is too simplistic and investigate the many models that are part of the operations research literature about optimizing the transportation of hazardous materials which would better the highlight the trade-offs in choosing between the Burntlog Route or Johnson Creek Route or the 		

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			<p>No Action Alternative</p> <ul style="list-style-type: none"> ● Recognize that transportation spills do not just come from truck rollovers and collisions ● Recognize that transportation spills are only a small fraction of the total number of spills at mines; pipelines, storage facilities, and mining equipment can also fail, leak, or otherwise have accidental releases of hazardous materials ● Acknowledge that even if spills at mine sites and elsewhere are contained and cleaned up, that process can also create hazardous waste or other impacts that will then have to be dealt with. State quantitatively the minimum number and probabilities of expected spills from all mine-related sources, including any “over the fence” infrastructure, as well as explanation of why such an estimate is a lower boundary, for the Action Alternatives and the No Action Alternative. <p>Finally, if the SGP does go forward, in the interest of keeping the communities informed, the USFS should consider requiring that all spills above a certain threshold be recorded in an up-to-date and publicly available database. The Alaska Department of Environmental Conservation Statewide oil and hazardous substance spills database¹⁸⁴ would serve as a good model.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	157	<p>As noted by Lubetkin’s Executive Summary above, the Forest Service needs to do more to avoid, minimize and mitigate the risks of hazardous materials spills and to disclose these risks to the public. The environmental effects of a fuel spill on fisheries could be devastating:</p> <p>On September 6, 1989, fuel oil was spilled into Johnson Creek, a SFSR tributary downstream of the project area. Monitoring results indicate a significant reduction in macroinvertebrate populations for 5 miles downstream of the spill site (Newberry 1991). This illustrates that it is reasonable to assume there is a risk of toxic spills that may impact aquatic resources.</p> <p>It is our interpretation that the controlling document for fuel haul along the South Fork Salmon River is still the July 1990 South Fork Salmon River Road EIS (File Reference: EM.11.0006) which placed strict limits on fuel transportation down this road:</p> <p>Hauling of toxic materials, as defined in the Payette National Forest Plan, page IV-238, will be stringently restricted.</p> <p>And</p> <p>Protection of the South Fork from toxic spills will be accomplished by prohibiting hauling of toxic materials, by both commercial and noncommercial users on the South Fork Salmon River Road. Exception can be made for supply of the Reed Ranch and Krassel Guard Station, or emergency situations, with proper safeguards. Criteria for permitting exceptions are presented in Appendix E to the Final EIS.</p> <p>While fuel haul has not been totally banned, the restrictions are severe:</p> <p>No hazardous materials (refer to page IV-238 definition in the Payette National Forest Land and Resource Management Plan) except lime and petroleum products will be transported over the South Fork Road. The basic intent is to eliminate all fuel and other hazardous material haul on the South Fork road unless absolutely necessary.</p> <p>The Forest Service went on to define the requirements for fuel transportation, which include the following:</p> <ol style="list-style-type: none"> 1. Provide for use on a case-by-case permitted basis (District Ranger authority). 2. Considerations in permit issuance are: <ol style="list-style-type: none"> a. For emergency use or to serve South Fork uses only b. Other routes available c. Weather 	HAZ	<p>The 2021 MMP describes the quantities of materials, and anticipated delivery frequency for all materials (hazardous reagents or otherwise) and selected transport routes would be identified by Forest Service in the final Selected Alternative. All transports under Perpetua’s “control” would originate at the Logistics Facility and all deliveries would be required to stop and check in before convoying to the Project site. Perpetua would continue to work with local safety and first responder agencies to define an acceptable method to communicate timing, scheduling and routes for shipments of hazardous materials. We note that this coordination is in process and will continue to be facilitated by Perpetua’s Community Partnership Agreements and interactions with community representatives included on the Stibnite Advisory Council.</p>

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			<p>d. Use levels by recreational traffic 3. Maximum fuel at one time is 500 gallons. Fuel must be carried in a DOT approved flammable fuel container. 4. A bond with a value commensurate to the risk involved will be required -Salmon River Road EIS, p. E-2.</p> <p>As such, the 1993 Biological Opinion for the South Fork Salmon River Road contains no provisions allowing for a fuel spill: “...For both short-term construction activities and long-term increase in vehicular traffic, the allowable incidental take due to toxic spills is set at zero.” This Biological Opinion is still in effect as Payette Forest Plan Standard TEST02 states: For Forest-wide, watershed, or project-level Biological Opinions (BOs) and Biological Assessments (BAs) with letters of concurrence, requirements shall continue to apply until their expiration date unless these documents are specifically updated during further review with related regulatory agencies.</p> <p>Following the South Fork Salmon River Road ROD, fuel transportation for mineral exploration and development activities in the general area was specifically restricted along the South Fork Salmon River Road. The Forest Plan was subsequently amended on August 2, 1995 and further fuel-related restrictions were implemented:</p> <p>The Payette National Forest Land and Resource Management Plan limits all hazardous material, except lime and petroleum products, from commercial transport over the SFSR road. The intent is to limit the transport of all hazardous substances over the SFSR road except those that are absolutely necessary (Payette National Forest 1990). Emphasis added. Highlighting the sensitivity regarding fuel haul, the Forest Plan was subsequently amended on August 2, 1995 and further fuel-related restrictions were implemented: 1. Amend Appendix E of the FEIS for South. Fork Salmon River Road Project to include no non-commercial haul of petroleum products in excess of 60 gallons without a permit. 2. Implement a new road closure order that prohibits "Using the road with a vehicle that has a cargo containing more than 60 gallons of petroleum products without a road use permit". Although the subsequent 2003 Forest Plan is silent on this issue, the project-level Biological Opinion for the South Fork Salmon River Road is still in effect and does not allow for any incidental takes for toxic spills into that waterway. The South Fork Salmon River Road EIS also states the following: “Activities reasonably expected to occur within the next 10-15 years were identified and included in the cumulative effects analysis. Unforeseen activities will be analyzed for Forest Plan compliance and cumulative effects when proposed.” (emphasis added). All other recent projects have been consistent with the 1990 South Fork Salmon River Road EIS, including the Hamilton Bar/Three Mile Road closure, the reconstruction of the Goat Creek culvert, the South Fork Restoration and Access Management Plan, and the Golden Meadows Exploration Project. The Decision Notice for the Golden Meadows Exploration Project at the Stibnite site specifically restricted commercial fuel haul to the Johnson Creek Road:</p> <p>Fuel haul associated with this project will not be allowed on the South Fork Salmon River road. Fuel haul, as described in the EA section 2.1.9 and Attachment A of this decision will occur only on Johnson Creek road.190 Emphasis not added.</p> <p>Johnson Creek Road (FS 413) is the only authorized route for transporting fuel in large trucks during snow-free conditions for implementation of this project.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	167	<p>Under no circumstances should hazardous materials or heavy truck loads be allowed on the South Fork Salmon River Road, even in the event that the Burntlog Route becomes impassable due to snow, weather conditions, or otherwise. The road bed for the South Fork Salmon River Road is not designed to withstand heavy truck traffic and the risk of spill risk is unacceptable. Instead, the Forest Service must consider keeping the Johnson Creek Road accessible year round. Similarly, the Forest Service should assess either how quickly the Johnson Creek road could be plowed or consider that both Burntlog Route and Johnson Creek could be maintained for year round mine site access. We are concerned that if Burntlog Route becomes impassable for days to weeks or longer, Perpetua would seek emergency permission to haul hazardous materials and fuel necessary for operating the mine along the SFSR Road if the Johnson Creek Road is not plowed. Indeed, the Biological Opinion for the SFSR road contains no provisions for a hazardous materials or fuel spill. Moreover, it is our interpretation that the controlling</p>	HAZ	Perpetua will continue to coordinate training opportunities with regional Fire Departments (Yellow Pine, Cascade, Donnelly & McCall); Council, Riggins and New Meadows would be included in future training opportunities. Perpetua anticipates positioning a mixed Hazardous Materials Response Trailer at the Valley County Emergency Operations Center in Cascade, Idaho.

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			<p>document for fuel and hazardous material hauling along the South Fork Salmon River is the July 1990 South Fork Salmon River Road EIS (File Reference: EM.11.0006) which placed strict limits on fuel transportation down this road. While fuel haul is not totally banned, the restrictions are severe. The SDEIS erroneously assumes that access road choice for the proposed SGP is an either/or proposition. This assumption is misplaced because statements by Perpetua’s consultants recommend maintaining both roads due to the likelihood that Burntlog Route would become impassable during the winter months.</p> <p>Further, because road choice is not binary, there may be additional beneficial and adverse effects on forest resources. Beneficial effects may include reduced potential for destructive avalanches that could dam the EFSFSR, damage the Stibnite Road, and/or impact aquatic habitat if an avalanche control program is used to maintain wintertime access between Yellow Pine and the mine site. By contrast, adverse effects could be experienced due to the increased number of helicopter flights and explosives used for avalanche control along both the Burntlog Route and the Stibnite Road, impacting wildlife. These effects must be analyzed if the Forest Service is to take a hard look at mine site access.</p>		
David Chambers	17634-A	13	<p>4.7.2.2 2021 MMP – Mercury and Mercury Containing Materials</p> <p>There will a significant amount of mercury produced by the mercury emission controls, presumably as elemental mercury, but the details on the mercury emission controls are not provided in adequate detail in the SDEIS. It is noted:</p> <p>“... total mercury content in flasks and other waste streams to be disposed offsite is 10.9 tons per year with 10.7 tons consisting of metallic mercury in flasks.”</p> <p>This is a significant amount of mercury, which will require disposal. In the SDEIS it is not stated where mercury emission control residue will be disposed. The responsible way to dispose of this mercury would be ship it to a designated mercury disposal facility. The other option would be to dispose of the mercury in the TSF. Although this is probably a legal option, it also this mercury potentially more available than it would be if disposed of in a designated mercury disposal facility.</p> <p>In the following subsection (4.7.2.2 2021 MMP – Water Treatment Plant (WTP) Residuals), it is noted; “The WTP would produce a residuals slurry that would be disposed in the TSF.”</p> <p>It is clear from the statement that the TSF will be for the disposal of water treatment plant sludges, but it is not clear what will be done with the mercury emission control waste. The disposition of the mercury from the emission controls is an important issue, and needs further disclosure and discussion in the SDEIS.</p>	HAZ	The requested information has been added to the Mercury and Mercury Containing Materials subsection of Section 4.7.2.2 of the Final EIS.
Samuel Penney (Chairman)	19396	164	<p>4.2 Geologic Resources and Geotechnical Hazards</p> <p>The final antimony concentrate would be placed in 2-ton supersack containers ready for shipment off site for further refining. Add this to the risk of hazardous material spills in the project area and its waters and also enroute to the overseas refinery. The annual transport is estimated at to 730 truckloads. It is assumed that the concentrate, when sold, would be shipped to facilities outside of the U.S. for smelting and refining because there are currently no smelters in the United States with capacity for refining the antimony concentrate. This risk is unacceptable and grounds for denying the approval of this Project.</p>	HAZ	The Antimony Concentrate Handling subsection of Section 4.7.2.2 of the SDEIS discusses how the antimony sulfide concentrate would be handled at the site and in transport off site. In addition to placing the dry concentrate in closed supersacks, these containers would be placed into steel shipping containers at the mill. These would be sealed shut and locked before being placed on semi-trucks for transportation off site.
Samuel Penney (Chairman)	19396	221	<p>Fuels and Hazardous Chemicals subsection: The SDEIS recognizes the potential for small spills but does not discuss the large quantities of fuel and hazardous chemicals stored at the site and the potential environmental risks. It mentions environmental protection practices and design features would minimize the risk of accidental releases. Despite best plans and efforts, it seems large releases are possible given the remote location of the site, access challenges, and harsh weather conditions. This section should be expanded on.</p>	HAZ	Section 2.4.5.14 of the SDEIS and Table 2.4-11 discusses the quantities of hazardous substances to be used at the site, including the largest quantities. Section 4.7.2.2 states that the tanks that would contain hazardous substances would be located within engineered secondary containment sized to contain more than the quantity of the largest tank in the containment. Section 4.7.2.2 discusses the likelihood of spills of hazardous materials at the site and how they would be responded to in order to stop the spread of a spill and clean it up.
Samuel Penney (Chairman)	19396	291	Spill Risk	HAZ	The information requested in the comment is contained in Section 3.7.4.2 of the SDEIS.

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			The SDEIS consistently downplays the potential risk of contaminants spilling into aquatic ecosystems. There should be a section in the FEIS that documents Perpetua's current record with fuel spills and Project related vehicles going off the road during trips to the Stibnite site. In Perpetua's recent past, there has been a fuel spill from an airplane crash carrying fuel, staff vehicles that have gone off the road and contractor vehicle rollovers. This all took place during the Golden Meadows exploration/ Administrative Settlement Agreement and Order on Consent stage with relatively low numbers of personnel traveling compared to this mine proposal.		
Samuel Penney (Chairman)	19396	293	The SDEIS fails to analyze the spill risk for the Middle Fork Salmon River watershed. The proposed Burntlog Route crosses over a ridge that separates the SFSR and the upper Middle Fork Salmon River watersheds. ⁴⁹⁰ In fact, the Burntlog Route reaches within 0.25 miles from an unnamed tributary of Big Chief Creek, which leads into Indian Creek and eventually the Middle Fork Salmon River. Spill risk to the Middle Fork Salmon River watershed needs to be analyzed. This Middle Fork subwatershed needs to be added to the analysis area along with impacts to fisheries and other aquatic organisms.	HAZ	SDEIS Section 4.7.2.2 describes spill risk, prevention, and response along the Burntlog Route including risks at surface water crossings. The Final EIS has been revised to mention the potential effects of the segment of the Burntlog Route located along the divide between the Headwaters of the East Fork SFSR and the Upper Indian Creek watershed that drains to the Middle Fork Salmon River.
Samuel Penney (Chairman)	19396	294	The percent of access routes that are located in riparian conservation areas is insufficiently quantified. The SDEIS notes that 6.5 miles or 18% of the 36-mile Yellow Pine Route is located within 100 feet of streams. It is unclear how the Yellow Pine Route was calculated as a 36-mile distance or why the riparian area is only considered within 100 feet of a stream channel. The Boise National Forest Land and Resource Management Plan is useful in calculating the percentage of routes in close proximity to streams. Using guidance from this document, 61% of Johnson Creek Road is located within the riparian conservation areas buffer. Considering the high proportion of roads in riparian conservation areas, the risk of a spill reaching surface water needs to be properly analyzed. The measures included in the Spill Prevention, Control and Countermeasure Plan would reduce the potential for a spill to reach downstream waters, yet there is no guarantee of no effects to aquatic life.	HAZ	The acreages of Project-related disturbance to riparian conservation areas are presented for each SGP component (including roads) in SDEIS Table 4.11-1.
Samuel Penney (Chairman)	19396	295	The SDEIS falsely claims to qualitatively assess risk of vehicular accidents. The SDEIS cites data with very low rates of large truck accidents resulting in spills of hazardous material. ⁴⁹³ However, these data are assumed to be from mostly straight, multi-lane, paved highways, in stark contrast to the steep, sinuous, narrow dirt roads associated with the Project. The SDEIS acknowledges that statistics for haul truck road accidents on county roads and/or in mountainous terrain are very limited, ⁴⁹⁴ but that does not make it appropriate to use data comparatively from paved roads to suggest that the risk of spills in the SFSR watershed is very low. Equally unacceptable is the SDEIS making the assumption that transportation on these roads would be safer than highway roads because there is less traffic and lower speeds.	HAZ	A revised incident risk analysis for hazardous materials has been added to Section 4.16.2 of the Final EIS. This includes an analysis of longer transportation routes on existing highways than was included in the SDEIS and examines recorded and predicted incident rates along those highways including incidents involving hazardous materials.
Samuel Penney (Chairman)	19396	296	The SDEIS lacks any analysis on the risk of fuel spills from airborne traffic. Indeed, an airplane crashed and spilled fuel at the site in February 2012, releasing 100 gallons of diesel fuel. The SDEIS does not describe how air traffic will arrive at the site during the life of the mine. Analysis of the risk of fuel spills from airborne traffic is imperative, and an air route that avoids flying over critical habitat for Endangered Species Act-listed fish species should be detailed.	HAZ	Measures to protect stream channels from spills associated with aircraft are described in Chapter 2 of the EIS. The impact analysis includes implementation of these measures.
Samuel Penney (Chairman)	19396	297	The SDEIS concludes that design features and permit stipulations and regulatory requirements from state and federal agencies would reduce the risk of spills and ensure that effective response is provided should a spill occur. ⁴⁹⁶ Anyone who has traveled along the EFSFR or Johnson Creek during spring stream flows understands that it would be nearly impossible to contain a spill during high flows. Once again the SDEIS relies heavily on professional judgment regarding the use of BMPs with little to no analysis of spill risks. The Tribe recommends quantifying all hazardous materials being taken to the site, total number of trips in riparian buffers and running different spill risk scenarios.	HAZ	A revised incident risk analysis for hazardous materials has been added to Section 4.16.2 of the Final EIS. This includes an analysis of longer transportation routes on existing highways than was included in the SDEIS and examines recorded and predicted incident rates along those highways including incidents involving hazardous materials. Discussion of certain potential spill scenarios has also been added to Section 4.7.2.
Samuel Penney (Chairman)	19396	318	The potential and impact of antimony concentrate entering a waterbody from a spill should be evaluated and documented.	HAZ	Descriptions of the potential effects of certain spill scenarios, including antimony concentrate, have been added to Section 4.7.2 of the Final EIS.

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Samuel Penney (Chairman)	19396	320	The transportation of antimony from the site to the shipping yard should be detailed. Antimony concentrate bags will need to be transported from the site along roads with listed fish species such as the Snake and Columbia River. Will the concentrate be barged down these rivers?	HAZ	SDEIS Section 2.4.5.7 describes the containers and methods used to ship antimony concentrate from the site to a commercial loading facility. The specific methods and routes for antimony concentrate shipment from a loading facility would depend on the location of the receiving refinery and would be subject to transportation requirements for hazardous materials as regulated by the Department of Transportation.

Water Resources

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Elizabeth Barnes	6652	3	p. 2-110 Limestone is the primary method for decreasing soluble heavy metal concentrations and moderating pH levels. However, no estimate is provided on the potential total volume of limestone that will be used throughout the mine's operation. Or, where the limestone will be sourced from and what is its purity standard. While limestone has benefits, there are unaddressed risks associated with its use such as: deposition of fine limestone particles in river beds and loss of substrate diversity, deposition of heavy metal particulates as the decreasing pH draws them out of solution, and inconsistent results of buffering at high flows. The project area has extremely high concentrations of arsenic, antimony, and aluminum that will be exacerbated by mining operations if allowed to proceed as planned. Additional mercury, lead, and copper exceedances are anticipated. The river systems that run through the impacted area and contact heavily contaminated water sources at multiple points (TSF runoff, underdrains, etc.), have very high flows in spring when the mountain snowpack melts. This is a critical time of year for fish migration and spawning and it is unlikely that any volume of lime will be able to neutralize the pH of high flow waters, being naturally acidic from snowmelt, and the result every spring for decades after mining ends that dissolved heavy metals will be carried for miles downstream impacting huge reaches of the Salmon River and generations of fish and all who eat them.	WTR	SDEIS Section 2.4.5.7 describes how 130,000 to 318,000 tons of limestone would be mined annually on site to meet the limestone and lime needs of the Project for pH adjustment. The pH adjustments would be associated with ore processing with the resulting tailings placed in the lined tailings storage facility. Dust controls associated with the crushing of limestone and the lime kiln are also described in SDEIS Section 2.4.5.7 and would be utilized to inhibit dust and its deposition in the watershed. The Project includes water treatment and water management controls to improve or maintain analyte concentrations in the Project area streams. These streams are circumneutral under existing conditions and do not exhibit acidic pH values.
Elizabeth Barnes	6652	6	Table 3.9-5 The Acid-generating potential (NAG) of the SGP ore rock is extremely high, with acidity as extreme as 2.6 pH (Alaskite), 3.4 pH (Quartz-Monozite-Alaskite), 3.6 pH (Granite). Quartz-Monozite-Alaskite has the highest risk and is the most abundant mined material in the SGP, comprising 26-40% of deposits in Yellow Pit, and 48-70% in Hangar Flats Pit. These ores will have the greatest impact to water chemistry at and downstream the project area, especially at the ore stockpiles and ore tailings pile. The tailings pile underdrain will flow directly into Meadow Creek, making acid-generation highly likely at this point and acid mine waste will not be preventable, or addressed until it is too late. This will become increasingly problematic post-closure as liners degrade exponentially over time. In addition to direct outflows and underdrains, ore tailings and open pit walls and backfill interact with the groundwater, and there will be no mechanism to prevent chronic or acute releases of acid mine waste contaminated with antimony, arsenic, aluminum, and mercury all above water quality standards. Lead (pb) leachability also exceeds standards (Table 3.9-6b), why is this not thoroughly discussed as a risk? The Quartzite-Monozite-Alaskite Ore also has a NPR >1.5, beyond the threshold for potentially-acid generating material, creating an extremely strong likelihood of acid mine waste release.	WTR	Acid-generating ores would be processed and treated with lime then placed in the lined tailings storage facility where they would not contribute acidic drainage to the environment. Other mined materials such as development rock and pit wall rock are not expected to generate acidity. Instead, future water chemistry conditions are expected to be related to neutral pH leaching of mined materials rather than acidic drainage.
Elizabeth Barnes	6652	7	Despite the major risk and suitable conditions for the development of acid rock pollution, the tailings piles will be contaminated with high levels of heavy metals and other pollutants that will dissolve into water even without acidic conditions. It is stated that "a few constituents are mobile under neutral to alkaline pH conditions, including aluminum, antimony, arsenic, manganese and mercury, which were frequently leached (in Humidity Cell Tests) in concentrations above the strictest surface water quality standard. In addition, sulfate, selenium, TDS, copper, cadmium, and zinc were occasionally elevated (p. 3-166)." Furthermore, the HCT test did not use first flush water flows and chemistries (p. 3-168), which can be fully anticipated to flush huge amounts of dissolved pollutants from the SGP far down the Snake River. These risks of acid waste rock generation and heavy metal contamination are clear as day in the tables and analyses, but are largely trivialized and unscientifically dismissed in the EIS text to create a misleading read of the true environmental impacts and destruction of the watersheds that can be clearly	WTR	The characterization of Project mined materials demonstrates that acidic drainage is unlikely to occur. Acid-generating ores would be subject to oxidation of sulfides followed by neutralization and placed in a lined tailing storage facility. Development rock and pit wall rock do not exhibit acid generating properties in laboratory test work and acid generation has not been observed in the historical Yellow Pine and West End open pits.

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			anticipated to occur. To be particularly negatively affected are the spawning reaches for Chinook Salmon, Steelhead, and Bull Trout in and immediately downstream the project area. Why is acid mine drainage so dismissed albeit highly probable?		
Elizabeth Barnes	6652	8	Will cyanate be tested for in water outflows and water quality testing sites? What is the expected concentration? And impacts to aquatic life?	WTR	Cyanate is an intermediate stage in the breakdown of cyanide to carbon dioxide and nitrogen by alkaline oxidation. The Project uses membrane treatment to remove cyanide from solution instead of alkaline oxidation. Therefore, monitoring would focus on cyanide measurements instead of cyanate. Cyanate has low toxicity properties and tends to convert into carbon dioxide and nitrogen in surface water environments.
Elizabeth Barnes	6652	11	4.8.52 States that post-closure the streamflow system would "return to a stable seasonal pattern similar to existing conditions." Yet, permanent installation of geosynthetic liners in piles will increase overland flow and intensify peak flows. These peak flows disproportionately contribute to heavy metal source pollution from the historic mine area to downstream reaches. Overland flow and peak flow will also be intensified by impermeable surfaces of mine facilities, parking, roads, and loss of tree cover. What is the anticipated increase in overland flow due to installation of impermeable surfaces?	WTR	SDEIS Section 4.5.2.2 describes the reclamation cover materials that would be placed over geosynthetic liners. Upon revegetation of the cover materials, overland flow would resemble existing conditions.
Elizabeth Barnes	6652	12	Figure 4.9-1 What are "process losses?" Their quantity, composition, phase state, transport mechanism, and impacts?	WTR	Process losses would consist of evaporation from the process, connate storage of tailings water within the TSF, or residual moisture retained in the antimony concentrate. Evaporation releases water vapor to the atmosphere while previously dissolved constituents remain in the process. Water contained in the settled tailings would be retained by the liner system. Moisture retained in antimony concentrate would remain in liquid form until processed offsite when it would evaporate or become a residual of the concentrate process.
Elizabeth Barnes	6652	13	Figure 4.9-1 With the anticipated degradation of geosynthetic liners, what will prevent the tailings slurry from leaching indefinitely and at an increasing rate post-closure? p. 4-211.	WTR	Leakage rates through the tailings storage facility liner are described in SDEIS Table 4.9-7 and Section 4.9.2.2. Leakage rates through the liner depend on the water pressure from the tailings on the liner and would decrease over time during the closure and post-closure periods as the tailings dewater.
Elizabeth Barnes	6652	14	4.9-1 Why wont tailings storage facility outflow water be treated? It will contain water from open pits, ore stockpiles, tailings slurry, contact water ponds, process facilities, and truck shop, yet it is allowed to flow directly into Meadow Creek via IDPES outfall?	WTR	Tailings storage facility outflow would be recycled for process water use and ultimately treated during closure. Tailings storage facility underdrain flow would consist of groundwater emerging below the facility liner and would not be in contact with the tailings materials.
Elizabeth Barnes	6652	15	Table 4.9-9 What are the Predicted Maximum Concentrations in Water Treatment Plant influent for cyanide, cyanate, and TDS?	WTR	During operations, process water containing cyanide would be reclaimed and reused as process water. Water treatment of process water would be initiated in the post-closure period. Influent concentrations for cyanide and TDS during the post-closure period are presented in SDEIS Table 4.9-9. The selected water treatment process would not involve alkaline oxidation to form cyanate from cyanide.
Elizabeth Barnes	6652	16	4-202 What is the purpose for reroute Meadow Creek over the seepage pond at mine closure? This decision will delay remediation, as slurry pond needs to sufficiently dry before revegetation and increases surface water contact with highly contaminated materials.	WTR	The restoration of Meadow Creek over the tailings storage facility creates wetland areas to offset the removal of existing wetland areas by the tailings storage facility construction.
Elizabeth Barnes	6652	17	4-219 The basis for predicting operational and post-closure effluent water quality, and therefore stream quality, are based on "the MINIMUM of the predicted water treatment plant influent or the TARGET effluent concentrations was used." This basis for analysis will result in understated risks and the best case scenario, rather than the most likely case scenario.	WTR	SDEIS Table 4.9-10 presents the treatment plant effluent objectives. If influent water has a lower concentration than these objectives for an analyte, then the effluent water would have a lower concentration than these objectives as well, no greater than the influent concentration. Therefore, the resulting analyte concentrations in water treatment plant effluent are not understated and represent the reasonably foreseeable scenario.
Elizabeth Barnes	6652	18	4-219 Why will a temporary water treatment plant be permitted? Operations should not start until a permanent water treatment plant is up and running. What is the capacity of the temporary treatment plant? Are effluent standards, and predicted maximums, the same for the temporary and permanent treatment systems? How many years will construction of the permanent water treatment facility take?	WTR	A temporary water treatment plant would be needed to control effects on water chemistry during construction and commissioning of the permanent water treatment plant. The temporary treatment plant would be utilized during the project construction phase which would be up to three years.
Elizabeth Barnes	6652	20	4-212 What is the standard error for the expected maximum water volume to enter the Water Treatment Plant? Is 100 year flood an applicable maximum given the anticipated increase in flood events due to	WTR	The range of influent volumes to the water treatment plant based on a 120-year precipitation record are described in SDEIS Figure 4.9-9. During operations, these volumes include

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			climate change effects on precipitation trends? What are the anticipated volumes of water to be produced in the TSF and contact ponds, in relation to the Water Treatment Facility capacity? What is the remediation plan for contact water ponds?		dewatering water and contact water in excess of the make-up water demand for processing. Water from the tailings storage facility would be reclaimed and recirculated for process use. In the post-closure period, these volumes include contact water and tailings storage facility drainage. These volumes are described in the lower graph shown in SDEIS Figure 4.9-9. During operations and closure, contact water would be collected and used for process make-up water or treated for discharge. Following closure and into the post-closure period, placement of membrane liners, reclamation cover material and revegetation would eliminate contact water by inhibiting contact of surface water with mined materials.
Elizabeth Barnes	6652	21	Why is there no remediation plan for Hangar Pit or other mine pits that will have indefinite contact with groundwater and be an eternal source of heavy metal pollution to the local watershed?	WTR	SDEIS Section 4.9.2.2 describes the effects of groundwater interaction with pit backfill materials on groundwater chemistry and the estimated pore water chemistries. Groundwater chemistry would be subject to point of compliance regulations under the Idaho Ground Water Quality Rule with mitigation requirements determined through application of that rule. The point of compliance for the project has not yet been determined.
Elizabeth Barnes	6652	22	4-219 The use of both Meadow Creek and the East Fork Salmon River spread the potential for contamination to two critical creeks, what is the justification for this? Flows could be increased with other water sources.	WTR	Discharges to Meadow Creek and the East Fork SFSR would consist of treated water meeting discharge requirements established through the IPDES permit.
Elizabeth Barnes	6652	24	4-220 Will the water treatment facility be a permanent installation on the landscape, or will it be decommissioned and remediated to a natural state? At what timeline?	WTR	The water treatment facility would remain in place until water treatment operations would be no longer needed to treat effluent from the tailings storage facility or contact water. The time period for treating effluent is expected to be approximately 40 years. When the water treatment facility is no longer required, it would be removed and reclaimed.
Elizabeth Barnes	6652	25	4-220 What is the explanation for the discrepancy between the predicted 25,000-50,000 g wastewater flow, but only 2,000 g per year effluent? How will 25,000 gallon/day flow affect flow rates in streams?	WTR	The 2,000 gallons per minute is the design capacity of the mine water treatment plant for treating dewatering water and contact water. The 50,000 and 25,000 gallon per day volumes are the design capacities for the sanitary wastewater treatment plan for workers housed on site.
Elizabeth Barnes	6652	26	4-220 There is no quantification of sewage wastewater chemistry, or temperature? This debases any final analysis of mine impacts of fish populations as this is critical information. Many commonly used personal care products are not addressed in water treatment systems and can have deleterious effects on aquatic lifeforms, not addressed in the EIS. Why not?	WTR	Sanitary wastewater treatment would meet discharge standards imposed by the IPDES permit. Effects of water treatment on stream temperature were described in SDEIS Section 4.9.2.2.
Elizabeth Barnes	6652	28	4-225 The West End Lake Pit is predicted to be a long-term source of Antimony, arsenic, mercury during operation and post--closure. This pit interacts with ground water and will be a source of heavy metal pollution downstream for the indeterminable future. Antimony is toxic to embryonic and larval stages of fish at very low levels (Nam et al. 2009). Arsenic exposure in the aquatic environment causes bioaccumulation in aquatic organisms and can lead to physiological and biochemical disorders, such as poisoning, liver lesions, decreased fertility, cell and tissue damage, and cell death (Bears et al. 2006; Ribeiro et al. 2005). "Mercury is one of the most serious contaminants threatening our Nation's waters because it is a potent neurological poison in fish, wildlife, and humans.. (USGS 2018)."Arsenic and lead will also exceed water quality standards in the Hangar Pit backfill (Table 4.9-15). The claims made in the cumulative effects section that fish habitat will suffer no net loss, and rather, will be expanded under the operation of SGP alternatives, is completely debased and unscientific given the multiple documented sources of heavy metal pollution that is certain to be sourced from tailings underdrains, contact water ponds, ore stockpiles, and backfilled pits. The EIS is highly deceiving in its description of cumulative effects to fish. Furthermore, there is no analysis whatsoever of the effects of anticipated heavy metal leaching on the aquatic invertebrate food chain, without which the fish populations cannot survive. I cannot state with enough emphasis the certainty, given the predicted water chemistries, that the project area will be inhabitable to fish populations, or for many miles downstream as heavy metals will be released and will persist in the environment, decimating invertebrate populations, accumulating in fish and other wildlife populations, and ultimately denuding the project area and downstream reaches of life and productivity. Why are water quality exceedances not thoroughly discussed in the cumulative effects on fish sections?	WTR	The water chemistry associated with the West End Pit lake and its effects on groundwater are described in the analysis presented in SDEIS Section 4.9.2.2. The effects pit lake and pit backfill water chemistry were incorporated into the surface water chemistry evaluation. Antimony, arsenic, and mercury present in contact water would be subject to water treatment. Tailings underdrain water has the chemistry of existing groundwater because the underdrain collects groundwater coming to the surface below the liner which would not be in contact with tailings materials. The resulting effects of groundwater chemistry and water treatment on surface water chemistry were incorporated into the effects analysis for fish as described in SDEIS Section 4.12.2.2.

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Elizabeth Barnes	6652	30	4-230 What is the potable water source for the mine workforce, during operation and for the decades postclosure that water treatment will be required?	WTR	There is an existing potable water well and potable water treatment system operating at the site. As described in the Water for Potable Use subsection of Section 2.4.5.10, there would be water supply wells installed for the worker housing facility. Operation of the potable water supply systems would comply with State requirements for monitoring and treatment.
Elizabeth Barnes	6652	31	4-243 The only reason that no exceedances are predicted is because the method for imputation was using the effluent targets, and not the anticipated maximums. Why? Under maximum metal concentration conditions, there absolutely will be exceedances and this is an extremely deceitful presentation of information considering the maximums are provided in tables and could very well be used in the calculations of effluent chemistry when compared to treatment effectiveness and capacity.	WTR	Achievement of effluent water treatment targets would be required by permit and therefore represent the reasonably foreseeable water concentrations.
Elizabeth Barnes	6652	32	4.9-21 Upstream reaches of multiple streams flow through the TSF, adding a continuous source of water contact, and primarily acidic rainfall and snowmelt. Why not relocate the tailings pit to occupy one drainage, instead of 3? Given the predicted exceedances of antimony from multiple documented sources (TSF, contact ponds, ore stockpiles, open pits), why is antimony predicted to decrease post-closure, but arsenic predicted to increase?	WTR	The tailings storage facility design fills the native topography to approximately the crest elevation of the completed tailings embankment. At this elevation, the tailings would occupy the Meadow Creek drainage and the lower portion of two tributary drainages. Exclusion of the two tributary drainages would require two embankment dams and channel diversions that would not result in reduced environmental effects. During operations meteoric water entering the TSF would become part of the process water recirculation and not be discharged to the environment. As part of the reclamation plan, the TSF would be covered with an impermeable membrane that itself would be covered with clean reclamation materials which would prevent contact of meteoric water with the underlying tailings. Monitoring data for Meadow Creek indicated that stream water is circumneutral and not acidic (e.g., SDEIS Table 3.9-9). Antimony concentrations are more affected by the removal of legacy materials from the drainage that contribute antimony to surface water when leached. Mined materials associated with the Project do not produce antimony to the same extent when leached. For arsenic concentrations, removal of the legacy materials that contribute arsenic to surface water when leached, results in a reduction in stream arsenic concentrations during operations. However, mined materials associated with the Project produce similar arsenic concentrations in the post-closure period when leached.
Elizabeth Barnes	6652	33	4-252 Given the increases in antimony, arsenic, mercury, and lead, why are "effects on surface water concentration expected to be negligible?" This seems like an unfounded claim given the data provided in multiple tables.	WTR	Effects on surface water chemistry are based on comparison to existing conditions and the predicted surface water chemistry effects of the Project resulting in lower or similar analyte concentrations compared to existing conditions.
Elizabeth Barnes	6652	34	4-225 The concentrations of antimony and arsenic and mercury in groundwater from contact with the West End Pit will be permanently above water quality standards. Why are the effects of these heavy metal exceedances on fish, humans, invertebrates, and waterfowl not discussed or incorporated into the cumulative effects section?	WTR	Effects of the West End Pit lake on groundwater chemistry are direct effects from the Project and are therefore described in Chapter 4 in SDEIS Sections 4.9.2.2 (water resources), 4.12.2.2 (fish and aquatic resources), 4.13.2.2 (wildlife), and 4.18.2.2 (public health and safety). Human and ecological exposure to groundwater is limited, making groundwater effects on surface water chemistry the primary exposure assessed.
Elizabeth Barnes	6652	36	4-283 Will revegetation be delayed permanently if water temperature fails to meet standards?	WTR	Revegetation would occur promptly following placement of reclamation cover material on facilities. Attainment of target revegetation would be monitored and adjusted as needed until water temperature standards are met. A mitigation measure for water temperature has been added to the Final EIS.
Elizabeth Barnes	6652	37	4-285 It is stated that there will be no surface water impacts because it is a renewable resource? What does this mean, given the indefinite contact of surface water with multiple sources of contamination within the project area	WTR	The text has been clarified to indicate that water management and reclamation activities protective of surface water quality would improve or maintain the existing conditions for surface water as a renewable resource.
Elizabeth Barnes	6652	39	4-348 What is the rationale for stating that a spill would have effects that are "moderate, temporary, and localized?" Wouldn't a major spill have effects that are severe, permanent, and widespread. The risk of a spill is extremely downplayed in the EIS and very little information or analysis is provided on the potential environmental impacts. The EIS is written with extremely rose-colored glasses and I pray that officials use the data in the tables and their own minds to see the clear and present danger posed by mine operations in this location with extremely high naturally occurring heavy metal concentrations, multiple	WTR	The SDEIS accounts for the spill prevention and spill response measures incorporated into the Project that would minimize the consequences of spills. The TSF is designed to be a zero discharge facility while operating to contain process water. All facilities that would store or use liquid hazardous materials would be constructed with spill containment to prevent releases to the environment if a spill from primary containment occurred. Spills outside of containment would quickly be responded to by mine employees and the spilled materials

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			headwater streams running through contaminated mine material, and a poorly-conceived water treatment plan that allows multiple sources of contaminated water to go untreated and rather run through effluent out-pipes. Even if concentrations at the point of release are below standards (which would be extremely unlikely given the data) the accumulation of these metals downstream and in the Salmon River watershed food chain are highly likely and will not be measurable until mediation is far too late. The cumulative effects statement only speaks on the physical habitat distances expected to be physically accessible, and does not consider the poor water quality that will occur in these reaches. I pose to officials, would you eat a fish reared below the TSF? Because numerous wildlife will.		would be contained and cleaned up which would not allow permanent and widespread impacts. Contact water would be collected and either used within the process or be treated in accordance with permitted outfalls before discharge to surface streams.
Jack Nelson (Representative, District 26)	7149	3	The net benefit of the project will include 47% reduction in arsenic in the East Fork South Fork of the Salmon River on site and a reduction of 40% in arsenic off-site. All of these benefits will happen because of private investment and a commitment to the environment through modern mining practices.	WTR	No further response required. General in nature or position statement.
Britt Raybould (Representative)	7180	3	Moreover, Perpetua has shown its committed to responsible mining practices. As outlined in the Supplemental Draft Environmental Impact Statement (SDEIS), Stibnite Gold will reduce 47% of arsenic in the East Fork South Fork Salmon River on site, as well as a 40% reduction of arsenic in the East Fork South Fork Salmon River off site. Additionally, antimony is critical for long duration storage batteries, which will help assist in the move toward cleaner energy.	WTR	No further response required. General in nature or position statement.
Brooke Green (Representative, District 18)	7183	4	The company will also pick up, reprocess and safely store over 10.5 million tons of legacy mine waste and store it inside of a double lined and capped facility to prevent it from interacting with both ground and surface water like it does today.	WTR	No further response required. General in nature or position statement.
Jason Monks (Representative)	7208	4	And despite not making any money from the mineral resource yet, they've already started addressing water quality at Stibnite. This past summer, they began voluntary work to reroute waterways away from historic mine waste and next summer they will start picking up and storing over 300,000 tons of historic mine waste that poses a threat to the rivers that go through their project site. This kind of work shows that they are genuine in their commitment to make Stibnite better than it was when they found it.	WTR	No further response required. General in nature or position statement.
Susan Dorris (Mayor, Donnelly)	8432	5	The MMP identifies significant water enhancements. An important point is that the MMP has specific actions that will improve the overall ecological standing and that has a trickle-down effect that will improve water quality. Also, the fish tunnel although not a water quality issue is an enhancement that will be beneficial for the EFSFSR Salmon spawning areas and the restoration of the river back over the Yellow Pine pit will also increase diversity of fish in the upper reaches.	WTR	No further response required. General in nature or position statement.
Treg Bernt (Senator, District 21)	10237	2	This site has been mined over 100 years and was effectively abandoned by past operators and responsible parties. There is over 10 million tons of legacy waste and tailings that are degrading water quality. At certain places, arsenic can reach 700 times the drinking water standard. Perpetua wants to fix these legacy issues. In fact, some of the benefits of the project include a 47% reduction in arsenic in the East Fork South Fork of the Salmon River on site and a 40% reduction in arsenic off-site. This important work can only be done with private dollars that Perpetua will be bringing to the table.	WTR	No further response required. General in nature or position statement.
Snake River Fund	16536	4	The SGP presents numerous recreational, environmental, and sociocultural concerns. Perhaps the most immediately problematic of those concerns is the health of waterways adjacent to, and downstream from the operations site and of waterways that parallel proposed access roads. As a result of the SGP, stream temperatures are predicted to be elevated above baseline conditions for up to 100 years (SDEIS ES-15). The Forest Service's own Climate Shield identifies these potentially impacted streams as being an indispensable cold water refuge for native trout. Furthermore, potential contamination from tailings and hazardous waste spillage along access roads carries the potential to irreversibly deteriorate designated critical habitat for ESA-listed Chinook salmon, Forest Service listed sensitive westslope cutthroat trout, steelhead trout, and bull trout.	WTR	The SDEIS discusses the Project effects on stream water temperature (Section 4.9.2.2) and the stream water temperature effects on fish (Section 4.12.2.2). Section 4.7 describes the potential for spills of materials and the measures that have been included in the designs and operational practices to reduce the potential for impacts of spills. The Project Reclamation Closure Plan includes measures to address the stream temperature effects and the mitigation measure provided in SDEIS Section 4.9.3 address potential uncertainty in the successful implementation of the Reclamation Closure Plan.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	4	Although your October 21, 2022 Dear Reader Letter announcing the availability of the SDEIS accurately characterizes Perpetua's Modified Mine Plan (MMP) as "reducing surface disturbance and anticipated environmental impacts," the SDEIS does not clearly or consistently describe these environmental improvements. The data presented in the SDEIS (especially in the figures and tables) clearly show the project will substantially improve water quality in the project area and downstream from the project and	WTR	The effects of the removal of fish barriers and restored habitat including the Stibnite Lake are described in the Fish Resources and Fish Habitat section of the SDEIS Executive Summary. A description of the benefits of the Blowout Creek remediation has been added to the Surface Water and Groundwater Quality section of the Executive Summary.

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			<p>restore miles of stream and fish habitat. The Forest Service needs to improve the consistency and clarity of the text of the Final EIS, which can be readily accomplished by editing the document to ensure consistency and to make more use of the figures and tables that illustrate and quantify the water quality improvements and the stream segments that will be restored. The Executive Summary needs to present a more balanced discussion of impacts. As written, it does not clearly describe the environmental benefits associated with the proposed restoration activities in the MMP. Instead, the Executive Summary emphasizes adverse impacts rather than giving equal weight to the water quality improvements and habitat restoration that would result from the MMP. The Environmental Consequences chapter of the SDEIS contains abundant and detailed analyses and data that clearly show water quality and fish habitat/stream restoration improvements. However, these beneficial impacts are not clearly or consistently discussed in the Executive Summary. The Executive Summary also omits two significant environmental restoration measures integral to the MMP:</p> <ol style="list-style-type: none"> 1. Constructing Stibnite Lake in the backfilled Yellow Pine Pit to mitigate the loss of the Yellow Pine pit lake fish habitat area and to minimize fluctuations in stream temperatures; and 2. The reclamation activities that will eliminate the significant sedimentation problem at Blowout Creek. It is inappropriate to exclude these beneficial impacts from the Executive Summary. The Executive Summary should explain that Perpetua added Stibnite Lake to the MMP to respond to public comments received on the DEIS about temperature fluctuations in this segment of the East Fork of the South Fork of the Salmon River (East Fork) and the need to replicate the lake habitat that currently exists in the Yellow Pine Pit. WMC notes that words that would typically be used to describe beneficial impacts are used sparingly or are completely absent from the Executive Summary. For example, the word “positive” is used only once in the Executive Summary to describe public health and safety benefits (see Page ES-26.) The word “positive” is not used to describe the documented water quality improvements or the restoration of stream and fish habitat. The word “improve” is used on Page ES-15/16 to describe water quality impacts. However, it is used in a confusing way stating: The MMP would improve some of the existing water quality conditions observed in Meadow Creek and the East Fork SFSR by removing and repurposing legacy mine wastes. However, the 2021 MMP would have direct permanent impacts on water quality, as it would contribute new sources of mine waste material to the East Fork SFSR drainage. This is the only acknowledgement in the Executive Summary that the MMP will improve water quality. But the second sentence shown above casts doubt on the improvements by suggesting that the new mine wastes would create direct and permanent water quality impacts without discussing the numerous project design features to prevent, limit, or mitigate impacts from the project development rock and tailings. 		
Hendrickson, Emily (President, Women's Mining Coalition)	17429	5	<p>The Surface Water and Groundwater Quality section in the Executive Summary fails to clearly explain that the Site-Wide Water Chemistry (SWWC) predictive modeling results for the downgradient prediction node at YP-SR-2 clearly show water quality improvements during and after mining. The data presented in Figures 4.9-21 and 4.9-25 make it easy for the public to understand the beneficial water quality impacts because these figures clearly document that the MMP will improve water quality at YP-SR-2. The Executive Summary in the Final EIS needs to clearly state that the SGP will achieve significant reductions in arsenic levels (40 percent) and antimony levels (58 percent) as predicted at YP-SR-2, compared to baseline conditions. The Executive Summary should either reference Figures 4.9-21 and 4.9-25 or include these figures.</p>	WTR	<p>The text in the Surface Water and Groundwater Quality section of the Executive Summary has been revised to clarify that predicted stream water metal concentrations are improved or consistent with the existing conditions.</p>
Hendrickson, Emily (President, Women's Mining Coalition)	17429	8	<p>The Final EIS needs to use the data in the SDEIS and the Specialist Reports in order to be more transparent about the impacts and benefits associated with the SGP. Both the Executive Summary and the Final EIS should present a more balanced discussion of both the positive and the negative impacts. As currently written, the Executive Summary presents a partial and incomplete snapshot of the project that inappropriately minimizes the project benefits. WMC has the impression from reading the Executive Summary that the Forest Service has purposefully downplayed and underemphasized the environmental benefits (especially the water quality improvements) that will result from the remediation activities integral to the MMP. The Final EIS should highlight these benefits and discuss them in the context of improving the environmental and ecological conditions in the Payette and Boise National Forests.</p>	WTR	<p>The text in the Surface Water and Groundwater Quality section of the Executive Summary has been revised to clarify that predicted stream water metal concentrations are improved or consistent with the existing conditions.</p>

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Hendrickson, Emily (President, Women's Mining Coalition)	17429	10	A careful reading of Section 4.9 of the SDEIS reveals that the MMP will result in significant environmental improvements to sitewide water quality. However, it is not easy to arrive at this understanding because certain paragraphs in this section obscure this result by making statements that are inconsistent with the data in the document. Out-of-context localized or partial assessments that omit a bigger-picture evaluation and misstatements of facts that are correctly presented elsewhere in the document are other sources of confusion in this section. The SDEIS and the Forest Service's August 2022 Water Quality Specialist Report include lengthy discussions of the results of the new SWWC predictive model. As explained in the Specialist Report, the SWWC model integrates the following water sources in the project area: surface water, effluent from the water treatment plant, groundwater (including the projected groundwater quality beneath and downgradient from the tailings and waste rock disposal facilities), the backfilled Yellow Pine and Hanger Flats pits, and the West End pit lake. Figure 4.9-21 in the SDEIS, "Locations for Surface Water Chemistry Predictions Stibnite Gold Project, Stibnite, ID," clearly shows the SWWC predictive model results predict the MMP will significantly reduce the concentration of arsenic and antimony in streams in the project area compared to the existing baseline levels of these metals. This figure also shows that mercury levels remain the same after mining and are well below the regulatory standard. Despite the fact that Figure 4.9-21 presents a very useful and easy-to-understand synthesis of the SWWC predictive modeling results, the SDEIS glosses over this important finding and fails to properly acknowledge this significant environmental benefit in a way that makes it easy for the public to understand that water quality improvements will be one of the main environmental accomplishments that would result from the MMP. This finding should be highlighted in the Final EIS as one of the most important indicia of environmental improvement that will result from the SGP.	WTR	SDEIS Section 4.9.2.2 describes the Project effects on surface water chemistry and concludes that the Project improves or sustains existing conditions. The text in the Surface Water and Groundwater Quality section of the Executive Summary has been revised to clarify that predicted stream water metal concentrations are improved or consistent with the existing conditions.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	11	The SDEIS creates confusion when it repeatedly states that the post-operational water quality will exceed water quality standards, because this statement creates the impression that meeting water quality standards should be the metric used to assess the project impacts and benefits. Comparing the post-operational water quality to surface water quality regulatory standards in a watershed that is designated as impaired under Section 303(d) of the Clean Water Act is meaningless and ignores the water quality improvements that the project will create. Although it is appropriate for the SDEIS to disclose that the predictive model shows that post-operational water quality will not meet regulatory standards, it is inappropriate to imply this finding represents a project shortcoming, with the implication that the MMP will not do enough to improve water quality. As clearly shown in Figure 4.9-21, the post-operational water quality will not exceed the mercury water quality standards. Figure 4.9-21 documents that the MMP will not change the post operational mercury levels in area streams, all of which are below the 12 nanogram per liter (ng/l) regulatory standard. Thus, the several statements in the text that the project will exceed water quality standards are not correct for mercury.	WTR	SDEIS Section 4.9.2.2 correctly identifies that surface water concentrations would be greater than regulatory standards. In its impact assessment of surface water chemistry, the SDEIS concludes that these concentrations represent an improvement or sustainment of existing conditions.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	12	The Final EIS should clarify that the water quality modeling results that are presented in Figure 4.9-21 show that post-operational water quality will be significantly better than baseline conditions due to substantial reductions in arsenic and antimony levels. The Final EIS should eliminate the inconsistencies in the water quality discussion in the SDEIS. For example, the discussion on Page 4-251 of the SDEIS creates confusion by misrepresenting the modeling results at YP-SR-2: "Downstream of the project on the East Fork SFSR at node YP-SR-2 (below the confluence with Sugar Creek), predicted surface water chemistry is largely unchanged from existing conditions with some variability in predicted antimony, arsenic, and mercury concentrations during the operating and initial closure period (Table 4.9-21 and Figure 4.9-25)." (italics added for emphasis, bold in the original.) This discussion contradicts and is inconsistent with the data shown in Figure 4.9-21. (It also conflicts with the data shown in Figure 4.9-25 for the downstream monitoring point, YP-SR-2.) Both Figures 4.9-21 and 4.9-25 clearly show that there will be significant improvements in water quality at YP-SR-2 where the post-operational water quality is predicted to reduce antimony concentrations by 40 percent and antimony concentrations by 58 percent, compared to baseline conditions. It is completely incorrect to ignore these meaningful water quality	WTR	SDEIS Tables 4.9-18 through 4.9-21 quantitatively describe the predicted changes in water chemistry for all regulated constituents. Most of these constituents are largely unchanged by the Project. The notable reductions in arsenic and antimony concentrations are described in the text, tables, and figures in the surface water chemistry subsection of SDEIS Section 4.9.2.2.

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			improvements and misleading at best to state that water quality is “largely unchanged from existing conditions.”		
Hendrickson, Emily (President, Women's Mining Coalition)	17429	13	Other sections of the SDEIS do a much better job of discussing the water quality improvements resulting from the MMP. For example, contrast the above-cited discussion on Page 4-251 with the discussion shown below on Page 4-522: “Under the SGP operations and closure, water quality of surface flow departing from the Operations Area Boundary would be the same or better than existing baseline conditions; therefore, there would not be impacts to the quality of downstream waterways...” These dramatically different statements create confusion, which needs to be eliminated in the Final EIS by conducting a through editing of the document for consistency to ensure that it clearly and consistently discusses the data and modeling results that are presented in the SDEIS and the Water Quality Specialists Report. A more consistent discussion of the SWWC-predicted water quality benefits accruing to the project in the Final EIS will improve the public’s understanding of the water quality benefits that would result from the MMP.	WTR	The effects of the Project on all regulated analytes are assessed as part of the NEPA analysis and described in Section 4.9.2.2. The conclusory statement represents the summary regarding surface water impacts utilizing the specific details and comparisons to regulatory standards described earlier in the section.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	14	Another source of confusion are the lengthy and detailed discussions of groundwater quality in the SDEIS, which are misleading because they read as if they are final conclusions rather than the results of the groundwater quality component of the SWWC model. As clearly stated in both the SDEIS and the Water Quality Specialist Report, the ATSDR Public Health Assessment conducted for the existing mine site eliminated the groundwater as a drinking water pathway from consideration as a public health concern. Discussing the results of the groundwater quality modeling as if these results show there will be an adverse impact blurs the distinction between environmental impacts and model inputs. The Final EIS should clarify that the groundwater modeling results are a model input and do not represent an impact to a human receptor because the area groundwater is not a source of drinking water. The Final EIS should also explain that because the area surface waters are the ecological receptors for groundwater, the SWWC model appropriately incorporates the groundwater quality modeling results.	WTR	SDEIS Section 4.18.2.2 states that groundwater effects of the Project have a negligible effect on human health.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	15	The SDEIS devotes numerous pages to discussing the predictive modeling results of operational and post-operational water quality at the model prediction nodes shown in Figure 4.9-21. Figures 4.9-22 through 4.9-25 present useful graphs showing the predictive modeling results at four of these nodes. Figure 4.9-21 clearly illustrates the benefits at the downstream node (YP-SR-2) in map view; Figure 4.9-25 is a graphical representation of the same benefits. The lengthy narrative could be shortened and improved by making greater use of Figures 4.9-21 through 4.9-25. Figures 4.9-22 through 4.9-25 are easy to understand and present data that clearly documents the water quality benefits associated with the MMP. Both the Executive Summary and Section 4.9 would be greatly improved by adding a narrative summary that succinctly synthesizes the modeling results shown in these figures. The Final EIS should include a summary that helps the reader understand these results and that emphasizes that the downstream prediction node (YP-SR-2) is the best place at which to measure the overall water quality benefits from the MMP. By making better use of Figures 4.9-21 and 4.9-25 and editing for internal consistency, Section 4.9 of the Final EIS can more clearly discuss the post-operational water quality benefits that would result from the MMP. The Final EIS should highlight these benefits with the objective of making it easier for the public to understand that the MMP will improve water quality. The discussion on Page 4-552 of the SDEIS, which states that water quality would be “the same or better than existing baseline conditions,” is an example of a factually correct and clear statement that should be replicated in the Final EIS.	WTR	The effects of the Project on all regulated analytes are assessed as part of the NEPA analysis and described in Section 4.9.2.2. The conclusory statement represents the summary regarding surface water impacts utilizing the specific details and comparisons to regulatory standards described earlier in the section.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	23	Under the SDEIS, the TSF Embankment and Buttress will contain from 115,317 – 425,957 tons of arsenic, 117-378 tons of mercury, and 13,145 -17,566 tons of antimony. Compared to the DEIS Alternative, arsenic disposed in the TSF Dike /Buttress is increased by 210%, and decreased by 10% in the YPP and 66 % in the WEP. The HFP is backfilled with 14,618 - 53,995 tons of arsenic as opposed to water in the DEIS. Typical arsenic concentrations in DR backfill will range from 812 ppm to 3000 ppm, (average - 95th %tile), as compared to 656 ppm to 2422 ppm in the DEIS. Table SD11 summarized DR COC for the DEIS and Table SD3 summarized DR and Waste COC for the SEIS.	WTR	The composition and leachability of the TSF embankment and buttress and pit backfill material are incorporated into the water chemistry analysis as depicted in the conceptual diagrams shown in SDEIS Figures 4.9-2 and 4.9-15, respectively. The incorporation of arsenic concentrations in dust into the air quality assessment is described in SDEIS Section 4.3.2.2.

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			<p>DR disposal SDEIS and DEIS are markedly different, and direct comparisons are difficult. Three of the DR surface repositories indicated in the DEIS have been eliminated and one subsurface pit has been added. Four (4) of the 10 DR haul road scenarios evaluated for both the DEIS and SDEIS air quality analyses are no longer applicable, and none estimate haulage to the TSF Dike/Buttress, the most utilized route under the new SDEIS Preferred Alternative. As a result, the relevancy of the air quality analyses supporting HR emissions calculations is suspect. However, these effects cannot be evaluated as the electronic links to the modeling files can no longer be accessed.</p> <p>All SDEIS Alternative DR repositories will be under a geo-synthetic cover and largely protected from meteoric waters for the life of the cover. In total, approximately 54% of SDEIS DR arsenic will be disposed in surface repositories and 46% in Pits, as opposed to 68% surface and 32% sub-surface disposal in the DEIS. Pit-disposed COCs will be exposed to groundwater wet/dry and redox cycles, and will release COCs to groundwater. Although additional protections will be afforded from meteoric waters, YPP and HFP subsurface disposal of COCs likely increases groundwater contact, leaching and discharge.</p> <p>The Forest Service should independently re-evaluate the air quality modeling and the relevance of the Haul Road characterizations, emission estimates, and carcinogenic risk assessments. Similarly, the release to groundwater and consequent downstream effects from YPP and new HFP should be re-evaluated.</p>		
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	24	<p>The largest component of total on-site arsenic (64%) is in ore. Under the new SDEIS Alternative, a projected 112M tons of pit ore will be produced containing 396,246 to 1,028,406 tons of arsenic (average - 95th%-tile). About 55%, 12%, and 31% of arsenic in Pit ore will be produced from the YPP, HFP and WEP, respectively. This a marked change from the DEIS Alternative reflecting 44%, 46% and 9%, respectively. These are significant differences, as the concentrations and chemical form vary among ores and can have important effects on the distribution, chemical form, toxicity, and disposition of arsenic in downstream metallurgical processes, disposal and releases, and behavior in environmental media. About 3% of ore arsenic is in historic wastes.</p> <p>Ores will be crushed and ground and subjected to flotation concentration. About 85% of arsenic in ore will go to concentrates and 15% to tailings. An estimated 9% of YPP arsenic, 30% of HFP arsenic, and 17% of WEP arsenic, or a total of 61,547 to 157,878 tons of arsenic will discharge with flotation tailings to the TSF. The chemical form of this arsenic is unclear, but likely varies by Pit source. An estimated 85% of arsenic in ore (348,766 – 894,462 tons) will be captured in gold flotation concentrates (54% of Site-wide As). The arsenic in these concentrates is pressure oxidized in a high temperature autoclave (POX) to liberate gold and will eventually go through cyanide (CN) leaching and detoxification (Detox) and be discharged to TSF. About 60% of total Site-wide As will be subjected to the POX/CN/Detox processes and undergo substantial chemical transformation.</p> <p>Neither the DEIS nor SDEIS addresses the arsenic content, geochemistry or chemical constituency in relation to these proposed metallurgic processes or waste characteristics. This omission is of considerable concern, as arsenic chemistry and toxicity are complex and species (valence) dependent. Solubility, bioavailability and toxicity are highly variable among mineral processing applications depending on other metal concentrations, pH, and oxidation-reduction status, among other factors. Only two, two-sentence statements in the entire SDEIS document address these issues: i) on page 2-51 Oxidation and Neutralization and ii) in Table 2.4-13 Proponent Proposed Design Features. Both allude to: “Perpetua would monitor levels of soluble arsenic in the tailings. If soluble arsenic levels are higher than anticipated, Perpetua would treat the oxidized concentrate with HAC prior to neutralization.”</p>	WTR	The arsenic contained within tailings would be managed within containment facilities that would inhibit environmental exposure during operations and long term with impermeable liners and clean cover materials. Limitations on arsenic exposure would control effects of arsenic solubility, bioavailability, and toxicity on environmental receptors. Additional detail on the studies that have been conducted on arsenic stability in mill wastes and the design responses to these studies is found in Section 13.9 of the Feasibility Report (M3 2021).
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	25	Careful concurrent review of the evolution of the New MoDPRO2 Alternative using the 2014/2019/2021 M3 Feasibility Study documents and the subsequent MoDPRO and MoDPRO2 Alternative modifications, indicates that the Forest Service should be more diligent and forthcoming in the SDEIS, and in informing the public regarding difficulties with toxic soluble arsenic in the TSF discharge.	WTR	The arsenic contained within tailings would be managed within containment facilities that would inhibit environmental exposure during operations and long term with impermeable liners and clean cover materials. Limitations on arsenic exposure would control effects of arsenic solubility, bioavailability, and toxicity on environmental receptors. Additional detail

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			<p>The brief mention of HAC (Hot Arsenic Cure) in the SDEIS apparently parrots a two paragraph statement in Section 2.2.5 Tailings Arsenic Management, in Perpetua, October 2021, STIBNITE GOLD PROJECT: REFINED PROPOSED ACTION – MoDPRO2. In short, Perpetua acknowledges that 2018 testing showed a substantial amount of amorphous (unstable) arsenic compounds formed in the POX would result in elevated soluble arsenic in POX waste and the tailings leachate. These levels may not meet water quality standards during post closure, necessitating long-term water treatment, even with the MoDPRO improvements.</p> <p>Perpetua then asserts that, based on mid-2020 tests, the new Alternative MoDPRO2 will address the soluble arsenic detoxification problems as follows: “During the initial years of operation, Perpetua Resources would monitor levels of soluble arsenic in the tailings. If soluble arsenic levels were higher than anticipated, Perpetua Resources would treat the oxidized concentrate with hot arsenic cure (HAC) prior to neutralization.”</p> <p>Repetition of a single unsupported sentence in serial reports does not constitute reliability in the assertion that the HAC is a catch-all solution for the arsenic instability problems in the largest on-site discharge.</p>		on the studies that have been conducted on arsenic stability in mill wastes and the design responses to these studies is found in Section 13.9 of the Feasibility Report (M3 2021).
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	26	<p>Although the documents show Midas was aware of, and actively investigated these problems in 2018, the Forest Service was either unaware of, or chose to ignore, these concerns in the DEIS and, subsequently, in the SDEIS. The only public disclosures regarding arsenic detoxification difficulties prior to the DEIS were the two brief references to arsenic behavior in wastes in the 2019 Feasibility Study noted and copied in full in the original DEIS comments.</p> <p>The 2021 Technical Feasibility Study disclosure to Investors provided the details of the tests that indicated conditions necessary to capture precious metals in the POX/CN/Detox circuit, resulted in arsenic instability downstream of the autoclaves; and largely labile, pentavalent As being discharged to the TSF.</p> <p>The following are the first and last paragraphs of Section 13.9.4 Arsenic Stability Investigation (2020) of the 2021 Technical Feasibility Study summarizing the problem, investigations and conclusions: The stability of arsenic was a concern flowing out of the 2018 metallurgical product environmental geochemical results. A test work program was initiated at SGS commencing April 2020 to examine where arsenic destabilization occurred.</p> <p>Section 13.9.4.7 Arsenic Deportment Across Metallurgical Circuit concludes: Arsenic destabilization appears to be an inevitable outcome of raising the pH of the POX residues for the recovery of gold employing the cyanide carbon-in-leach step. The destabilization of arsenic does not seem to be reversible at pH values above neutral and only appears to be arrested when the pH is reduced to approximately 8.5 in Cyanide Detox. Arsenic is expected to leach from POX residues and report to the process liquors. The only sink for aqueous arsenic is in the pore water within the tailings facility and in the autoclave and neutralization circuits where arsenic containing process water is employed in the feed repulp, reagent make up and quench water (emphasis added).</p>	WTR	The arsenic contained within tailings would be managed within containment facilities that would inhibit environmental exposure during operations and long term with impermeable liners and clean cover materials. Limitations on arsenic exposure would control effects of arsenic solubility, bioavailability, and toxicity on environmental receptors. Additional detail on the studies that have been conducted on arsenic stability in mill wastes and the design responses to these studies is found in Section 13.9 of the Feasibility Report (M3 2021).
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	28	<p>Finally, the stabilization results referenced in the Feasibility Study are based on Synthetic Precipitation Leachate Procedure (SPLP) test results. SPLP is commonly used to simulate the effect of acid rain on land-disposed waste (e.g., land application or unlined landfills) where leaching to groundwater is a concern. The SPLP test is not a regulatory test, and concentrations are generally compared to drinking water standards (i.e., 0.01 mg/l for As). The 2021 Technical FS leachate studies refer to “acceptably low SPLP concentrations of As (<2 mg/L).” The justification for this SPLP “cut off” level is unknown as it is 200 times the drinking water standard.</p> <p>Because these wastes are to be disposed in a lined and covered TSF landfill, the Toxic Characteristic Leachate Procedure (TCLP) is a more appropriate test, and that most often cited in reviews of arsenic stabilization (Nazari, et al (2017). TCLP is a regulatory test and the standards are generally 100 times the drinking water standard. The TCLP procedure generally shows considerably greater concentrations of arsenic than the SPLP. The use of SPLP in the earlier studies suggest that Midas was concerned with</p>	WTR	<p>The arsenic contained within tailings would be managed within containment facilities that would inhibit environmental exposure during operations and long term with impermeable liners and clean cover materials. Limitations on arsenic exposure would control effects of arsenic solubility, bioavailability, and toxicity on environmental receptors. Additional detail on the studies that have been conducted on arsenic stability in mill wastes and the design responses to these studies is found in Section 13.9 of the Feasibility Report (M3 2021).</p> <p>The TCLP test is only applicable to regulated hazardous wastes for disposal purposes. Mill tailings are not regulated as hazardous wastes so TCLP testing is not applicable. SPLP and WMWT was therefore used to help characterize the waste materials.</p>

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			disposal of the arsenic subject to meteoric waters. MoDPRO2 changed the TSF configuration to a geo-synthetic cover. As a result, the Forest Service should not rely on SPLP test results in evaluating arsenic stability, and should consider the Perpetua's alleged capacity to stabilize amorphous arsenic in the POX/CN/Detox is unproven.		
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	29	TSF Leak Detection and Treatment: The concern with appropriate leachate testing was exacerbated with the Idaho mining industry's successful lobbying effort to modify the IDEQ CN waste disposal rules. At the time Midas was conducting arsenic stabilization investigations, the Idaho CN rules required double-lining, and leachate collection and treatment for the TSF. These rules were amended by the Idaho State legislature and as noted in the SDEIS, the TSF will not require double lining. Leak detection will be commenced in groundwater monitoring as opposed to between the liners, and feasibility of timely seepage collection/treatment is unlikely. This rule change increases the urgency for reliable arsenic stabilization alternatives.	WTR	Comment noted. Statement of position. No response required.
von Lindern, Ian (Founder, Terragraphics International Foundation)	17436	30	Summary of Arsenic Tailings Concerns: Numerous tests conducted prior to the DEIS indicated significant arsenic instability associated with POX/CN/Detox proposed discharges to the TSF. These instabilities were not disclosed to, or were ignored by, the Forest Service in the DEIS. Midas Gold performed an assessment of arsenic stability in 2020 and alleged that the HAC had been developed to address this problem in the new 2021 MoDPRO2 Alternative. Examination of the studies, however, show these were based on three tests of a single ore concentrate, were significantly diluted with pre-POX flotation tailings, and relied on an inappropriate leachate procedure. The DEIS and SDEIS failed to mention or consider these uncertainties and shortcomings. Simultaneously, IDEQ cyanide disposal rules were amended, relieving the SGP of double lining the TSF. Leakage from the TSF will likely be undetectable in any way that supports corrective actions. The Forest Service should not accept Perpetua's assertions that arsenic in the TSF discharges can be stabilized, and consider an Alternative that does not require on-site treatment and disposal of thermally treated arsenic.	WTR	The arsenic contained within tailings would be managed within containment facilities that would inhibit environmental exposure during operations and long term with impermeable liners and clean cover materials. Limitations on arsenic exposure would control effects of arsenic solubility, bioavailability, and toxicity on environmental receptors. Additional detail on the studies that have been conducted on arsenic stability in mill wastes and the design responses to these studies is found in Section 13.9 of the Feasibility Report (M3 2021).
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	18	For example, degraded water quality is a major concern both in the short and long term. Water quality effects will depend significantly on the CWA permitting for the mine site. But Perpetua and the Forest Service have failed to disclose in any detail what types of CWA permits will be issued for which point sources, where those permitted point sources will be located, which standards will apply to them, and other important factors.	WTR	As described in SDEIS Section 3.9.3, the State of Idaho implements the CWA permitting through the IDEQ. The water quality effects analysis in the EIS incorporates the reasonably foreseeable outcome that the Project operates under Idaho regulations and operational permit requirements. Attainment of these requirements is achieved through use of on-site water treatment facilities which are described in the EIS with regard to their design and process plus their influent and effluent volumes and chemistries in Section 4.9.2.2.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	25	Temporal data is also limited. As discussed below, the SDEIS fails to address the potential long-term impacts of water treatment at the West End Pit and the Tailings Storage Facility, which may continue for an indefinite period of time.	WTR	SDEIS Section 4.9.2.2 describes the water treatment process, treatment volumes and treatment duration. Water treatment is predicted to be necessary until reclamation and closure activities reduce outflow from the tailings storage facility to near-zero. This discharge condition is expected to be reached after approximately 40 years of tailings draindown. Based on modeling for the project, the West end Pit is not expected to have the potential to overflow for 40 years, monitoring will occur to determine if the pit will overflow and corrective actions will be utilized as necessary.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	30	In February 2022, the Corps adopted the pre-2015 WOTUS rule, which no longer categorically excludes ephemeral features as jurisdictional waters and the General Condition 23(d) Stream Mitigation threshold changed to all losses of stream bed that exceed 3/100-acre. Although impact analysis is completed and jurisdictional review is underway, it isn't clear how this review will address impacts to WOTUS identified in the SDEIS. Would this increase the impacted acreage if adopted? The results of this review including (identification of acreage, full analysis and disclosure of impacts) need to be addressed in a revised SDEIS.	WTR	As described in SDEIS Sections 3.11.4.3 and 3.11.4.4, wetlands are delineated per USACE methodology involving hydrophytic vegetation, hydric soil, and wetland hydrology while streams and riparian areas are delineated along reaches with perennial and intermittent flow based on distances from ordinary high water marks (forested areas) or flood prone widths (non-forested areas). The effects analysis presented in SDEIS Section 4.11.2.2 is based on effects to those delineated wetlands, streams, and riparian areas. The determination of which of these areas are jurisdictional under the WOTUS rule is the purview of the USACE who will determine the level of impact and mitigation required through their Clean Water Action Section 404 permitting process. While the Forest Service does not determine the level of impact and mitigation requirement, a Project decision would require fulfillment of the mitigation requirement as determined by the USACE.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	78	<p>A. Groundwater and surface water hydrology</p> <p>1. The MODPRO2 model needs additional clarification, testing, and potential improvement before predictions of groundwater and streamflow impacts can be made and conclusions can be formed. There remain unaddressed comments from the MODPRO modeling that apply to the MODPRO2 modeling, as well as new comments on the MODPRO2 groundwater modeling effort. The MODPRO2 model needs additional clarification, testing, and potential improvement before predictions of groundwater and streamflow impacts can be made and conclusions can be formed. These concerns include spatial calibration bias, a model domain that is too close to areas of impacts, model layering that may be inadequate to estimate vertical hydraulic gradients, model layer geometry that may adversely affect model results, and a lack of testing major geologic structures in the area, to name a few. These concerns should be addressed and potentially corrected to improve upon the model's ability to predict impacts.</p> <p>One of the largest concerns of the MODPRO2 modeling is the lack of correlation of what the model results mean in terms of potential impacts to sensitive ecosystems. The modeling results are presented in terms of a) drawdown of the water table during and after mining at discrete times, b) modeled predictions of the recovery of streamflow after mining, and c) percentage of abundance of particles (flow paths) from the three pits (two backfilled and one pit lake) that will report to various stretches of different streams, creeks, and rivers. Furthermore, drawdown impacts are only shown for a minimum evaluation of the 10-foot drawdown contour, and sensitive ecosystems may be impacted at levels below this threshold. The model predicted impacts should be equated to volumes of impacted groundwater and rates of impacted groundwater movement to sensitive downstream ecosystems, rather than only in the context of groundwater and surface water drawdown and recovery. The general impact of modifying the model to address the comments in this letter could potentially change model predictions such as:</p> <ul style="list-style-type: none"> ● Groundwater flow directions and interaction with surface water during and after mining, ● Estimated depth to groundwater and impacts of groundwater mounding beneath or within facilities and generated geochemistry, and ● Estimates of groundwater discharge to the open pits which could, in turn, influence estimates of ultimate pit lake level, the amount of and impacts from groundwater pumping for makeup water, and the geochemistry of seepage during and after mining. <p>The SDEIS must take a hard look at the potential impacts to surface and groundwater hydrology, and associated impacts. More detailed comments are provided in Semmens (2022).</p>	WTR	<p>The groundwater flow model was evaluated by the Forest Service and deemed suitable for use in the impact analysis. Limitations and uncertainties associated with model predictions are described in SDEIS Section 4.8.2.2. Mitigation measures to address these limitations and uncertainties plus account for ongoing additional data collection are described in SDEIS Section 4.8.3.</p> <p>The impact analysis utilizes the results of the numerical groundwater flow model to predict Project dewatering pumping requirements, the lateral extent of drawdown associated with this groundwater pumping, and the time for water levels to recover following the cessation of pumping. Limitations in pumping performance and response data are addressed via monitoring requirements and model updates that incorporate monitoring results.</p> <p>A change in groundwater elevations of 10 feet or more was selected for identifying areas of potential drawdown impacts. This threshold was established based on the fact that natural fluctuations in water levels, particularly in fractured rock aquifers, commonly exceed 10 feet. Drawdowns of less than 10 feet are not considered because these changes probably would not be measurable or distinguishable from natural seasonal or annual variations in groundwater levels. In addition, the 10-foot drawdown cone has been used as the threshold for defining the potential drawdown effect in numerous mining EIS documents for over 25 years. The Forest Service acknowledges that numerical models could be used to provide predictions of drawdown of less than 10 feet and that drawdown of less than 10 feet could significantly impact flow in some perennial seeps, springs, and streams. However, the extent of the model domain and the lack of detailed hydrogeologic data outside the mine exploration areas make smaller scale drawdown predictions in these areas unreasonable.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	79	<p>2. The water-quantity related modeling is substantively flawed and must be addressed to provide an accurate analysis of potential impacts.</p> <p>There was no adoption of science-based widely-available forecasts of climate change in the MWB and SWWB models and simulations that looked out as much as 100 +/- years into the future and informed the Modflow 6 simulations. Thus, there is 100 +/- years worth of bias built into not only these outputs but also in the Modflow 6 simulation outputs, because MWB model outputs of runoff and recharge, used as Modflow 6 inputs and SWWB inputs are based on MWB climate inputs of temperature and total precipitation – with snowfall derived, presumably, from these two time series that start nearly 120 years ago. The temperature and snowfall biases that likely result are unacceptable. The precipitation bias that likely results is small and perhaps acceptable. What was done should not be characterized as the “best available science”.</p> <p>Uncertainty, while apparently considered in the SWWB/GoldSim model, has not been addressed for the MWB and Modflow 6 models (which together form the SHSM model couplet). The apparent uncertainty analysis conducted for the SWWB/GoldSim model is identified with that particular adjective because the lack of documentation on what was done, how it was done and why it was done leave this reviewer with more questions than answers on the matter. The Forest Service should stipulate that Perpetua apply the tools in the GoldSim uncertainty analysis toolkit to all elements in the SWWB/GoldSim model that can</p>	WTR	<p>Quantitative incorporation of climate change forecasts is outside the scope of this analysis. The effects of climate change are described qualitatively in SDEIS Section 4.4.2.2.</p> <p>Sensitivity analyses were performed on the SHSM model regarding model inputs and assumptions related to climate change that were material to the predictions of dewatering pumping rates, the extent of dewatering drawdown, and groundwater recovery following the cessation of pumping. These predictions were utilized to assess Project effects on groundwater quantity. Uncertainty around these predictions was described in Section 4.8.2.2 with monitoring and modeling update requirements described in Section 4.8.3.</p> <p>Model documentation including sensitivity analyses used to develop the Water Quantity Specialist Report and the SDEIS are provided in their reference sections and were provided by Perpetua to the Forest Service.</p>

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			<p>potentially affect surface water and groundwater quantity demands and the timing of those demands, and to adequately document and interpret the actions taken and the results.</p> <p>It appears as though the Water Quantity Specialist Report (USDA Forest Service 2022b) and SDEIS (USDA Forest Service, 2022a) authors did not have the resources necessary to comprehend and understand the MWB model development and simulations, nor the SWWB model development and simulations, based on the very limited coverage given to each in the SDEIS and Water Quantity Specialist Report. This is most regrettable and of dire consequence for the Forest Service’s assessment of hydrological environmental impacts and of environmental impacts that stem from hydrosystem impacts. The Forest Service needs to request all model supporting documents from Perpetua and hire independent third party hydrologists with very strong backgrounds in numerical modeling to reanalyze MWB and SWWB model results. The focus needs to be on the question of whether the assumptions, data selection, and conceptualizations used in development and application of these models were conservative with respect to the environmental impacts that depend on the predicted changes to the hydrologic system.</p> <p>The validity of the MWB model has not been established. Similarly, the validity of the apparent 1-way coupling between the MWB model and the Modflow 6 model has not been established. The validity and logic for the use of monthly averaging for climatic data inputs in both the MWB and SWWB models has not been established. The Forest Service should require that Perpetua establish validity in both of these regards.</p> <p>There is considerable groundwater model domain with projected future peak drawdowns less than 10 feet that exist outside of the 10-ft drawdown contour used to define what the proponent feels are the areas of certain drawdown, or level of drawdown that is significant in comparison with their estimate (method unknown) of uncertainty. The areas of lesser drawdown, which include wetlands and groundwater-dependent ecosystems (GDEs), are not adequately considered. Also, it is not clear in the SDEIS water-related sections that water resource monitoring will actually occur both outside of and within this artificial boundary. Much greater emphasis needs to be placed on monitoring drawdowns less than 10 feet and areas of impact outside of this artificial boundary.</p> <p>Forecasts of future stream flow using the Modflow 6 model need to be based on probable future climate conditions, not on improbable past or present climate conditions. Only then can the associated simulations correctly inform assessments of water quality, ecosystems, fish species and other water-dependent environmental impacts. It is possible that the impacts on stream flow from the combination of mine-related surface water and groundwater abstractions and probable future climate change will leave stream water quality in a state that is inferior to that projected under the no-action alternative. This needs to be addressed by the proponent.</p> <p>Please see more extensive details on these issues in Schlinger (2023).</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	80	<p>B. Geochemistry</p> <p>1. The geochemical testing results and modeling efforts are flawed and inadequate, and will likely underestimate impacts.</p> <p>The selection of samples for geochemical testing did not consider hydrothermal alteration, which can substantially affect contaminant leaching and acid generation potential. Failing to use geochemical test units within each lithology means that the testing results are most likely not representative of the range of leachate chemistry that will develop at the mine. In addition, the volumes of each subgroup within a lithology with different leaching characteristics is not known and cannot be applied to the block model and the SWWC model to more accurately estimate site water quality.</p> <p>The methods used to estimate neutralization potential (NP) will likely overestimate NP in the long term. Overestimating NP will make it appear as if fewer samples and waste types are potentially acid generating (PAG). If more mined material is PAG, additional mitigation measures will be needed to prevent the formation of acid drainage from new mining activity.</p>	WTR	<p>Phases 1 and 2 of the geochemical characterization program tested samples from each of the lithologies substantially present in the mined materials as described in SDEIS 3.9.4.2. This testing included multiple static tests for each substantially present lithology to cover the range of geochemical conditions present in that lithology. The geochemical test data and historical site observations support that conclusion that acidic drainage would not be expected to form because the neutralization potential present exceeds acid generating potential. Kinetic tests were run more than 100 weeks and exhaustion of their acid generation potential was confirmed prior to ending each test. The use of first flush kinetic test leaching data is described in SDEIS Section 3.9.4.2 with potential implications for predictive modeling described in SDEIS Section 4.9.2.4.</p>

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			<p>Much uncertainty exists about whether the newly mined materials will produce acid and therefore leach higher contaminant concentrations over the long term. Although the kinetic tests were conducted for more than 100 weeks in many cases, rocks in the deposits could take even longer to form acidic drainage. The depletion rates of NP and acid production potential are similar, which makes it difficult to predict which will “win out” in the long run. Because the wastes will exist at the site in perpetuity, long-term leachate production is important, and conservative estimates should be used to design effective mitigation measures.</p> <p>Source terms were created using leaching rates and concentrations from long- and short-term leach tests, respectively. They are expressed as rates (in mg/kg/week) and are one of the most important inputs to the SWWC model for predicting water quality. The “first flush” of contaminants is released during the early weeks of humidity cell testing, but rates from those times were not used to develop source terms. Instead, lower average “steady-state” rates from later times in testing were used. The first flush of contaminants from mined materials will occur when weathered wastes and ore are flooded (e.g., in flooded pits) and when weathered wastes and ore are wetted from storm events or snowmelt, especially after a previous dry period. Such conditions will exist at the Stibnite site in waste and ore stockpiles, backfilled pits, pit walls, and in the TSF buttress/embankment. Because the first-flush rates have been ignored, the source terms for development rock and ore will underestimate the release of contaminants from these mine facilities during operations and closure/post-closure.</p> <p>Source terms were developed using the designations of PAG versus non-PAG and waste versus ore for a given deposit and lithology. However, these distinctions do not result in a meaningful difference in source term values for arsenic and antimony, which are two of the mine-related contaminants of highest concern (that is, source term values are very similar for PAG versus non-PAG and for waste versus ore). Source terms for the SWWC model need to be thoroughly reexamined in a revised SDEIS.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	82	<p>1. The site-wide water chemistry model is inadequate and underestimates impacts. As detailed in Maest (2022), the site-wide water chemistry (SWWC) model relies on inputs from the geochemical characterization program, source terms, the water balance model, and water treatment plant (WTP) effluent quality to predict water quality resulting from development of the Stibnite Gold Project. The model predicts average annual and average monthly concentrations for site water quality and uses average precipitation, runoff, and infiltration without considering climate change. The extensive use of averages will underestimate potential maximum concentrations that will require treatment or management.</p> <p>The SWWC does not evaluate the effects of ammonia or selenium. Ammonia will result from blasting of the open pits, and selenium can be leached from mined materials. The effluent discharge permit (IPDES) for release of treated water to Meadow Creek may require monitoring and permit limits for both of these mine-related contaminants. The treatment evaluation does not consider the removal of ammonia or selenium.</p> <p>The SWWC model includes individual conceptual models for the pits and the TSF but does not include an overall conceptual model for the entire site. The SWWC model also does not consider the stream sediment (surface water-stream sediment) or food-chain (sediment-macroinvertebrates/periphyton-fish) pathways, and no monitoring of these environmental media (sediment, macroinvertebrate, periphyton contaminant content) is proposed.</p> <p>Although the movement of contaminants from the TSF and the pits is considered in the water balance model, the future use of groundwater for drinking water has been excluded from consideration in the SDEIS. The potential for domestic groundwater use in the future cannot be discounted. The Forest Service is obligated to ensure that the proposed mine plan is in compliance with all applicable state and federal laws.</p> <p>The SWWC and the underlying water balance model do not consider climate change. The past precipitation and temperature record is included in water balance calculations, but future climate projects are not included in any evaluations for the SDEIS. Because the mine life is proposed to be 20 years (including construction, operation, closure, and reclamation), TSF seepage is predicted to last for 40</p>	WTR	<p>Climate change was not explicitly incorporated into numerical water chemistry modeling. SDEIS Section 4.4.2.2 qualitatively describes climate change implications for water quality.</p> <p>Project effects on selenium and ammonia concentrations are described in SDEIS Section 4.9.2.2.</p> <p>Project component conceptual models are incorporated into the overall conceptual model depicted in SDEIS Figure 4.9-1. Surface water chemistry analysis incorporates sediment control measures as described in Chapter 2 of the EIS to limit effects of Project-related sediment.</p> <p>Drinking water was not considered as a potential exposure pathway in the assessment of human health effects as described in SDEIS, however the drinking water standard of 0.010 ppm As is the lowest applicable criteria for the project as the South Fork is designated as a drinking water source. S Section 4.18.2.2. However, the water quality analysis compares predicted groundwater analyte concentrations to drinking water standards and existing conditions which do not currently meet drinking water standards. The SDEIS notes that under the current condition, water treatment is required for use of groundwater as a drinking water source.</p> <p>The coprecipitation water treatment technologies proposed by the Project have been used effectively for mine water treatment for more than 20 years. Therefore, there is a reasonable expectation that they would be able to achieve water treatment objectives.</p>

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			<p>years, and post-closure and active management of the site will be needed in perpetuity, it is unacceptable that climate change has not been incorporated into the predictions for the proposed project. Climate change must be incorporated into all water balance estimates and the SWWC model, and made available for public review in a revised SDEIS. The need for perpetual capture and treatment of mine-influenced water should also be evaluated in a revised SDEIS.</p> <p>The mine water treatment approaches proposed have not been evaluated using laboratory bench studies, and the desk study that was performed used outdated references whose conclusions have been contradicted by more recent studies. These many shortcomings indicate that the SWWC model and associated studies need to be thoroughly reevaluated in a revised SDEIS.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	83	<p>2. Surface water quality standards must be protective of aquatic life. The lack of aquatic life criteria for antimony is concerning. The SDEIS must consider the potential impacts of antimony on aquatic life. As described in more detail in Maest (2022), a chronic aquatic life guideline for antimony should be incorporated to provide adequate protections for fish and other aquatic life. The selenium standard used to compare to predicted surface water concentrations in the SWWC model may not reflect the most updated approach used by the U.S. EPA that includes monitoring of not only water but also aquatic biota.</p>	WTR	<p>An antimony standard of 0.0052 mg/L applied for surface water was based on a drinking water standard. This value is lower than the 0.190 mg/L standard for aquatic life.</p> <p>As described in SDEIS Table 3.9-1, the selenium standard utilized is the EPA freshwater aquatic life criteria.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	84	<p>3. Groundwater quality protections must account for public use.</p> <p>Existing groundwater under the TSF buttress/embankment does not exceed arsenic or antimony standards, but all predicted groundwater arsenic and antimony concentrations are higher than background values and Idaho groundwater standards, showing that groundwater quality in this location is expected to worsen as a result of the project. The use of groundwater at the site as a drinking water resource in the future should require that the project cannot worsen groundwater quality. The arsenic groundwater standard of 0.05 mg/L does not reflect the current federal drinking water standard and should be updated for future groundwater use. The SDEIS seems to imply that the proposed mine plan does not need to consider human health concerns related to groundwater pollution at SGP. According to the SDEIS (ES-15), There are no active domestic groundwater wells used for residential drinking water within 15 miles of the SGP. Because groundwater is not currently used as a public drinking water source at the SGP and is assumed to be unlikely to be used as a drinking water source in the future, the Agency for Toxic Substances and Disease Registry Public Health Assessment conducted for the existing mine site eliminated the groundwater as drinking water pathway from consideration as a public health concern (ATSDR 2003). Yet the cited report is 20 years old, and the ATSDR was completing an assessment of the site to fulfill its congressional mandate for preparing a public health assessment within one year of EPA proposing a site to the National Priority List (Superfund). In contrast, the proposed SGP is a new mine plan subject to applicable groundwater quality standards. The SDEIS must consider groundwater as a potential future drinking water pathway for the purposes of the proposed SGP. Mine operations, closure and post-closure are predicted to affect area resources for the next 60 years (20 years of operations and 40 years of water treatment), with ongoing groundwater impacts continuing post-closure. It is reasonable to expect that groundwater resources in the area may be needed for drinking water resources in the next 20-60+ years, given the increase in population, demands on water resources and the effects of climate change. According to IDEQ, ground water supplies drinking water to 95% of Idaho citizens. As Idaho's population grows, so does the need for clean, usable groundwater, with recent reports pointing to Idaho's population boom putting demands on domestic water supplies.</p>	WTR	<p>The exposure analysis conducted in ATSDR 2003 remains valid as the condition of the site relative to domestic use has not changed.</p> <p>SDEIS Figures 3.9-20 and 3.9-21 show the baseline distribution of antimony and arsenic in the Meadow Creek area groundwater that would be affected by the TSF Embankment and Buttress. While the majority of these monitoring well results exhibit antimony concentrations below the drinking water standard, most monitoring well results show an exceedance of the arsenic drinking water standard. Therefore, the area currently does not appear to be a viable source of drinking water without use of water treatment to remove arsenic. Figure 4.9-20 shows the predicted spread of groundwater from under the TSF facility over a 100-year timeframe. The spread of the plume is contained within a rugged, mountainous area administered by the Forest Service. Installing culinary water wells within this area in the future is not reasonably foreseeable.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	85	<p>4. The SDEIS must take a hard look at potential impacts to groundwater and provide adequate data, including maps of existing and predicted groundwater plumes. The SDEIS fails to provide sufficient information to determine the extent of groundwater pollution from the proposed SGP, detailed information about applicable groundwater standards and compliance points, and whether groundwater standards will be met. The SDEIS must include appropriate modeling, with detailed maps to document the existing and anticipated groundwater plumes at the site, similar to those done for the East Smoky Canyon EIS. Without this information, it is impossible to determine the geographic extent of groundwater pollution.</p>	WTR	<p>In the Project area, topography focuses groundwater flows along narrow drainage bottoms that also host streams at their ground surfaces. Areas of groundwater affected by historical and proposed operations are elongated along these valley bottoms.</p> <p>SDEIS Figures 3.9-20 and 3.9-21 show the locations where monitoring well observations indicate the presence of arsenic and antimony concentrations above water quality standards as part of existing conditions. These locations are associated spatially with the valley bottoms and their surface streams.</p>

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					SDEIS Figure 4.9-20 illustrates the source and destination of groundwater movement from mine facilities through groundwater to the surface water drainage areas. The affected groundwater areas are located between the mine pit source areas and the indicated receiving surface waters.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	86	<p>5. Water quality impacts may be underestimated due to location of assessment nodes. Surface water quality predictions were made at assessment nodes downstream of project facilities (pits, DRSFs, and the TSF). The predicted changes at the assessment nodes account for both impacts due to project facilities and dilution in the streams between the project discharges and the assessment node. This could result in an under prediction of water quality impacts since stream chemistry between the project discharges and the assessment node could be greater than that predicted at the node. For example, assessment node YP-SR-4 appears to be about 2000 feet downstream of the Yellow Pine pit and therefore is not necessarily representative of impacts to the EFSFSR closer to the pit. This could imply that a mixing (dilution) zone would be authorized, which would not typically be available in an impaired situation such as the current situation at the project site. As such, the SDEIS may be underestimating water quality impacts associated with the project. The SDEIS needs to analyze the potential impacts to surface water, which requires identifying water quality impacts at the point of greatest potential impact. The SDEIS should provide data to demonstrate that the proposed assessment points accurately represent this.</p> <p>The SDEIS must also provide details on the groundwater points of compliance, with separate points of compliance for the Sugar Creek and the EFSFSR watersheds. There is no reason to believe that groundwater containing high levels of arsenic won't move under the perched water table created for the Stibnite Lake, through the Yellow Pine backfill and emerge at the first downstream gaining reach of the EFSFSR. Without this information, it is impossible for the public to determine the extent of potential impacts to groundwater and potentially surface water resources.</p>	WTR	<p>The SDEIS analysis provides predictions for surface water chemistry at locations established by Midas Gold/Perpetua Resources, where surface samples have been collected for analysis to establish existing conditions. Utilizing model results for these locations facilitates a comparison of predicted Project effects to existing conditions. The location of assessment node YP-SR-4 is appropriate because it is downstream of the SGP and upstream of the next contributing stream (Sugar Creek) to the EFSFSR.</p> <p>The Forest Service is not establishing points of compliance for surface water or groundwater as that compliance is the purview of IDEQ as described in SDEIS Section 3.9.3. Likewise, the Forest Service is not establishing mixing zones related to points of compliance. However, the Forest Service is evaluating the effect of the Project on surface water and groundwater chemistry via a comparison of predicted water chemistry to observed existing conditions and numerical water quality standards. The impacts of the SGP on groundwater chemistry within the boundaries of the mine area and downgradient of the mine area are discussed starting on page 4-243. The particle tracking modeling showed the potential extent of groundwater flow downgradient of the mine area over 100 years.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	87	<p>6. A TMDL is required for 303(d) listed streams.</p> <p>All IDEQ-inventoried water bodies at the proposed mine site (except for West End Creek) are listed under Section 303(d) of the federal CWA as “impaired” due to water quality. The causes for listing of these waters are associated with elevated concentrations of arsenic, antimony, and mercury. Each of the 303(d)-listed water bodies has designated beneficial uses of “cold water communities,” “salmonid spawning,” and “primary contact recreation,” and all (except Sugar Creek) have designated beneficial uses of “drinking water supply.”</p> <p>Sugar Creek is 303(d) listed category 5 for arsenic (PCR) and mercury (COLD, PCR, SS). (SDEIS, Table 6-16). The SDEIS predicts an “increase in arsenic concentrations (0.013 mg/L to 0.014 mg/L),” and an “increase in mercury concentrations (6 ng/L to 8 ng/L) in Sugar Creek in association with the closure of the Bailey Tunnel and the removal of its contributions to Sugar Creek chemistry plus the arrival of groundwater outflow from the West End pit lake in the post-closure period (SRK 2021a).” (WQ specialist report, p. 155)</p> <p>As described in the SDEIS (p. 4-225), water quality in the West End pit lake will exceed water quality standards for antimony, arsenic and mercury concentrations throughout the operating and closure period. Mine-impacted groundwater flowing from the West End pit lake is hydrologically connected to surface water in Sugar Creek.142 As a result, an NPDES Permit is required for discharges of groundwater to surface water. Furthermore, a TMDL is required to address the contribution of arsenic and mercury to Sugar Creek, a 303(d) limited stream for those parameters. A TMDL should be completed for all 303(d) listed streams at the Mine Site, including, but not limited to the East Fork SFSR (1st, 2nd and 3rd order streams) (See Table 3.9-17).</p> <p>The SDEIS also identifies numerous 303(d) limited streams along the access road and utility corridor. IDEQ lists Johnson Creek on its 303(d) list of impaired waters “due to temperature, which routinely exceeds the 10 degrees Celsius (50 degrees Fahrenheit) guideline for bull trout spawning in the summer.” (SDEIS, p. 3-488) Other 303(d) limited streams along the utility corridor are identified in Table 4.9-23. (P. 4-265). Many of these streams are identified as impaired for temperature, sediment,</p>	WTR	<p>Establishment of TMDLs is the purview of IDEQ as described in SDEIS Section 3.9.3. The Forest Service is evaluating the effect of the Project on surface water and groundwater chemistry via a comparison of predicted water chemistry to observed existing conditions and numerical water quality standards.</p>

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			and phosphorus. A TMDL should be completed for all 303(d) listed streams along the access road and utility corridor, and where TMDLs are already developed, the SDEIS must demonstrate that the impacts from proposed mine activities will not result in further impairment. The SDEIS must take a hard look at the potential direct, indirect and cumulative impacts of the proposed impacts (including vegetation clearing, sediment loading, etc.). These impacts must be quantified, and climate change must be taken into account. It is also inadequate to assert that BMPs or specific design requirements will adequately address the potential impacts, without providing data to support that assertion. A qualitative assessment is inadequate to understand the potential impacts to these resources. Please see additional detailed comments on this issue from Newberry (2022).		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	89	<p>8. The SDEIS fails to provide baseline data to characterize organic carbon or quantify the increase in organic carbon from the sewage treatment plant and its potential impacts.</p> <p>The SDEIS (4-220) predicts 25,000 - 50,000 gallons per day of discharge from the sewage treatment plant to the EFSFSR. However, it fails to provide detailed information about the sewage treatment plant, describe the potential effluent concentrations, or analyze the potential effects of these discharges to surface waters. The SDEIS fails to provide current baseline data to characterize organic carbon in area streams. (Water Specialist Report p. 67) It relies on another study (Holloway 2017) in which water quality data was collected in 2015 - baseline data which is now seven years old and outdated. The SDEIS (p. 452) predicts increases in organic carbon loading rates in the East Fork SFSR, but it hasn't modeled potential surface water quality changes resulting from the wastewater treatment plant discharges. • The SDEIS must provide current baseline data to characterize organic carbon in area streams, and quantify the potential impacts to surface water from the sewage water treatment plant, including the potential for increased algae. It should also analyze the cumulative effects of increased carbon and other pollutants from the sewage treatment plant on the EFSFSR and associated aquatic life, in association with the other potential impacts, such as predicted increases in stream temperature associated with climate change, increases in mercury from air deposition, and other potential impacts. The SDEIS should also consider the risks of a sewage spill from operations and/or transport of sewage materials. For example, the Pogo gold mine in Alaska has experienced repeated spills of raw sewage when transferring sewage to vacuum trucks, and as a result of a myriad of problems at the Water Treatment Plant, resulting in violations of fecal coliform in nearby surface waters.</p>	WTR	<p>Baseline organic carbon data are described in SDEIS Section 3.9.4.4. As described in that section, the poorly developed soils and sparse vegetation in the drainage area are associated with low organic carbon concentrations in surface water. The general soil conditions in place at the time that the data were collected remain in place. Therefore, it is reasonable to conclude that surface water organic carbon concentrations have remained low.</p> <p>The effects of treated wastewater on surface water organic carbon concentrations are described qualitatively in SDEIS Section 4.9.2.2. The quantitative changes in organic carbon concentrations would be dictated by IPDES permit limitations. The IPDES permit limitations combined with the relatively low volume of discharge compared to receiving stream flow led to the conclusion that changes in surface water organic carbon concentrations would be incrementally small compared to existing conditions.</p> <p>As described in the SDEIS, sewage systems would be equipped with waste containment and runoff control structures to prevent escape of untreated sewage to surface water.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	90	<p>9. The Forest Service should not approve any operations that increase water pollution, especially in impaired waters.</p> <p>In addition, to the increased pollution in water bodies in (6), there are additional areas where the SDEIS predicts that water quality will exceed standards or worsen existing conditions as a result of mining activities.</p> <ul style="list-style-type: none"> ○ The SDEIS (p. 4-192) predicts that subsurface infiltration from the TSF embankment and buttress will mix with the alluvial groundwater under the facility footprint, resulting in a groundwater chemistry with antimony and arsenic concentrations above the strictest potentially applied water quality standards. Infiltration from the unlined TSF buttress is predicted to have a more notable effect on groundwater analyte concentrations. Specifically, mixing of infiltrated leachate with previously unimpacted alluvial groundwater is predicted to increase antimony and arsenic groundwater concentrations above existing conditions and groundwater standards. (SDEIS, p. 4-243) ○ The SDEIS predicts that a small portion of the groundwater flow from the Yellow Pine pit backfill would reach groundwater to the west of the EFSFSR channel, where antimony and arsenic concentrations are currently below standards, and could cause an increase in groundwater concentrations for those two pollutants. (p. 4-244). ○ Immediately downstream of the West End pit on West End Creek at node YP-T-6 (above the confluence with Sugar Creek), predicted surface water mercury concentrations are an order of magnitude higher than existing conditions during the operating period due to the observed West End concentrations. (SDEIS, p. 4-251) 	WTR	<p>The Forest Service analysis of water quality utilizes a comparison of predicted water chemistry to observed existing conditions to identify effects of the Project on water quality. As described in SDEIS Section 3.9.3, regulatory authority regarding the Clean Water Act is the purview of IDEQ which will determine whether the Project can be permitted under its IPDES and cyanidation permits. The Forest Service analyses of Project water quality did not conclude that the Project would not comply with applicable state and federal requirements or Idaho antidegradation policy.</p>

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			<p>○ Similarly, downstream of the project on the EFSFSR at node YP-SR-2 (below the confluence with Sugar Creek), mercury concentrations are expected to increase in surface water due to variability in water treatment, although remain below standards.</p> <p>○ The West End pit lake water quality concentrations are predicted to exceed potentially applicable water quality standards for antimony, arsenic, and mercury throughout the operating and closure period (Figure 4.9-14 and Table 4.9-12). The SDEIS (p. 4-348) also predicts that water quality standards for these contaminants will be exceeded permanently post-closure, and that the pit lake would not be reclaimed or restored and would therefore have impacts on fish in perpetuity. The SDEIS (P. 4-243) also finds that “Where the local groundwater has not been previously impacted, the groundwater interactions with inundated backfill pore water and the West End pit lake would have the potential to increase groundwater concentrations for antimony and arsenic to levels above groundwater standards.”</p> <p>The SDEIS fails to demonstrate that the proposed plan will comply with applicable water quality standards. The SDEIS also predicts uncertainty about the potential overflow of the pit lake during high flow conditions, and describes the potential for the use of either or both surface water diversions or the use of a mobile water treatment plant if water levels reach a threshold level. (SDEIS, p. 2-87) It states that lake levels will be monitored after closure, as specified in the EMMP, but no specific reference or details to this are found in the 2021 EMMP.</p> <p>The plan must demonstrate that the pit lake and a potential overflow of the pit lake will comply with applicable standards, and not defer to some future options without sufficient detail to demonstrate viability. An overflow of the pit lake will most likely be in response to a storm event, in which there may be inadequate time to mobilize a water treatment plant. Further, the diversions are expected to be decommissioned after mine closure, which appears to conflict with their proposed use in the event of an overflow. The SDEIS concludes that “Formation of the West End pit lake acts to permanently raise temperatures compared to existing conditions in the stream segment immediately below that area which receives discharges of groundwater that has interacted with the pit lake.” (p. 4-275) The additional pollution loading caused by the Project, including allowing discharges before the required TMDL is produced and waste load and load allocations are implemented, violates the Forest Service’s duties to “minimize adverse environmental impacts on National Forest surface resources.” 36 C.F.R. § 228.8. “The operator also has a separate regulatory obligation to ‘take all practicable measures to maintain and protect fisheries and wildlife habitat which may be affected by the operations.’ 36 C.F.R. § 228.8(e).” <i>Rock Creek All. v. Forest Serv.</i>, 703 F. Supp. 2d 1152, 1164 (D. Mont. 2010) (mine approval violated Organic Act and 228 regulations by failing to protect water quality and fisheries). “Under the Organic Act the Forest Service must . . . require [the project applicant] to take all practicable measures to maintain and protect fisheries and wildlife habitat.” <i>Id.</i> at 1170. The CWA, Organic Act, and agency regulations preclude the Forest Service from approving aspects of a mining operation that would violate federal or state water quality standards. “Under the Clean Water Act Section 313, the Forest Service cannot authorize mining operations that do not comply with state and federal water quality regulations, including a state’s antidegradation policy. 33 U.S.C. § 1323(a). <i>Save Our Cabinets v. U.S. Dep’t of Agric.</i>, 254 F. Supp. 3d 1241, 1249 (D. Mont. 2017) (Forest Service approval of mining project violated duties under CWA and Organic Act to ensure compliance with water quality standards). See also <i>Hells Canyon Pres. Council v. Haines</i>, 2006 WL2252554, *4-5 (D. Or. 2006) (Forest Service mine approvals violated state CWA standards).</p> <p>The Organic Act mandates the same compliance, as the Part 228 regulations “further require that mining operators comply with applicable state and federal water quality standards including the Clean Water Act; [and] take all practicable measures to maintain and protect fisheries and wildlife habitat.” <i>Save Our Cabinets</i>, 254 F. Supp. 3d at 1250. The 228 regulations require that the operator submit sufficient information to enable the agency to ensure that the Project will comply with all applicable state and federal requirements to protect water quality and fisheries. See 36 C.F.R. §§ 228.4(c)(3), 228.8(b), 228.8(e). The SDEIS does not show, or properly analyze, that all aspects of the project will fully protect “fisheries and wildlife habitat” and comply with all CWA standards and requirements.</p>		

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	91	<p>10. The SDEIS must provide clarity on applicable standards and criteria</p> <p>The SDEIS refers to “potentially applicable standards” and “potentially applicable criteria in many locations throughout the document. The Forest Service must demonstrate through the NEPA process that the proposed mine plan will be in compliance with all state and federal laws, yet it is impossible for the public to determine what standards will apply, and whether the proposed mine plan will be in compliance. Cyanide leach mining operations frequently result in water quality impacts that were not predicted during the permitting process. It is essential that the NEPA process provide detailed information and take a hard look at the potential impacts of the proposed project on surface and groundwater quality</p>	WTR	<p>State and federal agencies with regulatory authority over the SGP have been extensively coordinated with regarding the content of the SDEIS. The application of water quality standards is within the purview of multiple regulatory agencies as described in SDEIS Section 3.9.3. Therefore, the potential standards that could be applied by those agencies are aggregated to determine the most stringent potential standard as presented in SDEIS Table 3.9-1.</p> <p>Uncertainty in the prediction of Project water quality effects is described in SDEIS Section 4.9.2.4 with mitigation measures targeted at reducing uncertainty described in SDEIS Section 4.9.3.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	92	<p>11. The SDEIS fails to provide current baseline data to characterize water quality in streams adjacent to proposed access roads, utility corridors and off-site facilities that have the potential to be impacted by SGP activities</p> <p>According to the Water Quality Specialist Report, the Surface Water Quality Baseline Study (HDR 2017) did not include sample locations outside of the proposed SGP. However, streams adjacent to proposed access roads, utility corridors, and off-site facilities have the potential to be impacted by these SGP activities. According to the report, “The types of impacts that could occur are usually described qualitatively because little is known about the existing water quality of these streams.” (Water Quality Specialist Report, p. 72). Instead, the SDEIS refers to IDEQ’s 303(d) water quality monitoring program, and provides general descriptions of area streams based on whether they fully support beneficial uses, don’t support beneficial uses or weren’t assessed. (Figure 6-14). NEPA requires current and detailed baseline data to characterize all streams and other water bodies that have the potential to be impacted by SGP activities, including access roads and utility corridors.</p> <p>Without this data, it is impossible to determine the potential impacts associated with the proposed project.</p>	WTR	<p>NEPA does not require collection of new baseline data if there already is sufficient information available for the lead agency to make an informed decision. The SDEIS utilizes IDEQ’s 303(d) water quality monitoring to describe the existing conditions for surface waters that would be crossed by access roads. Access roads, utility improvements, and off-site facilities would be constructed and utilized per design features and Forest Service requirements to minimize the effects on surface water quality. Potential impacts of off-site roads and utility corridors that might be used for the Project are described on page 4-262 of the SDEIS.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	94	<p>13. The SDEIS must consider surface water & groundwater quality cumulative effects</p> <p>It should be noted that both the liner and cover systems installed on the TSF and TSF buttress are engineered materials with finite life times. It is reasonably foreseeable that they will eventually degrade and fail at some point in the future. The magnitude and duration of contaminant release at that time is unknown, however it would certainly have the potential to adversely affect both surface water and groundwater. The SDEIS must take a hard look at the potential for long-term, cumulative effects to water quality, and analyze potential mitigation measures, including pumpback wells, or other mitigation options. Furthermore, the SDEIS Section 2.4.7.4 states that “A low permeability geosynthetic liner would be incorporated into the cover over the entire surface of the backfilled Yellow Pine pit, including the reconstructed channel floodplain corridor to reduce the infiltration of meteoric water into backfill material, which could dewater the restored stream channel and result in additional metal leaching from the underlying backfill.” This is not a realistic long-term mitigation measure. The SDEIS fails to provide detailed information about the liner, or examples of where this has been successfully conducted on other mine sites at this elevation and subject to flash flooding, plant roots, and other impacts that would compromise the liner integrity. Further, the SDEIS provides no detailed information about how this system would be maintained in perpetuity. The SDEIS must analyze the direct, indirect and cumulative impacts associated with the inevitable failures in the liner system over time, including the cumulative effects of climate change. For example, the 500-year storm event that occurred in Montana in 2022, which resulted in massive flooding, destruction of roads, rerouting of rivers and streams, and other substantial impacts.</p>	WTR	<p>The EIS has been revised to include examples of liner placement over mine facilities. An associated mitigation measure has been added to Section 4.9.3 of the Final EIS.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	104	<p>a. Habitat impairments are significant enough to consider Stibnite among the U.S.’s most contaminated sites</p> <p>Contaminants associated with historic mining at Stibnite resulted in heavy metals and cyanide contamination in area soils, groundwater, seeps, sediments, and thus surface waters (USEPA 2020). An initial assessment conducted by the U.S. Environmental Protection Agency (USEPA) in 1985</p>	WTR	<p>SDEIS Section 4.12.2.2 describes effects of sediment on fish populations and on productivity of macroinvertebrates and other fish prey.</p> <p>Sediment conditions were initially evaluated in the 1990s as summarized by URS 2000 then revisited by the USGS in their 2015 investigation. A summary of these findings was added to the EIS. Recent activities conducted under the No Action Alternative and proposed activities</p>

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			<p>determined habitat impairments in the watershed were significant enough to consider it among the U.S.'s most contaminated sites in (USEPA 2020). Despite significant restoration and some cleanup efforts, the site remains contaminated and an eligible Superfund site. Moreover, numerous streams in the East Fork drainage of the South Fork Salmon River (EFSFSR) as well as the South Fork Salmon River (SFSR) exceed Idaho standards for drinking water and aquatic habitat, and thereby are considered 'impaired.' Exceedances are documented for arsenic, antimony, mercury, temperature, and sediment in watersheds and subwatersheds that will be impacted by mining (IDeq 2018). While the SDEIS indicates that some water quality will be improved by treatment associated with the proposed Stibnite mining project, ground and surface water flows are poorly characterized and treatment is neither sufficiently described nor tested for effectiveness.</p> <p>Maest (2020) states: "The food chain/dietary pathway for fish (contaminated stream sediment to macroinvertebrates to fish) was not considered in the DEIS conceptual models, in the examination of existing conditions, or in current or future modeling efforts. It was also not considered when evaluating potential environmental improvements from planned legacy cleanup or mitigation measures. No information is provided in the DEIS on stream sediment metal/metalloid concentrations"; and "A reliable evaluation of the potential effects of the mine cannot be completed without site-specific information on chemical speciation and the toxicity of antimony to fish populations". Further, Maest discloses that sediment arsenic concentrations exceed the probable effects level (PEL) by up to 400 times, and sediment mercury concentrations exceed the PEL by up to 50 times. The food chain/dietary pathway for arsenic has been shown to adversely affect salmonids in laboratory experiments and at locations in Montana and Idaho, yet it was completely ignored in the DEIS". These same comments apply to the SDEIS as well (Maest 2022).</p> <p>Stream sediment chemistry is an important source of analyzing contaminant loading to fish. The food chain/dietary pathway for fish, starting with contaminated stream sediment, was not considered in the SDEIS conceptual models for existing conditions or current and future modeling efforts. Excluding stream sediment from the contaminant pathway analysis is a major, fundamental flaw with the conceptual model for this site, ignoring best available science, biological opinions, and U.S. FWS and NMFS Recovery Plans for ESA-listed salmonids.</p> <p>The SDEIS does show limited sediment quality data from five stream locations taken in June 2016. These samples showed that at three of five locations for arsenic, and four of five locations for mercury, levels exceeded Canadian guidelines for the protection of aquatic life. Although the U.S. does not have established sediment guidelines, Canadian guidelines provide a useful reference for sediment concentration guidelines to protect aquatic life. The food chain/dietary pathway for arsenic has been shown to adversely affect salmonids in laboratory experiments and using stream sediment from mined areas in Montana and Idaho. Yet, the SDEIS completely ignored stream sediment data.</p> <p>A conceptual model showing the food chain/dietary pathway for contaminant impacts to fish from consuming macroinvertebrates residing in contaminated stream sediment is needed. More sediment sampling is needed, and the results should be included in the design of conceptual models, mitigation, and clean-up measures.</p>		<p>under the Action Alternatives are designed to reduce the total load and metal concentrations of sediments in the Project area.</p>

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	105	<p>c. Temporal variability of metal contaminants</p> <p>One of the most distinctive features of site surface water quality is the temporal variability in concentrations associated with stream hydrographs. Consideration of temporal variability is especially important at sites affected by mine contaminants, such as streams in the Stibnite area. Although the Forest Service and plan proponent analyzed surface water samples, surface water monitoring was not frequent enough or well-timed with snowmelt to identify temporal changes and maximum concentrations. Knowing maximum concentrations of contaminants is important in understanding the potential for acute short-term toxicity to aquatic biota and for assessing the effectiveness of clean-up and mitigation measures. Therefore, weekly, daily, or ideally hourly sampling is needed during or shortly after spring freshet and summer thunderstorms to estimate potential maximum concentrations and to use in the calibration of the inputs for water quality models. These should be presented in a supplemental SDEIS.</p>	WTR	<p>SDEIS Section 3.9.4.4 describes the observed temporal variability in total and dissolved surface water concentrations associated with existing conditions. This variability is most notable with respect to total mercury concentrations which are influenced by amounts of particulate matter in stream flow, and Arsenic under baseflow conditions.</p> <p>The observed surface water chemistry variability associated with variability in surface flow rates was incorporated into the surface water chemistry predictions presented in SDEIS Section 4.9.2.2 in Figures 4.9-22 through 4.9-25.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	106	<p>d. Antimony speciation and food chain pathway</p> <p>The toxicity of arsenic and antimony to humans via drinking water and to aquatic biota is highly dependent on their chemical form (chemical speciation) in surface water and groundwater. The SDEIS did not analyze any water samples for chemical speciation. Essentially no information is available in the literature on the potential food chain/dietary pathway for antimony, which is one of the most important contaminants from legacy and proposed mining activity. Further, little fundamental information is available on the aquatic toxicity of antimony, and arsenic cannot be used as a surrogate. Neither the state of Idaho nor the federal government have established antimony criteria for the protection of aquatic life. A reliable evaluation of the potential effects of the mine cannot be completed without site-specific information on chemical speciation and the toxicity of antimony to resident fish populations. Site-specific toxicity testing should be conducted using clean sediment and sediment with a range of elevated antimony concentrations. Such work is especially important for understanding the effectiveness of promised legacy cleanup measures.</p>	WTR	<p>SDEIS Section 3.9.4.4 describes antimony as present primarily in its more oxidized species (i.e., Sb(V)). Because Project contributions of antimony would be associated with leaching of oxidized mine materials, it is likely that associated antimony species would also primarily be Sb(V).</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	108	<p>f. Water chemistry impact predictions consider unjustifiably limited parameters of concern</p> <p>The SDEIS qualitatively evaluates impacts to fish from potential increases in concentrations of a few metals (mainly arsenic, copper, mercury, and antimony). Those described impacts are largely minimized in the document. Copper is considered amongst the most toxic elements to all aquatic life with increases of 2-20 parts per billion imparting deleterious indirect impacts on salmonid survival. Mercury biomagnifies with increasing trophic levels, ultimately leading to grave concerns for human health. Information regarding toxicological impacts of both arsenic and antimony are insufficient in the literature at large, and virtually non-existent for the Stibnite Gold project area.</p>	WTR	<p>The constituents considered for the water quality analysis are presented in SDEIS Section 4.9.2.2 with quantitative results presented in Figures 4.9-22 through 4.9-25 and Tables 4.9-18 through 4.9-21. The effects of the Project on arsenic, antimony, and mercury concentrations are also described in the narrative. Copper concentrations are not predicted to differ from existing conditions. Arsenic and antimony concentrations are based on federal drinking water criteria and the toxicological rationale for setting those standards. Observed ecological effects of arsenic and antimony take place at higher concentrations than the drinking water standards as observed in the development of aquatic life standards for those constituents. The potential effects associated with mercury concentrations are related to methylmercury which is described in Section 4.9.2.2.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	109	<p>g. Multiple other contaminants of significant concern to salmonids and other aquatic life receive no consideration in the SDEIS</p> <p>In addition to impacts of several other existing contaminants at the site most likely related to historic mining activities were overlooked or not considered at all (aluminum, cadmium, iron, manganese, selenium, and zinc; see Zamzow 2020). Other metals are likely to increase as a result of Stibnite Gold Project development, but given the certainty of increases in these metals, some potential impacts of lesser-considered metals are described below. In particular, because they biomagnify, mercury and selenium should both be considered in much more depth than they are in the SDEIS. Moreover, information regarding toxicity (direct, indirect, lethal, and/or sublethal) of antimony is widely lacking.158 Given the near certainty of increases in antimony concentrations resulting from Stibnite Mine development, laboratory toxicity testing (including laboratory tests using site-specific waters) should be required prior to permitting.</p> <p>Maest (2020) concludes that little information on the toxicity of antimony to aquatic biota; no site-specific information on antimony or arsenic toxicity to resident and protected fish, macroinvertebrate,</p>	WTR	<p>Predicted concentrations of aluminum, cadmium, iron, manganese, selenium, and zinc are presented in SDEIS Tables 4.9-18 through 4.9-21. Concentrations of these constituents are predicted to remain below regulatory standards and to vary little from existing conditions.</p>

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			and aquatic plant populations; and no information is provided on the relationship between fish life cycles and temporal variability of arsenic, antimony, mercury, or any other analytes in site surface waters. No information is provided on the exposure to fish from arsenic, antimony, mercury, or other contaminants via the dietary pathway (sediment-macroinvertebrate-fish). This pathway has been shown to cause adverse effects to salmonids at mine sites in Idaho and Montana.”		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	111	SDEIS Figure 3.9-1 describes the surface water quality analysis area to include streams and lakes located in the 22 sub-watersheds that encompass the proposed mine site, access roads, transmission lines, and off-site facilities within the East Fork and South Fork Salmon River watersheds. Yet Chapter 4 only analyzes effects to water quality at the mine site area. The SDEIS does not analyze consequences to the surface water quality analysis area downstream and outside of the Stibnite Gold Project area (increased temperatures, spill risk, metals concentrations).	WTR	SDEIS Section 4.9.2.2 describes the effects of spill risks on surface waters outside of the mine area. Activity outside the mine area (i.e., power transmission and road access) are not expected to modify stream temperatures and metal concentrations at these locations.
Idaho Regulatory Agencies	17718	121	Need to update to Idaho DEQ 2022 Integrated Report, which has received EPA approval	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	122	Need to update the current 2022 Integrated report in the reference section (IDEQ 2020a) to (IDEQ 2022a)).	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	123	Need to update the 2018/2020 Integrated Report reference to 2022 Integrated Report	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	124	Update 2016 Integrated Report reference to 2022 Integrated Report	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	125	1. Update footnote 2 to “2022 Integrated Report”	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	143	This is not the most current flow diagram which was submitted with the IPDES Individual Industrial Permit application (please contact Perpetua/Brown and Caldwell for the most current diagram).	WTR	The flow diagram has been updated.
Idaho Regulatory Agencies	17718	144	According to SRK_2021_Stibnite_ModPRO2_SWWC_AP_20211020_FNL provided by Perpetua/Brown and Caldwell provided as part of the Individual Industrial Permit application (data provided by SRK Consulting)	WTR	The flow diagram has been updated.
Idaho Regulatory Agencies	17718	120	Statement “There are no active domestic groundwater wells used for residential drinking water within 15 miles...” may need to be verified. IDWR has several domestic wells on record in Yellow Pine. Furthermore, IDAPA 58.01.02.130.10 S-23: East Fork of the South Fork Salmon River – source to mouth has a designated domestic water supply beneficial use. that are not MIDAS GOLD Inc wells. (i.e., Well #442288.,355654, 359550. 370682, 370681, 432827, 286123, 355655, 286122, 436188, 286170, 418314, 370681, 370682, 359550, 355654. 370682, 442288,).	WTR	The text has been revised to indicate that potable water wells in Yellow Pine are located more than 8 miles from the Project area in a downgradient direction in terms of the EFSFSR watershed.
Idaho Regulatory Agencies	17718	77	The reference to SRK, 2021 is incorrect. The geologic map shown is from Stewart, et al, GEOLOGIC MAP OF THE STIBNITE QUADRANGLE, VALLEY COUNTY, IDAHO. SRK may have slightly modified it by adding the mineralized zones shown in red. But, that information is also not from SRK. Please correct.	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	86	Why does water from the TSF Buttress, Pit backfill, and Development Rock percolate into the groundwater? Same question for the ore stockpiles? This schematic does not show any water treatment before going into groundwater.	WTR	The analysis presented in SDEIS Section 4.9.2.2 assumes that some percolation from the mined materials would occur because while measures (e.g., geosynthetic covers) would be used to minimize the percolation, some percolation would still occur. Percolation from the base of these facilities would not be able to be intercepted for water treatment.
Idaho Regulatory Agencies	17718	87	"The pit lake is not expected to overflow to the surface." The stated reference could not be found. What is this expectation based on? The numerical groundwater flow model is probably cannot be used as an infallible predictive model. This needs a better explanation, and it needs to assume that overflow is possible, as that is what "not expected" suggests. How will an overflow be dealt with?	WTR	The reference regarding the prediction that the West End Pit lake would not overflow to surface is the Water Management Plan. This citation has been added to the EIS.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Idaho Regulatory Agencies	17718	88	In all graphs, the correct citation is IDAPA 58.01.11	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	89	In all graphs, the correct citation is IDAPA 58.01.11	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	90	In all graphs, the correct citation is IDAPA 58.01.11	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	91	"However, there are still several constituents that are predicted to be elevated above existing conditions and/or applicable water quality standards in surface water or groundwater throughout the entire 100-year model-simulated post closure period, attributable to a combination of existing conditions and mine-impacted waters. Due to these predicted water quality changes, water treatment of several mine-related discharges would be required to maintain the long-term productivity of water resources both within and downstream of the mine area until facility seepage collection plus cover and liner systems effectively abate discharge of mine-impacted water to the environment (over approximately 40 years)." Comment: based on the information presented in this paragraph, it is assumed that facility seepage would end at 40 years, but the model states 100 years. These statements are in conflict. Please rewrite.	WTR	As stated, there would be some constituents in exceedance of water standards throughout the 100 year prediction based primarily on the existing conditions at the site and not reduced below those standards by Project-related activity. No revision has been made to the section.
Idaho Regulatory Agencies	17718	156	Similar what you included under Federal Laws on pg 3-104, add a paragraph about the instream flow water rights held by the Idaho Water Resource Board under State and Local Laws	WTR	The requested paragraph from the Water Resources Specialist Report has been added to the EIS text.
Idaho Regulatory Agencies	17718	157	Current text: "Water rights associated with mining projects are protected from forfeiture under Idaho Code 42-223(11)." As written the statement is too absolute. Soften the statement and/or add further language from 42-223 (11) for context.	WTR	The requested revision has been made. "Water rights associated with mining projects are protected from forfeiture for nonuse under Idaho Code 42-233(11), provided the water right owner has maintained the property and mineral rights for potential future mineral production."
Idaho Regulatory Agencies	17718	158	Current text: "Storage of water is not subordinated ...as storage not more than a 24-hour water supply for any beneficial use." Add a sentence that Perpetua is proposing mitigation for their proposed storage ponds.	WTR	Revision made. "Mitigation for stored water would be addressed via IDWR's decision on Perpetua's proposal and water rights application."
Idaho Regulatory Agencies	17718	159	Current text: "The maximum diversion rate under existing and proposed surface water rights is 4.05 cfs," Isn't the maximum diversion rate 9.6 cfs? And 4 cfs (one significant figure) is a "typical rate"? Please clarify.	WTR	The clarification has been added that a 4 cfs diversion would be the expected diversion under normal operating conditions when there would not be a demand for additional make-up water.
Idaho Regulatory Agencies	17718	126	2. EFSFSR 3rd order : Not supporting COLD, DWS, PCS, SS / Cause: Antimony (DWS), arsenic (DWS, PCR), temperature (COLD, SS)	WTR	Revision made.
Idaho Regulatory Agencies	17718	127	***Note SCR is not listed as a beneficial use	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	128	3. EFSFSR 1st and 2nd order : Not supporting COLD, DWS, SS / Cause: Arsenic (DWS), Temperature (COLD, SS)	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	129	4. Rabbit Creek : Not Supporting COLD, DWS, SS / Cause: Arsenic (DWS), temperature (COLD, SS)	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	130	5. Meadow Creek : Not Supporting COLD, DWS, SS / Causes Arsenic (DWS), temperature (COLD, SS)	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	131	6. Garnet Creek : Not Supporting COLD, DWS, SS / Causes Arsenic (DWS), temperature (COLD, SS)	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	132	7. Fiddle Creek : Not Supporting COLD, DWS, SS / Cause: Arsenic (DWS), temperature (COLD SS)	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	133	8. Midnight Creek : Not supporting COLD, DWS, SS / Causes Arsenic (DWS), Temperature (COLD, SS)	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	134	9. Hennessy Creek : Not supporting COLD, DWS, SS / Causes Arsenic (DWS), Temperature (COLD, SS)	WTR	Edit has been made.

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Idaho Regulatory Agencies	17718	135	10. West End Creek: Fully Supporting COLD, PCR, SS	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	136	11. Sugar Creek (3rd order Cane Creek to mouth): Not supporting COLD, PCR, SS / Causes Arsenic (PCR), mercury (COLD, PCR, SS)	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	145	The second bullet of “Plant Ponds” “Inflow Sources”: “Stockpiles” should be “Stockpiles, including the Hangar Flats Stockpile” with a footnote clarifying: Ponds at the truck shop and plant site are aggregated in the GoldSim model as a combined pond storage, referred to as “Plant Ponds” in the model. The combined storage includes the North and South Truck Shop ponds; and the North and Central Plant Site ponds.	WTR	Table 4.9-1 entries have been modified per the comment.
Idaho Regulatory Agencies	17718	146	2 nd bullet of the West End Pond Inflow Source should be “West End In-Pit DRSF backfill, Stockpile Seepage, and runoff”	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	147	Hangar Flats Pond predicted analytes should be: Antimony, Arsenic, Cadmium, Copper, CaCO ₃ , Fluoride, Iron, Lead, Manganese, Mercury, Nickel, pH, Selenium, Silver, Sulfate, Thallium, and Zinc	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	148	The Plant Ponds predicted analytes should be: Antimony, Arsenic, Cadmium, Chromium, Copper, Lead, Manganese, Mercury, Selenium, Thallium, and Zinc	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	149	The SODA Pond predicted analytes should be: Antimony, Arsenic, Cadmium, Copper, Chromium, CaCO ₃ , Fluoride, Iron, Lead, Manganese, Mercury, Nickel, pH, Selenium, Silver, Sulfate, Thallium, and Zinc	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	150	The West End Pond predicted analytes should be: Antimony, Arsenic, Cadmium, Chloride, CaCO ₃ , Copper, Fluoride, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Sulfate, and Zinc	WTR	Edit has been made.
Idaho Regulatory Agencies	17718	151	The Midnight Pond predicted analytes should be: Antimony, Arsenic, Copper, Nitrate/Nitrite, Manganese, Mercury, Lead, Sulfate, Solids	WTR	Edit has been made.
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	8	<p>V. The Clarity and Consistency of the Impact Analysis Can be Improved in the Final EIS</p> <p>IMA was glad to see that your October 21, 2022 Dear Reader Letter announcing the availability of the SDEIS described Perpetua’s Modified Mine Plan (MMP) as “reducing surface disturbance and anticipated environmental impacts.” However, we are concerned that the SDEIS does not convey this same message because it does not clearly or consistently describe the MMP’s environmental improvements compared to the Plan of Operations/Proposed Action (the ModPRO) evaluated in the 2020 Draft EIS.</p> <p>Fortunately, the data presented in the SDEIS (especially in the figures and tables) present a clear picture that the MMP will substantially improve water quality in the project area and downstream from the project and restore miles of stream and fish habitat. In the Final EIS, the Forest Service needs to edit the document to improve the consistency and clarity of the text so that it more clearly matches the data shown in the figures and the tables – especially in Section 4.9 on Surface Water and Groundwater Quality.</p>	WTR	The Final EIS includes revision of the executive summary to reflect the water quality effects of the Project.
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	9	<p>A. The Executive Summary Does Not Accurately Summarize the SDEIS Findings</p> <p>Because most members of the public will not have time to read the entire SDEIS, they will probably rely on the Executive Summary to understand the SGP and the associated benefits and environmental impacts. Unfortunately, as written, the Executive Summary devotes more effort to discussing the adverse impacts rather than highlighting the water quality improvements and habitat restoration that would result from the MMP. The Executive Summary needs to give equal weight to the impacts and benefits associated with the MMP – especially the proposed restoration activities to address problems stemming from the legacy mine waste features.</p> <p>It is curious that the Executive Summary downplays these benefits when the Environmental Consequences chapter of the SDEIS contains abundant and detailed analyses and data that clearly show</p>	WTR	<p>The Final EIS includes revision of the executive summary to reflect the water quality effects of the Project.</p> <p>The acknowledgement of new sources of mine waste material has been retained as components of the proposed Project and the analysis of their effects on water quality as described in SDEIS Section 4.9.2.2.</p>

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			<p>water quality and fish and stream habitat improvements. The Executive Summary in the Final EIS needs to describe these beneficial impacts more clearly so they are consistent with the data presented in the SDEIS.</p> <p>The Executive Summary in the Final EIS also needs to mention two significant environmental restoration measures in the MMP, Stibnite Lake and Blowout Creek, both of which are omitted from the Executive Summary in the SDEIS. The MMP's addition of Stibnite Lake is a significant environmental enhancement compared to the ModPRO analyzed in the Draft EIS. Perpetua is proposing to construct this lake in the backfilled Yellow Pine Pit to mitigate the loss of the Yellow Pine pit lake fish habitat area and to minimize stream temperature fluctuations. This project refinement is in response to the public comments received on the Draft EIS that voiced concerns about the loss of lake habitat for fish and fluctuating stream temperatures. The Executive Summary in the Final EIS should describe the beneficial impacts associated with Stibnite Lake and give credit to Perpetua for listening to and acting upon the public comments on the Draft EIS to improve the project.</p> <p>Also, the Executive Summary in the Final EIS needs to acknowledge the reclamation activities planned for Blowout Creek, which is currently a major source of sedimentation into the Yellow Pine Pit and the East Fork of the South Fork of the Salmon River (EFSFSR). The earthworks and revegetation restoration work in Blowout Creek that are part of the MMP will substantially eliminate this major sedimentation impact.</p> <p>The Executive Summary discusses water quality improvements in a very confusing and misleading way. Page ES-15/16 states:</p> <p>The MMP would improve some of the existing water quality conditions observed in Meadow Creek and the East Fork SFSR by removing and repurposing legacy mine wastes. However, the 2021 MMP would have direct permanent impacts on water quality, as it would contribute new sources of mine waste material to the East Fork SFSR drainage¹².</p> <p>As written, the second sentence negates the first sentence leaving the reader to wonder whether there will be net water quality improvements. At the very least, this paragraph needs to have a third sentence that explains the many state-of-the-art environmental protection measures and mine waste management design features that will prevent, limit, or mitigate impacts from project mine wastes.</p> <p>The Surface Water and Groundwater Quality section in the Executive Summary does a poor job of clearly explaining that the Site Wide Water Chemistry (SWWC) predictive modeling results for the downgradient prediction node at YP-SR-2 show water quality improvements during and after mining. Despite the fact that Figures 4.9-21 and 4.9-25 are easy to understand and clearly document that the MMP will improve water quality at YP-SR-2, the Executive Summary in the SDEIS never mentions these figures or quantifies the water quality improvements shown in these figures. The Executive Summary in the Final EIS needs to explicitly state that the SGP will achieve significant reductions in arsenic levels (40 percent) and antimony levels (58 percent) as predicted at YP-SR-2 compared to baseline conditions. The Executive Summary would be greatly enhanced by including Figure 4.9-21. If including a figure is inconsistent with the Forest Service's editorial guidelines for an Executive Summary, the Executive Summary in the Final EIS should at least reference Figures 4.9-21.</p> <p>It is very important for all sections of the Final EIS to present a transparent and balanced discussion of the data in the SDEIS and the Specialist Reports that discloses both the impacts and benefits associated with the SGP. Both the Executive Summary and the Final EIS should give equitable treatment to the positive and the negative impacts. Based on the Executive Summary's emphasis on the impacts and minimization of the project benefits, it appears that the Forest Service is reluctant to highlight the environmental benefits (especially the water quality improvements) that will result from the remediation activities integral to the MMP. This seems odd because the Forest Service should be eager to find ways to improve the environmental conditions in the Payette and Boise National Forests – especially projects where there is a private-sector entity like Perpetua that is proposing to make the substantial investment needed to improve the environment.</p>		

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			<p>IMA understands that the Forest Service cannot give a full-throated endorsement of the SGP and must remain neutral during the NEPA process. But maintaining neutrality demands adherence to the facts and a full and balanced disclosure of both the positive and negative impacts associated with a proposed action. There are abundant facts presented in the SDEIS and the Specialist Reports that document the beneficial impacts as well as the unavoidable or residual adverse impacts that would result from the MMP.</p> <p>In preparing the Final EIS, the Forest Service has the opportunity to present the data described in the SDEIS in a more balanced way that does not emphasize the adverse impacts while subordinating the beneficial impacts. This “balancing act” is largely an editing exercise to use the information in the SDEIS to discuss the spectrum of impacts associated with the SGP and to eliminate any internally inconsistent statements in the document. By editing the document in this manner, it will be easier to read and more useful to the public.</p>		
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	10	<p>B. Section 4.9 Could be Improved by Editing it for Consistency</p> <p>IMA had to re-read Section 4.9 a couple of times before we were able to understand the water quality impacts discussion because it is not written in a way that is easy to understand. In fact, the discussion was very hard to follow until we saw Figure 4.9-21 “Locations for Surface Water Chemistry Predictions Stibnite Gold Project” on Page 4-246. This figure clearly and succinctly shows that the Site Wide Water Chemistry (SWWC) predictive model predicts the MMP will significantly reduce the concentration of arsenic and antimony in streams in the project area compared to the existing baseline levels of these metals. The most important data shown on Figure 4.9-21 are for the downstream prediction node, YP-SR-2, which is located downgradient of the mine facilities, below the confluence of Sugar Creek and the EFSFSR.</p> <p>Unfortunately, the SDEIS does not do a good job of explaining the importance of the modeling results at this downgradient monitoring point. Despite the fact that Figure 4.9-21 presents a very useful and easy-to-understand synthesis of the SWWC predictive modeling results, the SDEIS glosses over this important finding and fails to capitalize on Figure 4.9-21 to explain the water quality improvements. Because these improvements are one of the main environmental accomplishments that would result from the MMP, it is important for the public to understand this predicted outcome. The Final EIS should highlight this finding and explain that improved water quality downgradient from the mine area is one of the most significant indications that the SGP will improve the environment.</p> <p>As an example of the less than ideal organization of Section 4.9, IMA, like all SDEIS readers, had to wade through 64 pages of Section 4.9 before getting to the essential information that the project will improve water quality downgradient from the site. This key finding should not be buried on the 64th page of Section 4.9. IMA urges the Forest Service to edit Section 4.9 in the Final EIS to make it more useful and easier to read by presenting a synthesis of the key findings at the beginning of this section.</p> <p>Additionally, Section 4.9 contains some internally inconsistent text that is puzzling and obscures the water quality improvements that will result from the SGP. Besides being confusing, the contradictory statements are problematic if they are read in a vacuum or if project opponents parse them out of the document and selectively use them to assert the project will not improve water quality. For example, the discussion on Page 4-251 of the SDEIS misrepresents the modeling results at YP-SR-2:</p> <p>“Downstream of the project on the East Fork SFSR at node YP-SR-2 (below the confluence with Sugar Creek), predicted surface water chemistry <i>is largely unchanged from existing conditions</i> with some variability in predicted antimony, arsenic, and mercury concentrations during the operating and initial closure period (Table 4.9-21 and Figure 4.9-25).” (italics added for emphasis, bold in the original.)</p> <p>IMA strenuously objects to characterizing a 40 percent reduction in arsenic concentrations and a 58 percent reduction in antimony levels compared to baseline conditions as “largely unchanged from existing conditions.” This discussion contradicts and is inconsistent with the data shown in Figure 4.9-21</p>	WTR	<p>The Final EIS includes revision of the executive summary and Section 4.9 to reflect the water quality effects of the Project.</p> <p>The summary of water quality effects appears in the Executive Summary and SDEIS Table 2.8-1. Section 4.9 is not intended to be a summary of water quality effects, but instead a description of the multiple analyses that developed estimates for geochemical source terms, solute leaching, and water flow that concluded with the water quality predictions presented in the tables and figures at the end of the section.</p> <p>The SDEIS water quality analysis is based on a comparison of predicted surface water and groundwater analyte concentrations to regulatory standards as described in Section 3.9 and Table 3.9-1. Implications associated with water quality on wetlands, fish, wildlife, and human health are described in the sections associated with those resources (Sections 4.11, 4.12, 4.13, and 4.18, respectively).</p>

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			<p>and the data shown in Figure 4.9-25 for the downstream monitoring point, YP-SR-2. Ignoring and/or mischaracterizing these significant water quality improvements is factually incorrect and misleading.</p> <p>Fortunately, other sections of the SDEIS present a more factually correct discussion of the water quality improvements resulting from the SGP. For example, Page 4-522 properly reveals the SGP will improve water quality:</p> <p>“Under the SGP operations and closure, water quality of surface flow departing from the Operations Area Boundary would be the same or better than existing baseline conditions; therefore, there would not be impacts to the quality of downstream waterways...”</p> <p>The Final EIS needs to eliminate contradictory statements and consistently describe the water quality improvements resulting from the SGP. A simple and efficient way to achieve the necessary consistency would be to repeatedly reference the results shown in Figures 4.9-21 and 4.9-25.</p> <p>The SDEIS repeatedly states that the ATSDR Public Health Assessment conducted for the existing mine site eliminated groundwater as a drinking water pathway from consideration as a public health concern. Consequently, the detailed groundwater quality discussion in Section 4.9 is not an impact analysis and is thus academic and misleading. The Final EIS should clarify that the groundwater modeling results are a model input and do not represent an impact to a human receptor because the area groundwater is not a source of drinking water. The Final EIS should also explain that because the area surface waters are the ecological receptors for groundwater, the SWWC model appropriately incorporates the groundwater quality modeling results.</p>		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	4	Implementing effective monitoring, corrective actions, and addressing uncertainty for effects to stream temperature.	WTR	Comment noted. Statement of position. See responses regarding stream temperature for additional details.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	5	Ensuring impacts from groundwater and surface water contaminants (e.g., mercury, methylmercury, arsenic, and antimony) are not underestimated when demonstrating compliance with the Clean Water Act and determining if additional mitigation measures for potential impacts are needed.	WTR	Comment noted. Statement of position. See responses regarding surface water and groundwater chemistry for additional details.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	26	<p>Riparian Vegetation Zones</p> <p>The DSEIS includes a measure to establish 18-foot-wide vegetation zones consisting of willow, spruce, and other riparian species that effectively shade stream flows in the restored and native stream channels in the mine area. Studies over the years have shown that riparian vegetation located outside of an 18-foot buffer is a critical component of riparian vegetation stream shade production. That is, restored riparian buffer widths would need to be much wider than 18 feet to produce levels of stream shade that would result in the predicted post-closure stream temperature conditions illustrated in Figure 4.9-27. The DSEIS references to the Environmental Monitoring and Management Plan (EMMP) framework, however, specific actions were not provided that described how full potential stream shading from riparian vegetation within the Riparian Conservation Area will be achieved for riparian areas located outside of 18 feet from the stream.</p> <p>EPA recommends the FEIS include specific management and protection that will be implemented to ensure (shade producing) riparian vegetation is promoted outside of 18 feet from the stream. Describe the specific planned efforts to eliminate anthropogenic disturbance, and promotion of riparian restoration, within the entire riparian zone, including the “outer” riparian zone associated with stream shade production (i.e., outside of 18 feet from the stream).</p>	WTR	<p>Reclamation and closure activities associated with the zone outside of the 18-foot wide area are described in the Project's Reclamation and Closure Plan. Most of the restored stream channels would be meandering in nature resulting in wider zones of stream side restoration closer to 100-feet or more across as depicted in the Reclamation Closure Plan Figures 3-7, 3-8, and 3-9. In some instances (e.g., restoration of the lower reaches of Fiddle Creek), the stream channel would be more direct with a width of stream channel restoration area closer to the 18-foot wide area.</p> <p>Anthropogenic disturbance affecting restored or reclaimed areas would be subject to subsequent Forest Service review and permitting under NEPA.</p>
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	27	<p>Stream Temperature</p> <p>The DSEIS states that predicted long-term post-closure cool stream temperature conditions depend on the successful implementation of “the lined Stibnite Lake lacustrine feature above the cover of the Yellow Pine pit backfill to moderate maximum stream temperatures.”</p>	WTR	Sediment monitoring would be required per an approved Water Resources Monitoring Plan.

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			<p>“Cooling” temperature properties of this lake is dependent on lake water residence time and depth, both of which are impacted by upstream sediment delivery. That is, sediment transport into the lake can result in sediment deposition on the lake bottom, reducing the water depth, and subsequently decreasing the lake residence time. Specifically, it was reported that “about 90 percent of coarse-grained sediment derived from upgradient is deposited in the Yellow Pine pit” along with approximately 20 percent of the fine-grained sediment (<0.0625 millimeter in diameter), and “[t]hus, the Yellow Pine pit is an effective sediment trap for coarse-grained particles but does not have a long enough residence time to deposit the majority of the fine-grained sediment load.” In addition, “most of the sediment load discharged from the Meadow Creek reach is deposited in the Yellow Pine pit lake”.</p> <p>Unless otherwise determined through modeling analysis, it can be expected that these same sediment transport/deposition dynamics will occur with the created East Fork South Fork Salmon River (EFSFSR)/Stibnite Lake complex. In addition, this material also highlights the likely need to understand sediment loading and transport in the EFSFSR watershed to maintain the future Stibnite Lake attributes that lead to “cooling” water temperatures.</p> <p>Several potential sediment reduction and management measures are introduced on DSEIS page 4-274, and it is stated that the effectiveness of these measures will be evaluated through the EMMP. However, the EMMP does not provide specific examples on how current and future sediment loading is evaluated (i.e., status monitoring), as well as evaluate the effectiveness of the proposed actions to address any future sediment “issue” (i.e., effectiveness monitoring).</p> <p>EPA recommends the FEIS include implementation of detailed monitoring strategies that will: 1) monitor and quantify the sources and amount of sediment loading (including both chronic and episodic) entering the EFSFSR river system upstream of the Stibnite Lake; 2) evaluate the transport of both suspended and bedload transport in the stream network upstream of the Stibnite Lake; and 3) monitor sediment deposition and bathymetry conditions in Stibnite Lake. Information collected as part of this monitoring effort is necessary to: 1) determine if a problem exists associated with excessive sediment loading and/or deposition in Stibnite Lake, and 2) provide the necessary information to produce plans intended to adequately address any future corrective action to address excessive sediment loading and/or deposition in Stibnite Lake.</p> <p>EPA also recommends the FEIS include detailed corrective action strategies that outline actions to: 1) correct/eliminate any future “elevated” sediment sources (similar to what is proposed to excessive sediment from Blowout Creek²⁵); 2) correct/eliminate the transport of the bed load and “coarse” sediment load that has entered the river network; and 3) potential mitigation measures to address potential future “shallowing” of Stibnite Lake resulting from sediment deposition.</p>		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	28	<p>Significant Temperature Mitigation Feature</p> <p>Figure 4.9-27 illustrates that the most significant temperature mitigation feature in the EFSFSR river watershed is located between the TSFB and the East Fork Meadow Creek (EFMC). Specifically, modeled stream temperatures post mine closure (i.e., end of year 27) decrease up to 7° C within this short reach, which results in lower temperature to continue downstream in the EFSFSR. The DSEIS later reports that without this upstream temperature reduction “stream temperatures downstream of the Yellow Pine pit area could also be greater than existing conditions.” The DSEIS lists several possible reasons for this “significant” stream cooling reach: 1) resumption of “baseline” cool groundwater discharge; 2) increase stream shade; and 3) underdrain flow from the TSF.</p> <p>It is unlikely that the first two factors outlined on page 4-271 are meaningful factors in the creation of the “significant” stream cooling zone between the TSFB and the EFMC. The dashed line in Figure 4.9-27 indicates that stream temperatures currently increase within this reach, indicating that “baseline” groundwater influences within this reach are likely a relatively minor factor towards the creation of the “significant” temperature reduction zone. Additionally, it is unlikely that increase shade within this reach will result in the “significant” stream cooling zone because stream shade does not “cool” a river/stream. Stream shade reduces the amount of solar heat load (i.e., sun light) from reaching the stream water, and</p>	WTR	<p>To clarify, the SDEIS does not describe vegetation as directly cooling the stream. It does note that vegetation shading along a stream can result in a cooler stream than would occur in the absence of vegetation.</p> <p>Uncertainties regarding the effects of vegetation shading on stream temperatures are described in SDEIS Section 4.9.2.4 with monitoring and associated mitigation for temperature effects described in SDEIS Section 4.9.3.</p>

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			<p>this lower heat load can result in a gradual loss of heat energy (i.e., temperature reduction) through the relatively slow evaporation/convection processes.</p> <p>It is possible that cool underdrain flow from the TSF added into this stream reach could physically “dilute” the warm stream water advecting from upstream. The amount of cooling would be dependent on the volume and temperature of these underdrain inputs.</p> <p>EPA recommends the FEIS: 1) provide additional analysis describing the potential uncertainty that the “cooling” feature will function as predicted, 2) ensure proposed monitoring assesses if the “cooling” feature functions as predicted, and 3) include a description of potential mitigation/corrective actions if the “cooling” feature does not occur as expected.</p> <p>An acknowledgment of potential uncertainty of predicted ground water discharge volumes and “restored” shade conditions is on page 4-281. However, as described above, these two factors are unlikely a significant source of the cool water within the TSFB and the EFMC reach of Meadow Creek. The potential uncertainty associated with the predictions of the magnitude and duration of the cool underdrain flows were not provided in the DSEIS. Material presented on Page 2-56 indicates that these underdrain flows may be unavailable for stream cooling within this reach due to 1) the potential need for it to be treated prior to discharge into the stream; and/or 2) the potential need for it to be used as makeup water for the mill process. Thus, EPA recommends the FEIS include evaluations in this assessment that describe the potential uncertainty associated with the magnitude and duration of the predicted underdrain flows.</p> <p>The DSEIS does not discuss potential mitigation measures associated with a lower production and/or elevated temperatures of the expected underdrain flows discharging into the “significant” stream cooling zone between the TSFB and the EFMC. EPA recommends the FEIS include evaluations in this assessment that describe potential mitigation/corrective actions needed to address any loss or reduced effectiveness from the underdrain flows expected within this reach.</p>		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	29	<p>Groundwater Analyte Concentrations</p> <p>The DSEIS indicates groundwater analyte concentrations beneath the mine site, particularly in the vicinity of the TSF, TSFB, Hangar Flats pit backfill, and Yellow Pine pit backfill are expected to increase in response to constituent leaching from development rock. Existing groundwater in those areas typically does not meet regulatory criteria for use as drinking water due primarily to arsenic and antimony concentrations.</p> <p>To adequately describe the nature and extent of additional groundwater contamination contributed by SGP, EPA recommends the FEIS include a summary that describes the magnitude of groundwater concentrations above current baseline conditions and the geographic extent (in feet) over which baseline concentrations are exceeded. Figures which depict the extent and magnitude of groundwater concentration changes in relation to mine facilities would be particularly helpful to disclose groundwater impacts.</p>	WTR	<p>The magnitude of potential increases in groundwater chemistry are based on the predictions for seepage from the TSF embankment and buttress (SDEIS Table 4.9-8) and from the development rock backfills in the Midnight, Hangar Flats, and Yellow Pine pits (SDEIS Tables 4.9-13,4.9-14, and 4.9-15).</p> <p>SDEIS Figure 4.9-20 illustrates the starting locations for groundwater affected by pit backfill or the West End Pit lake and the destination for that groundwater. The areal zone between the starting locations and the destinations represents the area where groundwater concentrations could be increased relative to existing conditions by the Project.</p>
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	30	<p>Surface Water Methylmercury (MeHg) Concentrations</p> <p>The DSEIS states “MeHg concentrations in SGP site streams are not appreciably different from those reported by the USGS nationwide study, and that historical mining activity in the analysis area has not increased MeHg concentrations above those observed at similar reference locations throughout the U.S.”</p> <p>It is accurate that the USGS nationwide study did not identify an increase in MeHg in basins containing mines; however, the FEIS will need to include a caveat that this study only included one sample location from Idaho, and that location was outside of the Stibnite study area. As such, the statement that mining activity has not increased MeHg above “similar reference locations” is inaccurate. Instead, EPA recommends the FEIS state that MeHg concentrations in the Stibnite area were similar to those observed in non-mining impacted watersheds throughout the US.</p>	WTR	<p>The note that the USGS study utilized one location in Idaho has been added to the text.</p> <p>Changes in the dissolved organic carbon are described in SDEIS Section 4.9.2.2 where the use of sewage water treatment systems would have the potential to result in a small incremental increase in organic carbon concentrations when operated in compliance with expected IPDES requirements.</p> <p>Average predicted sulfate concentrations in surface waters are similar to existing conditions with maximum predicted sulfate concentrations rising above those levels but to concentrations less than the 45.9 mg/L value reported for the national average in the USGS study.</p>

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			It is important when comparing MeHg concentrations to other areas that these be interpreted in the context of the dissolved organic carbon (DOC) and sulfate levels present. The national USGS study referred to includes measures of these parameters. Because the amount of MeHg generated by an ecosystem is influenced by both DOC and sulfate, EPA recommends the FEIS include a comparison of not just the MeHg values, but the MeHg values in relation to existing DOC and sulfate concentrations in the Stibnite area and how those compare to other streams in the national assessment.		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	31	<p>Major Ions, pH, and Total Dissolved Solids (TDS)</p> <p>In the Surface Water - Major Ions, pH, and TDS section of the DSEIS, EPA recommends the FEIS include in this discussion the levels of sulfate under existing conditions. This information is included in Table 3.9.9, but the significance and trends of this data are not described. Because the levels of sulfate may increase because of mining activity and there are important links between sulfate levels and MeHg production, EPA recommends the FEIS include a description of current sulfate levels. From the table, it appears that most sulfate levels are quite low (<10 mg/L), especially when compared to the national average from the USGS study at 45.9 mg/L.</p>	WTR	<p>A description of the existing sulfate conditions and their implications for water quality has been added to Section 3.9.4.4.</p> <p>Average predicted sulfate concentrations in surface waters are similar to existing conditions with maximum predicted sulfate concentrations rising above those levels but to concentrations less than the 45.9 mg/L value reported for the national average in the USGS study.</p>
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	32	<p>Chemical Release Rates Temperature Correction</p> <p>The DSEIS states “[t]he source terms were then scaled to field conditions to account for differences in reaction rates, temperatures, and liquid-to-solid ratios between laboratory tests and field conditions.”</p> <p>EPA notes that the temperature correction will likely underestimate leaching rates encountered at the mine site. The Arrhenius equation is based on pyrite oxidation and is not specific to other metal/element release rates. Several metals have been shown to have higher release rates at lower temperatures.</p> <p>In addition to the inherent uncertainties in applying the temperature correction factor, an annual air temperature of 2.6°C should not be used for scaling. The annual average incorporates many months of sub-zero temperatures into this average when water is frozen and aqueous geochemical reactions are not occurring. A more conservative annual average would be based only on time periods when the temperature was greater than 0°C. A slightly less conservative approach would be based on an average that substituted 0’s for time periods when the temperature was negative. In addition, temperatures below the surface are often higher than air temperatures, especially when they are insulated with snow cover. Furthermore, chemical reactions are exothermic and can also contribute to increases in subsurface temperatures in geochemically active areas. In addition, under future climatic conditions, the temperature is predicted to increase. Overall, for the FEIS, EPA recommends the chemical release rates not be corrected for temperature during the water quality modeling.</p>	WTR	<p>Humidity cell testing (HCT) is a widely accepted methodology for examining the potential for mined materials to generate acidity and/or leach solutes when exposed to atmospheric conditions. Larger scale field testing would also be informative to this forecasting and is often performed in conjunction with HCTs to assess the differences in sulfide oxidation between field and laboratory conditions. In general, laboratory testing is more aggressive in creating conditions that promote sulfide oxidation, and therefore, provides a conservative quantification of leachate chemistry from mined materials. To translate from laboratory to field conditions, temperature correction factors are commonly applied to reflect the slower sulfide oxidation kinetics at lower temperatures.</p> <p>Model sensitivity associated with the selection of the scaling factor is described in SDEIS Section 4.9.2.4, which notes that the model implications of a larger scaling factor.</p>
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	33	<p>Effects of Deposited Mercury to Watershed</p> <p>The DSEIS indicates actual local mercury deposition rates from project emissions depend on the fractions of particulate versus gaseous mercury emissions. Particulate emissions generally deposit on the ground surface nearer to their source while gaseous emissions tend to deposit farther from the source or potentially become part of global atmospheric mercury burden.</p> <p>We appreciate this information being mentioned in the water quality section of the DSEIS. In the air section of the DSEIS, it suggests that most Hg⁰ will be captured, which suggests that most of the 13.6 lbs/year (6,200 g/year) that is released will be Hg²⁺ and HgP which would deposit locally. However, the results of the AERMOD predictions indicate that a much smaller amount of mercury (0.056 g/year) will be deposited within a square km around the mine site. There seems to be a disconnect between the amount and species of mercury emitted and the amount being deposited to the local watershed. EPA recommends the FEIS assess the potential for enhanced local deposition of Hg²⁺ and HgP of mercury to the local watershed and how this will impact water concentrations.</p>	WTR	<p>The total predicted mercury emission from the Project is 13.6 lbs/year, but the majority of that emission (72%) would be in gaseous form that would enter the global mercury inventory. Deposition modeling predicted the local deposition of the remaining Hg²⁺ and HgP to be 0.056 g/km²/year. This rate would be related to local deposition with the potential to affect site conditions compared to baseline deposition rates (i.e., 12.7 to 13.9 g/km²/year).</p>
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	34	<p>Ratios of Stream Mercury Loads to Atmospheric Mercury Deposition Rates</p> <p>The DSEIS states “[r]atios of stream mercury loads to atmospheric mercury deposition rates have been reported in watersheds affected by gold and silver mining (Domagalski et al. 2016)... Therefore, aerial</p>	WTR	<p>The section has been revised to include the predicted mercury deposition rate from the air quality analysis (i.e., 0.056 g/km²/year compared to a baseline deposition rate of 12.7 to 13.9 g/km²/year).</p>

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Environmental Review Branch)			<p>deposition would have a minor to moderate, long-term effect on particulate mercury loads in streams within the project area watershed.”</p> <p>It is unclear what ratios are being used in the analysis that led to the conclusion of minor to moderate impacts. An earlier version of the DSEIS document stated that “[r]eported ratios of stream mercury loads to atmospheric mercury deposition rates have been reported to be approximately 50-to-1 in watersheds affected by gold and silver mining with a drainage areas less than 500 square kilometers (Domagalski et al. 2016). Application of that ratio to the total mass of mercury emission would suggest that aerial deposition could contribute up to approximately 0.3 pounds per year to streams within the watershed during the operations period, primarily in the form of particulate mercury.”</p> <p>At that time, the EPA commented the ratio of 50 to 1 is not applicable to this situation. Domagalski et al, 2016 is suggesting that the stream Hg loads are 50 times higher than the atmospheric deposition load due to the contribution of non-atmospheric sources in the watershed.</p> <p>Applying the Domagalski ratio of 50 to 1, would indicate that deposition from the mine releases would be 0.006 pounds/ year and then multiplying value by 50 to come up with 0.3 pounds/year. But this large multiplier is a function of untreated mine waste in the watersheds that is overwhelming the atmospheric deposition. This is not applicable to conditions presented in the DSEIS.</p> <p>Our concern is that the DSEIS flips the intention of the 50 to 1 ratio to suggest that only 2% of atmospherically deposited mercury makes its ways into streams. This is inaccurate and opposite of what is presented in Domagalski for gold-silver mine impacted watersheds.</p> <p>While the DSEIS does not make specific reference to the ratio used in the analysis, EPA remains concerned about the basis of the analysis that used the Domagalski ratio of 50 to 1 for these conclusions. EPA recommends the FEIS reassess the ratio used and make corrections accordingly.</p>		The reference to Domagalski has been revised to acknowledge the study but to note that there has been no quantitative application of the ratios reported in that study.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	35	<p>Ratio to Predict Future MeHg Concentrations</p> <p>The DSEIS states “a ratio method to estimate methylmercury concentrations from predicted total mercury concentrations was applied per the approach and data collection by Holloway et al. (2017) that showed methylmercury concentrations were up to two percent of total mercury concentrations in samples from Sugar Creek and the East Fork SFSR.”</p> <p>EPA recommends the FEIS clarify if the ratio from Holloway is based on dissolved or whole water mercury concentrations and recommends utilizing dissolved concentrations since this is the form that is predicted to be released from the mine operations (i.e., “Predictive modeling indicates that mine facilities and water treatment would contribute dissolved mercury to surface waters primarily during the operating and early post-closure periods”)</p> <p>Also, the Holloway ratio is based on existing conditions between mercury and MeHg and will underpredict ratios that may exist if carbon and/or sulfate levels are increased.</p> <p>Overall, using this ratio to predict future MeHg concentrations likely results in an underprediction of the impacts. For the FEIS, EPA recommends reassessing the use of this ratio and adjusting the assessment accordingly to avoid underpredicting impacts.</p>	WTR	<p>The text has been revised to provide additional details regarding the use of the Holloway et al. (2017) mercury-methylmercury data.</p> <p>Changes in organic content and sulfate concentrations are predicted to be minor compared to existing conditions. Therefore, utilizing the maximum observed mercury methylation rate for the site provides a reasonable estimate for potential future mercury methylation on site.</p>
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	36	<p>Model Sensitivity and Uncertainty Air Temperature Correction Factors</p> <p>The DSEIS states “[a]ir temperature correction factors used to scale laboratory reaction rates to field conditions by the model could underestimate actual reaction rates and chemical releases from mined materials, and hence, surface water quality impacts.”</p> <p>We appreciate that the potential for underestimating reactions rates due to the temperature correction factor is mentioned in the DSEIS. However, for the FEIS, EPA suggests that the model be run without the temperature correction factor applied to the chemical source terms in order to provide an upper bound of leaching potential. In general, EPA suggests a preference to overpredict environmental impacts with a caveat that the predictions may be conservative rather than the other way around.</p>	WTR	Humidity cell testing (HCT) is a widely accepted methodology for examining the potential for mined materials to generate acidity and/or leach solutes when exposed to atmospheric conditions. Larger scale field testing would also be informative to this forecasting and is often performed in conjunction with HCTs to assess the differences in sulfide oxidation between field and laboratory conditions. In general, laboratory testing is more aggressive in creating conditions that promote sulfide oxidation, and therefore, provides a conservative quantification of leachate chemistry from mined materials. To translate from laboratory to field conditions, temperature correction factors are commonly applied to reflect the slower sulfide oxidation kinetics at lower ambient temperatures.

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			<p>Later the DSEIS mentions “[t]he model is most sensitive to ...increasing the reaction temperature” and “increasing the reaction temperature in mined materials and pit walls was shown to produce higher post-closure arsenic concentrations in the pit lakes and downstream assessment nodes.”</p> <p>Presumably, “increasing the reaction temperature” refers to using the humidity cell test (HCT) results that were obtained from the lab (at 25°C) without decreasing the reaction temperature to reflect the annual average measured at the mine site (2.6 °C). EPA recommends the FEIS provide details clarifying if they were still decreased from the lab, but less than had been done originally. It should also be taken into consideration that under future climate conditions, the annual average air temperature at the mine may increase, which would result in an underpredictions of chemical releases rates if the current rates are based on the average of historical temperature.</p> <p>Presumably these results represent uncorrected laboratory-based source terms, as opposed to a dataset where the reaction temperature has been increased beyond what was measured in the lab. Given that the temperature correction factor was a significant variable impacting the water quality predictions (i.e. correcting the chemical release rates measured at 25 °C down to 2.6 °C), this underscores our comments for the FEIS to include the uncorrected rates in the model predictions unless specific evidence can be provided to support the use of the temperature corrections.</p>		Model sensitivity associated with the selection of the scaling factor is described in SDEIS Section 4.9.2.4, which notes the model implications of a larger scaling factor.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	37	<p>Atmospheric Mercury Deposition</p> <p>The DSEIS states “[t]he surface water quality model predictions do not include mass loading inputs from permitted IPDES outfalls that would be required for the SGP. Additionally, mercury inputs from atmospheric deposition caused by the SGP have not been considered in the model. These additional loads were discussed qualitatively or semi-quantitatively in the analysis above but could modify future analyte concentrations compared to predicted values.”</p> <p>As mentioned above, we appreciate disclosing this information in the DSEIS; however, for the FEIS, EPA recommends accounting for atmospheric deposition in the water quality predictions to provide a holistic assessment of water quality impacts.</p>	WTR	The section has been revised to include the predicted mercury deposition rate from the air quality analysis (i.e., 0.056 g/km2/year compared to a baseline deposition rate of 12.7 to 13.9 g/km2/year).
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	38	<p>Site-wide Water Chemistry (SWWC) Model-predicted Concentrations</p> <p>The DSEIS states “[m]odel-predicted concentrations generated by the SWWC Model are for the dissolved fraction only and may underpredict concentration levels for constituents such as mercury that have been shown to occur in particulate form.”</p> <p>As mentioned previously, we appreciate disclosing this information in the DSEIS; however, for the FEIS, EPA recommends a preference to account for whole water concentrations (which is reflective of the 12 ng/L chronic criteria value for mercury).</p> <p>There are multiple aspects of the analysis in the DSEIS where the estimated impacts represent underpredictions. While each individual aspect may represent a relatively minor underpredictions, collectively they could add up to the impacts to air and water being significantly higher than what is anticipated in the DSEIS. As noted in the comments above, we recommend that underpredictions be remedied to develop conservative predictions of water quality impacts. This is important in order to disclose impacts more accurately and also to ensure that water management, control, and treatment plans will be effective at protecting water quality.</p>	WTR	The section has been revised to relate the magnitude of predicted particulate mercury deposition from the air quality analysis (i.e., 0.056 g/km2/year compared to a baseline deposition rate of 12.7 to 13.9 g/km2/year).
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	39	<p>Mitigation Measures for Mercury</p> <p>Mercury concentrations in West End Creek will increase from the baseline of approximately 4 ng/l to approximately 53 ng/l during mining operations (for 10 years). This represents an increase in mercury loading and likely impairment to West End Creek, which is fully supporting its beneficial uses and is a high-quality water under Idaho’s antidegradation policy. Additionally, it will also increase loading downstream to Sugar Creek, which is already listed as impaired under Clean Water Act Section 303(d) for mercury. The increase is due to the diversion of West End Creek, which is a result of the proposed SGP. Even though West End Creek is elevated in mercury above the proposed West End pit, by</p>	WTR	The predicted changes in mercury concentrations in West End Creek relate to the diversion of existing surface water flow containing mercury around the mining area. There is no mercury being added to the system, but an existing mercury load would be detectable further downstream because of the diversion. The net effect of that mercury on downstream surface waters would be the same as the existing condition. The Surface Water Chemistry subsection of SDEIS Section 4.9.2.2 describes the effects of the West End Creek diversion.

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			diverting the Creek and mining the pit, the SGP is resulting in an increase in the amount of mercury into lower West End Creek and Sugar Creek from current conditions. For the FEIS, EPA recommends that a mitigation measure be developed to avoid the predicted mercury water quality standard exceedances during operations or offset the additional amount of mercury being added to the system (e.g., by removing other mercury sources) to avoid further water quality degradation. Because mercury is bioaccumulative, effects to the system will likely extend beyond the lifespan of the SGP.		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	70	<p>Table 2.8-1 Alternative Comparison and Impact Summary (for 2021 MMP)</p> <ul style="list-style-type: none"> The DSEIS indicates low flow will be reduced at some locations during some periods of the SGP operations. EPA recommends the FEIS add a sentence to the table describing how far downstream (in feet or miles) from the SGP low flow conditions would occur so that the geographic extent of low flow impacts to the EFSFSR are clearly disclosed. Note that this comment also applies to the same sentence on page ES-14. In the summary table 2.8-1 2021 MMP, the TSF area groundwater summary provides the estimated changes in groundwater concentrations. EPA recommends the FEIS describe how far from each facility the groundwater concentrations would remain elevated above the baseline so that the geographic extent of groundwater contamination caused by the SGP is disclosed. The DSEIS states, “[f]or mercury, while the predicted concentrations do not exceed the aquatic life criterion based on water column, it is uncertain whether incremental change in water column concentrations beyond baseline would cause fish tissue concentrations to exceed the tissue-based criterion.” EPA recommends the FEIS add this sentence to the summary table 2.8-1 2021 MMP, for surface water quality since it relates to uncertainties associated with achieving Idaho’s fish tissue-based mercury water quality criterion for human health. According to pg. 4-308, “[f]unctional loss due to other indirect effects, including changes in hydrology, water quality, and increase dust and/or mercury deposition has been examined through inspection of dewatering drawdown and distance to roadways, but is difficult to quantify precisely. As a result, functional units that would be lost if these indirect effects occur, may be underestimated.” EPA recommends adding this statement or something similar to the summary table 2.8-1 2021 MMP, Wetlands for the FEIS. Otherwise, the exact acres of wetlands lost or changed provided in the table imply a level of certainty that does not exist since indirect (secondary) impacts are underestimated and not quantified. In addition, we recommend that a similar uncertainty statement be added to the Executive Summary on page ES-17. 	WTR	<p>Table 2.8-1 has been modified per the comment.</p> <p>Changes in surface water flows are expected to be within measurement error following the confluence with Johnson Creek.</p> <p>The magnitude of potential increases in groundwater chemistry are based on the predictions for seepage from the TSF embankment and buttress (SDEIS Table 4.9-8) and from the development rock backfills in the Midnight, Hangar Flats, and Yellow Pine pits (SDEIS Tables 4.9-13,4.9-14, and 4.9-15).</p> <p>SDEIS Figure 4.9-20 illustrates the starting locations for groundwater affected by pit backfill or the West End Pit lake and the destination for that groundwater. The areal zone between the starting locations and the destinations represents the area where groundwater concentrations could be increased relative to existing conditions by the Project.</p> <p>The uncertainty regarding fish tissue concentrations has been captured in the Fish Resources and Fish Habitat section of Table 2.8-1, i.e., "The effects of incremental change in water column mercury concentrations on fish tissue concentrations is uncertain."</p> <p>The clarification regarding indirect effects on wetlands has been added.</p>
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	72	<p>Surface Water and Groundwater Water Quality</p> <ul style="list-style-type: none"> The SDEIS states that for copper and mercury, impacts may be minimal but uncertainties in predicting future conditions exist. EPA recommends the FEIS describe the mitigation and monitoring that will occur to reduce the uncertainties and actions that would be taken if impacts are more than minimal and result in exceedances of Idaho’s CWA aquatic life criteria for copper and mercury. For the FEIS, EPA recommends noting in a footnote of the Table 3.9-6a Average MWMP Results – Development Rock and Ore and in the text that refers to the Table 87 that the detection limit used for this test for mercury (100-200 ng/L) is significantly above the CWA aquatic life criterion of 12 ng/L. Therefore, while some concentrations were above 200 ng/L, when values were less than this it does not indicate that the leachate would meet criteria. The same comment also applies to cadmium, copper, selenium, silver, thallium and lead. If similar issues also exist in other Tables in the text, EPA recommends adding a similar note indicating where the detection limit of the analysis is above the regulatory criteria level. The DSEIS indicates, under existing conditions, streams in the SGP area (except for West End Creek) are listed as impaired in accordance with CWA Section 303(d). The causes for listing of these waters are associated with arsenic (plus antimony and mercury at some locations) for exceedances of Idaho's water quality standards (WQS). Operational and post-closure concentrations of these elements in the East Fork 	WTR	<p>Water quality monitoring would be required under an approved Water Resources Monitoring Plan.</p> <p>The footnote regarding analytical detection limits for mercury has been added to Table 3.9-6a.</p> <p>The Executive Summary provides an appropriate summary for the water quality analysis. Readers interested in the detail can access the additional information in the water quality section and supporting documents. The standards for total and dissolved mercury have been added to the header of Table 3.9-10b.</p> <p>A discussion of cyanide concentrations in the vicinity of the TSF has been added to the EIS.</p>

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			<p>SFSR are predicted to be comparable to or less than the existing conditions.⁸⁸ EPA recommends the FEIS add a sentence to this statement in the Executive Summary that identifies that under the proposed action West End Creek is predicted to exceed Idaho's CWA mercury aquatic life criterion for approximately 10 years during operation. The predicted mercury Idaho CWA WQS exceedances are described in the main text of the SDEIS, but we recommend that they also be identified in the Executive Summary.</p> <ul style="list-style-type: none"> • For Table 3.9-10b, EPA recommends the FEIS add Idaho's CWA mercury criteria to the table header row as is done for the other constituents. • Since cyanide is predicted to be elevated in the tailings pond, EPA recommends the FEIS include cyanide in Table 4.9.6. Predicted TSF Surface Water Chemistry so that predicted cyanide concentrations are disclosed. • EPA recommends the FEIS add cyanide to Table 4.9-8 Predicted Groundwater Chemistry Underlying the TSF for the same reason as above. 		
Shawn Phillips	18836	3	<p>And those impacts will continue to be felt downstream, threatening increasingly commercial waters ... yet Perpetua Resources only considers environmental impact in a discrete chunk around the footprint of their mine.</p> <p>Again you are better equipped to understand real-world results, and I'm sure you also understand that small percentage changes can send ecosystems past tipping points, which push recreation and commercial operations past tipping points.</p> <p>But if Perpetua doesn't know how river systems distribute chemicals, they don't have any business running a mine in a vibrant and valuable river system ... and if they do understand but ignore, they're equally disqualified.</p>	WTR	SDEIS Section 4.9.2.2 describes the water quality effects of the Project. Water quality effects extending to wilderness areas downstream of the Project area are not anticipated.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	12	<p>The SEIS and supporting appendices rely heavily on 'Best Management Practices' to ensure that the projected loading of the East Fork South Fork Salmon River is within the legal threshold put forth by the Idaho Department of Environmental Quality. While this Project does note increases for mundane contaminants (sediment and/or temperature) that will have long-term effects on the environment, the Tribes still have concerns with loading particular contaminants on human health for our members utilizing resources from the area. The Project plans to implement a great deal of restoration actions in the initial phase and then completing the remaining restoration actions post-mining, with a timeline showing 50-100 years post-mining things will return to 'normal'. While it is understood that the best efforts to reduce constituents of concern will be taken at the outset of restoration design, inadvertent releases or severe weather can occur suddenly at this elevation (with potentially serious consequences) and the 50-100+ year timeline only increases the risk threshold for those stochastic events to compromise elements of restoration in the Project plan.</p>	WTR	<p>SDEIS Chapter 2 describes Project EDFs and Forest Service requirements that minimize the risk of inadvertent releases and severe weather along with response to these events.</p> <p>SDEIS Section 4.9.2.4 describes the uncertainties in forecasting water quality effects of the Project while SDEIS Section 4.9.3 describes mitigation measures to reduce those uncertainties.</p>
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	13	<p>Increased exposure of legacy leachates in tailings have relatively unknown concentrations of multiple constituents of concern, including legacy cyanide and arsenic, that have the potential to be mobilized during extraction/restoration activities. There is a possibility that the specific monitoring locations will not adequately pick up problems, and correlate those problems with specific locations within the mine site, in a timely fashion; increasing the likelihood that issues will be compounded by duration of exposure and/or ability to remedy releases. The Tribes' perspective is that intensive monitoring protocols should be required throughout all mining phases, with rigorous post-mining monitoring required throughout the projected life of reclaimed features (pits, tailings piles, ore stockpiles, etc.). As is often the case in new mining proposals, the water quality program relies heavily on adaptive management processes that do not necessarily include the collection of current data to inform management decisions based on established action triggers/metrics. This is particularly relevant to this proposal as most of the monitoring protocols rely on spot checks once every three months, instead of active/continuous monitoring during ground disturbance and post-closure.</p>	WTR	<p>The Project would include surface water and groundwater monitoring in the construction, operations, closure, and post-closure periods. As described in Section 4.9.3, the monitoring program would be adaptable and would be adapted per the monitoring results observed. The IDEQ permits related to surface water and groundwater impacts would also incorporate monitoring and reporting requirements that were not yet established when the SDEIS was prepared.</p> <p>An associated mitigation measure has been added to Section 4.9.3 of the Final EIS.</p>

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Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	14	The SEIS describes a discharge of sewage and waste into the watershed that is anywhere from 25,000 - 50,000 gallons per day of sewage discharge from the treatment plant. The Project doesn't describe any detailed information about the design of this sewage treatment plant or what the potential effluent is going to be. The Tribes are very concerned about this aspect because our Reservation is immediately downstream of a sewage treatment plant that releases serious contaminants. So why is the Forest Service allowing this mining operation to contaminate the pristine waters downstream, where our members are in those waters, without actually evaluating what that facility will look like and disclosing it to the public? The purpose of the SEIS is to describe every component of the Project, and this is one example where the questions cannot be answered by the information presented in the document.	WTR	Proposed sewage treatment is described in SDEIS Section 4.9.2.2 along with its potential effects on downstream water chemistry. Any discharge of wastewater to receiving streams would be regulated by permits issued by the IDEQ. These permits would be specifically designed to protect downstream beneficial uses of the surface waters. Detailed designs for the wastewater treatment systems are not necessary for this NEPA analysis because the proposed water treatment technologies are typical and well-proven but would likely be required for the IDEQ permits.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	15	The Tribes remain adamantly opposed to any course of action that would contribute to the existing levels of contamination from legacy mining or increase the risk of mobilizing contaminants during mining activities. This concern is compounded by the legacy risk this action will leave in the South Fork Watershed (50-100+years) when considering the known effects of climate change that will change the seasonal thermal regime, hydrologic cycle in the basin, and, the potential for large scale wildfire and/or flooding events. With water resources being one of our most sacred and base elements of all life, the risk to the watershed from mineral extraction is one of our foremost concerns; unfortunately, the Project does not adequately address these impacts or recommend suitable mitigation measures to ensure water quality does not deteriorate.	WTR	The predicted effects of the Project on water chemistry are described in SDEIS Section 4.9.2.2 along with a description of forecast uncertainties in Section 4.9.2.4. The Project is not predicted to modify water chemistry compared to the existing condition and mitigation measures designed to address forecasting uncertainties are described in Section 4.9.3.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	20	During initial project exposure to the public and in the initial DEIS for the Project, the proponents and Forest Service were quick to point to 'state of the art' water quality treatment for the mine. Based on new assumptions, generally presented as new 'liners and caps', will eliminate the need for water treatment after 40 years; because if there is a problem at year 39 it will definitely be resolved perpetually following year 40. An arbitrary deadline for maintenance of water quality treatment facilities only serves to benefit the proponent of the operations; obviously it is in the public interest to require water treatment for as long as necessary to meet established standards for human consumption, human health, and aquatic life. The Tribes unequivocally oppose allowing an arbitrary 40-year timeline to dictate the extent of water quality treatment; if this mining operation causes impacts to water quality in perpetuity then they need to commit to treat that water impacted for just as long.	WTR	SDEIS Section 4.9.2.2 describes how water treatment would be utilized to manage water quality effects from Project facilities. The 40-year time period is approximate and provides the estimate for the duration of that water treatment activity, but cessation of water treatment would depend on monitoring observation of site conditions that could result in a shorter or longer water treatment duration depending on those monitoring results.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	27	Thank you for reducing temperature and arsenic impacts to the EFSFSR by modifications to your mine plan. However, temperature loads are still unacceptable, as submitted in the SDEIS. Please continue to seek further reductions in these impacts as well as others such as mercury, lead, and cyanide.	WTR	Predicted surface water concentrations in the East Fork SFSR are currently near or below existing conditions. Measures to mitigate stream temperatures are described in SDEIS Section 4.9.3.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	28	Septic drain fields should be located according to Idaho DEQ requirements. All potable wells and potable water supply for workers should be permitted as Public Water Systems under the Idaho DEQ.	WTR	Sewage generated by Project employees would be managed via a water treatment plant rather than a septic drain field. The Project includes a public water system to supply potable water for employees.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	32	Please ensure and verify that development rock used for roads, parking areas, or concrete aggregate are suitable, not leachable, and does not contain radon-reducing constituents.	WTR	The geochemical suitability of proposed road materials was assessed with the study (SRK 2020) utilized and cited in the water quality analysis presented in SDEIS Section 4.9.2.2.
Small, Nathan (Chairman, Fort Hall Business Council,	18903	33	When discussing "liners", "lining", and other containment components, please be specific each time the term is used. Just saying "lining" or "liner" tells the reader nothing and does not inspire confidence that appropriate materials will be used to prevent contaminant migration.	WTR	The EIS text has been revised to indicate that liners and lining refer to the use of geosynthetic plastic liners.

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Shoshone-Bannock Tribes)					
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	41	The construction and operation of mine infrastructure may impact water quality and quantity within the analysis areas. The Tribes request that the following products and physical parameters be included in all environmental monitoring of mine and operation areas. Indicators: <ul style="list-style-type: none"> • Mineralized waste generated (tons, closure stabilization, and water chemistry). • Exposures of ore bodies/potentially acid-generating material (rock and water chemistry). • Legacy mine tailings and waste rock (rock and water chemistry). • Methylation rates for mercury (water chemistry). • Surface water quality (water chemistry and temperature). • Groundwater quality (water chemistry). • Stream flow characteristics (daily, seasonal, annual). • The extent, magnitude, and duration of changes in groundwater levels (feet of drawdown). 	WTR	The requested information appears in the Water Quantity Specialist Report and the Water Quality Specialist Report. These reports are cited and summarized in SDEIS Sections 4.8 and 4.9, respectively. They were also made available in their entirety at the same time as the SDEIS was released. Monitoring will be addressed in project monitoring plans.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	43	Yellow Pine Pit Lake is NOT "small" (222 acres and 720' deep). 2.4.5.1 Please remove the word "small".	WTR	Section 2.4.5.1 has been revised to remove the word "small." Water depth is currently in the 135' range.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	44	Please detail the water rights issue for use of groundwater seepage and in-pit surface water runoff in the ore processing plant, including 2.4.5.1 documentation of water rights.	WTR	SDEIS Sections 3.8.4.2 and 3.8.4.3 describe the status of water rights in the Project vicinity. Effects of the Project on water rights are described in SDEIS Section 4.8.2.2. As described in SDEIS Section 3.8.3, the issuance of water rights for the Project allowing diversion of groundwater, surface water, and/or mine contact water for use in ore processing is the purview of the IDWR with its decision made in a separate Idaho State permitting process and action.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	45	During the use of lower grade ore (either expected or unexpected) and as metals prices fluctuate, this reviewer has concerns that the mine lifetime, thus the remediation work after mining, will be extended/delayed into the future, further causing devastating impacts to the EFSFSR and surrounding environment. And would low metals prices be used as an excuse to not move low-grade ore from the tailings piles or the ore stockpiles?	WTR	Changes in metal prices and/or variations from expected ore grades have the potential to affect the timing of Project closure and reclamation. Low metal prices could also result in low-grade ore stockpiles being closed and reclaimed per the Reclamation Closure Plan rather than processed. The proposed ore stockpiles are located on top of the TSF Buttress. The proposed closure of the TSF Buttress by installation of a geosynthetic liner covered with growth media and revegetated would inhibit leaching of any remaining stockpile material.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	46	Define and reference the physical and chemical stability determinations of development rock. Who will monitor this? Who are data reported to? And, who makes the suitability determinations? Agencies?	WTR	Monitoring of development rock would be performed by the Project operator and consist of mined tonnages and placement in approved storage facilities plus laboratory testing for acid-generation potential and metal leaching potential. Monitoring results would be reported to the Forest Service and other Idaho state regulatory agencies that would assess whether development rock management meets requirements for physical and chemical stability.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	57	7.2.2.2 2021 MMP Traffic by heavy construction vehicles and equipment would occur throughout the road and SGP construction periods. The Motorized Mixed-Use Analysis Report (DJ&A, PC 2017) anticipates an addition of 65 vehicles per day on the Burnt Log Route during construction, with 69 percent of those anticipated to be heavy vehicles. As there are currently no buildings or operations in the Burnt Log Creek watershed, the addition of the Burnt Log Maintenance Facility would likely have an incremental increased effect on stormwater runoff, potential leaks or spills of automotive fluids, and sedimentation of dust from on-site road sanding material storage and vehicle travel over gravel surfaces. However, the facility would change less than 0.1 percent of the watershed to industrial use from forestry use, so any effects on water quality, ORVs, or the Wild classification of Burnt Log Creek are likely to be negligible.	WTR	The rationale for describing the level of consequence associated with the Burntlog Route activity is discussed in SDEIS Section 4.9.2.2. The nature of the activities, the area within the watershed where activity would occur plus Project designs and requirements to minimize effects are expected to result in changes in conditions that would be too small to be physically measured by normal methods or would be imperceptible (as described in SDEIS Table 4.1-1). As such, water quality effects associated with the use of the Burntlog Route on Tribal Treaty Rights are not anticipated. Mitigation measures for Burntlog Route use on Tribal Treaty Rights are described in the EIS under the Tribal Rights and Interests section.

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			The Tribes disagree. The effects on water quality, ORVs, Wild classification and cultural and customary access through Treaty protected rights will be significant and must be classified in this manner. Runoff in the creek is expected, potential leaks and spills from large heavy equipment is expected and dust, debris is not just incremental but significant. The true impacts from this construction must be documented in a realistic manner and communicated to the public that way. How will the loss of Treaty protected rights for the Shoshone-Bannock Tribes be mitigated? How do these activities com It with Environmental Justice?		
Jolie Drake	18929	3	As the second longest free-flowing river in the lower 48, the South Fork of the Salmon River (SFSW) provides habitat for species protected under the Endangered Species Act. But mining efforts are responsible for the SFSR's shocking rank of #5 on America's Most Endangered Rivers 2020 Report. Home to native westslope cutthroat trout, and critical habitat and active spawning grounds for threatened steelhead and endangered Chinook salmon and bull trout, this river is the foundation of ongoing efforts to restore these species. Past decades of heavy mining in the Stibnite area have already proven detrimental to water quality, landscapes, natural habitats, wildlife, and fisheries. In an effort to curb arsenic and mercury leaking into the river, miners unsuccessfully tried to reroute the headwaters by building a dam, but it blew out in 1965. Proposed as a Superfund site, U.S. taxpayers have already invested over four million dollars cleaning up damage from previous Stibnite mining operations. Yet, despite decades of restoration efforts, material contaminants remain in mine tailings, soil, groundwater, sediment and surface water. According to the U.S. Geological Survey's Idaho Water Science Center, the average concentration of dissolved arsenic currently in the EFSF is 57 micrograms per liter - five times the human health benchmark, and with highest reading dangerously close to the aquatic life long-term toxicity value of 150 micrograms. As an example of the damage mining can do to the environment, Panther creek, a nearby tributary to the Salmon River, suffered from mining operations at Blackbird Mine, releasing copper, arsenic, and cobalt into its tributaries. Before the mine, Panther Creek, like Stibnite, supported abundant Chinook and steelhead populations. But from the 1960's to the 1980's, no fish and few aquatic invertebrates could be found within 25 miles of the mine. In an effort to revitalize the fish population, years of studies transplanted fish, but fish populations failed to recover, and tests showed close to a 100% mortality rate. The watershed had barely any disturbances other than water quality, proving that mining-related pollution was the reason for these lethal effects.	WTR	No further response required. General in nature or position statement. It is acknowledged and understood that concerns regarding potential long-term environmental impacts, ecological integrity, and the well-being of potentially affected communities are valid and important to consider. During the decision-making process, the Forest Service will seek to identify the best possible balance between environmental protection, community needs, and sustainable forest management. Note that SDEIS Section 1.3 describes the CERCLA history of the Stibnite site.
Leah K. Corrigan	19000	5	The DEIS fails to provide an adequate analysis of the impacts on surface water and groundwater quantity and quality. All of the alternatives except for the no action alternative are likely to have significant negative impacts on the quantity of surface water and ground water in all drainages within the analysis area. In addition, all of the alternatives except for the no action alternative are likely to have significant negative impacts on water quality. Water quality will be negatively impacted by acid rock drainage and/or metals leaching from mineralized rock in the mine pits, development rock storage facilities (DRSFs) and the tailings storage facility (TSF). In addition, the project will negatively impact water quality through causing increased mercury methylation in adjacent waterbodies through emissions and other activities. Arsenic, antimony, mercury and other metals will contaminate surface and ground water for many years. I am very concerned about the impacts of the project on surface water and groundwater quantity and quality. Negative impacts on water quantity and quantity can have far reaching ramifications for the health of the Salmon River ecosystem as a whole, and many other things that I value that depend on a healthy river ecosystem, including fish populations, wildlife, recreation opportunities, human health, and businesses and local economies. For these reasons, it is critical for the DEIS to provide an adequate analysis of the impacts of the alternatives on water quantity and quality. There are substantial uncertainties in the model used to predict water quantity and quality impacts in the DEIS. As a result, the model likely underestimates negative impacts that will result from the four action alternatives.	WTR	SDEIS Sections 4.8 and 4.9 describe the predicted effect of the Project on water quantity and water quality, the uncertainties associated with model predictions, and monitoring and mitigation measures developed to address modeling uncertainties. Predicted Project effects on arsenic, antimony, mercury, and other metal concentrations along with mercury methylation are included in SDEIS Section 4.9.2.2. The Project has a neutral to beneficial effect on these concentrations due to removal of legacy mined materials present in the surface water drainages. Test work performed on materials that would be mined by the Project indicate that acid rock drainage is not anticipated. However, metal leaching is a likely effect that is addressed through the use of liners, geosynthetic covers, and water treatment. Site hydraulic data do not indicate higher levels of transmissivity along fault zones, observing low bedrock transmissivity in the vicinity of faults and shear zones. SDEIS Section 4.8.2.4 describes the level of uncertainty associated with use of groundwater flow models and Section 4.8.3 includes monitoring and mitigation measures designed to reduce the effects of model uncertainties.

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			<p>The DEIS acknowledges that there are several sources of predictive uncertainty for the hydrological model, including the following:</p> <ul style="list-style-type: none"> - A limited number of hydraulically tested wells and boreholes; - Typical limitations of data derived from hydraulic tests; - Uncertainty as to if any of the fault zones near the proposed pits were hydraulically tested - Not evaluating model predictive sensitivity to various possible degrees of hydraulic transmissivity of the fault zones, which have not been represented in the model; - Lack of a long-term bedrock aquifer test. Future documents will be updated with the results of the 2019 test when available. <p>The fact that the model does not evaluate model predictive sensitivity to various possible degrees of hydraulic transmissivity of the fault zones, is of particular concern. The DEIS acknowledges that the analysis area is cut by several major fault zones, and that the bedrock within the analysis area is faulted and fractured. The DEIS also acknowledges that faults can serve as conduits for groundwater flow. If the faults do serve as conduits to groundwater flow, they could increase hydraulic connectivity, and result in significantly different predictions with respect to the impacts of the project on surface and ground water quantity and quality.</p>		
Leah K. Corrigan	19000	6	<p>The DEIS indicates that there will be major impacts on the quantity and quality of surface and ground water resources. In turn these changes to water quantity and quality will have significant, long-term negative impacts on streams and rivers that support endangered fish, as well as other fish populations that are highly valued by the public for the angling and other recreational opportunities they provide. Given the sensitive location of the project and the long-term nature of the potential impacts, it is imperative to carefully examine “reasonably foreseeable” future outcomes of mine development, as required by NEPA. This includes ensuring that major uncertainties in the model, do not result in a failure to carefully examine all reasonably foreseeable impacts on water quantity and quality.</p> <p>The DEIS makes an unsupported argument that, because the modeling approach and data used by Brown and Caldwell are within the typical scope of modeling data for similar projects, the model is adequate. However, it is not clear that these “typical” projects have the same potential for massive adverse environmental impacts that this proposed project does, due to its location at the headwaters of the ESFSR, and the resources at stake downstream.</p> <p>The DEIS goes on to make an unsupported statement that development of alternative conceptual and numerical models to explore the influence of faults and fractures in the analysis area would not be realistic. However, the DEIS provides no information to support this statement. The DEIS provides no estimate of how much it would cost to develop alternative conceptual and numerical models, what type of expertise or data would be required, or how much time it would take. In addition, hydrologic models that explicitly model flow through faults and fracture zones or evaluate model predictive sensitivity to various possible degrees of hydraulic transmissivity of the fault zones, are considered to be important to development of accurate hydrologic models of the impacts of mineral extraction. In addition, hydrologic models that use these or other approaches to exploring the influence of faults, are common. For example, see the following:</p> <ul style="list-style-type: none"> - https://www.environment.gov.au/system/files/resources/877d5b40-4269-4708-a55f-b5e25df21b4b/files/simulating-the-groundwater-flow-dynamics-of-fault-zones.pdf - https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/95WR01178 - https://www.pebbleprojecteis.com/files/2c8a62a6-dedc-4981-88aa-377276c09c34 - https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/95WR01178 - https://www.usbr.gov/uc/envdocs/eis/Paradox/20191200-PVU_DEIS_Vol3_Apps_E-J_508.pdf 	WTR	<p>The EIS relies on government-supported numerical models that are commonly applied to analyses of water quantity and water quality effects of mining projects. These model applications are consistent with other Forest Service mining EIS’s and are recommended for use by other regulatory agencies such as the BLM and the Nevada Division of Environmental Protection.</p> <p>Site hydraulic data do not indicate higher levels of transmissivity along fault zones, observing low bedrock transmissivity in the vicinity of faults and shear zones.</p> <p>SDEIS Section 4.8.2.4 describes the level of uncertainty associated with use of groundwater flow models and Section 4.8.3 includes monitoring and mitigation measures designed to reduce the effects of model uncertainties.</p>

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			<p>- https://www.mdpi.com/2075-163X/10/8/727/htm</p> <p>The DEIS also states that such a model would be unlikely to produce significantly different predictive results. However, the DEIS also provides limited information to support this statement. As acknowledged in the DEIS, faults can act as conduits to groundwater flow. In addition to influencing impacts on surface and ground water, faults can provide conduits for the escape of mine influenced water from the mine site. At other mine sites, flow along faults has been demonstrated to be a key factor in preventing the containment of mine-influenced waters (https://www.mdpi.com/2075-163X/10/8/727/htm). The DEIS fails to disclose the potentially significant impacts that could occur if faults provide conduits for ground water flow or if flow along faults prevents containment of mine influenced waters.</p>		
Leah K. Corrigan	19000	7	<p>The FS acknowledges that existing data from long-term pumping bedrock aquifer testing would improve characterization of hydraulic properties of the bedrock formations. This would help to ensure that major uncertainties in the model, do not result in a failure to carefully examine all reasonably foreseeable impacts on water quantity and quality. The model should be updated based on this data, and the FS should prepare a new or supplemental EIS that discloses how inclusion of this data changes model predictions with respect to impacts on water quality and quantity.</p> <p>Another major flaw of both the hydrologic model and the analysis of the impacts of the action alternatives on surface water quality, is the failure to consider the potential for floods to cause increased erosion and overflow and breach of tailings ponds. The DEIS does not disclose that the streams in the analysis area experience regular peak floods and larger floods at predictable time intervals, including 100 year peak floods. In addition, the hydrologic model and analysis of impacts fail to provide any predictions regarding how such floods moving through the analysis area, could affect water quality in the analysis area and downstream. The U.S. Geological survey provides high quality data on mean annual floods likely in the analysis area, as well as peak floods at a range of time intervals, including 100-year peak floods, that are available to inform analysis of how floods might impact water quality (https://streamstats.usgs.gov/ss/, https://streamstatsags.cr.usgs.gov/gagepages/html/13311000.htm). A 100-year peak flood is reasonably likely to occur within the time period when such a flood could move through areas disturbed by mining, tailings ponds and other areas impacted by mining, and cause increased movement of contaminants from the project area into streams and watersheds downstream.</p> <p>Further, given that the FS relies almost entirely on the model predictions in analyzing the impacts of the alternatives on water quality and quantity, it is critical to audit the model. Mistakes made in inputting model inputs, running verification simulations etc. could result in substantial changes in the outcome of model predictions. The Forest Service should audit the model, and include the results of the audit in a new or supplemental DEIS.</p>	WTR	<p>The Final EIS describes the new bedrock pumping test data available since publication of the SDEIS and its relationship to the characterization of hydraulic properties and water management forecasts.</p> <p>Flood events were incorporated into the design of the TSF facility, stormwater diversions, and surface water controls (see SDEIS Tables 3.8-3 and 3.8-4).</p> <p>The Final EIS describes the results of the numerical model audit commissioned by the Forest Service.</p>
Leah K. Corrigan	19000	8	<p>Climate change and wildfire may exacerbate negative impacts of the action alternatives on surface and groundwater quantity and quality, especially over the long-term. Climate change may reduce precipitation and snowpack and increase wildfire frequency and intensity. All of these factors could result in cumulative impacts on water quantity and quality not adequately analyzed in the hydrologic model or the DEIS. The hydrologic model does not model the potential additive impacts of climate change and wildfire on surface and ground water quantity and quality.</p>	WTR	<p>On January 9, 2023, the Council on Environmental Quality (CEQ) published interim “National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change” in the Federal Register (CEQ 2023). CEQ grants agencies the discretion to decide whether to apply the guidance to NEPA analyses that were in progress when the guidance was issued. The interim CEQ guidance was published late in the development process for the SGP DSEIS, and therefore this EIS will primarily rely on earlier CEQ guidance on considering climate change in NEPA (CEQ 2016). For example, this EIS does not include all new recommendations such as applying social cost of GHG estimates to the incremental metric tons of each individual type of GHG emissions expected from the Proposed Action and its alternatives. However, this EIS does analyze the two fundamental considerations required by current and former iterations of CEQ climate change guidance: (1) the potential effects of a proposed action on climate change, including both GHG emissions and reductions from the proposed action (see below), and (2) the effects of climate change on the proposed action and its environmental impacts.</p>

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Leah K. Corrigan	19000	9	The DEIS does not provide an analysis of to determine if additional groundwater withdrawals associated with new water rights that will be required to implement the action alternatives, would infringe on the instream flow rights and wild and scenic nature of the EFSFR, the South Fork Salmon River and the Salmon River. The DEIS states this analysis will be performed by Idaho Department of Water Resources after a water rights application has been filed. However, the FS has a separate and independent obligation to analyze the potential cumulative impacts of the project, along with reasonably foreseeable actions authorized by the Forest Service and the impacts of climate change, on instream flow rights and wild and scenic values of the EFSFR, South Fork Salmon River and Salmon river. The FS should prepare a new or supplemental EIS that includes this analysis.	WTR	SDEIS Section 4.8.2.2 describes the water quantity effects of the Project including the effects of groundwater withdrawals associated with the diversion rates sought by Perpetua via pending water rights applications with the IDWR. The approved water rights would include measures protective of existing instream flow rights as enforced by the IDWR. The Forest Service initially protested Perpetua's water rights applications on this basis but resolved those protests through agreement on a mitigation measure to be incorporated into the water rights authorization.
Leah K. Corrigan	19000	10	The FS must improve the analysis of impacts on water quality and water quantity. It is not appropriate to defer this critical analysis to the Final EIS. The potential impacts of the project must be disclosed in the Draft EIS, at a point in the process where the public has the opportunity to comment. The FS must complete this analysis in a new EIS or a supplement to the EIS, and provide opportunity for public comment on this supplemental analysis.	WTR	The Final EIS analysis incorporates revisions per public comments received on the SDEIS water quantity and quality analysis. However, that SDEIS analysis was complete and did not defer any analysis to the Final EIS.
Leah K. Corrigan	19000	15	As discussed previously, the DEIS may be substantially underestimating the reductions in water quantity and quality that are likely to result from the action alternatives. If reductions in water quantity are larger than predicted, which is likely given the issues discussed above (e.g. the interactive impacts of the action alternatives and climate change), then both impacts on water quality and increases in water temperature, and resulting impacts on fish populations are likely to be much more substantial than indicated by the analysis provided in the DEIS. In addition, the SPLNT temperature models used in the DEIS stream temperature analysis do not account for changes to stream temperatures caused by changing climate conditions, and do not account for increased temperatures in the East Fork South Fork downstream of the mine site, even though the "Fisheries Analysis Area" encompasses downstream habitats and downstream temperature increases are likely. The NorWeST model, produced by the U.S. Forest Service Rocky Mountain Research Station, represents future stream temperatures, adding 1.1-2.0 degrees C in the years 2030-2059, and 1.0-3.0 2070-2099 to SPLNT modelled values. In addition, the DEIS does not provide adequate analysis of how reductions in water quantity or floods, could result in higher than anticipated concentrations of minerals and other toxic chemicals that may negatively impact fish species. Further, if stream flows are reduced to levels lower than predicted by the flawed hydrologic model, particularly during the time of year of natural low flows, fish may suffer from impacts associated with lack of dissolved oxygen and predation that aren't adequately disclosed in the DEIS.	WTR	The EIS includes monitoring and mitigation measures that would be required by the Project ROD to address water quality and quantity effects that vary from current predictions.
Karen Balch (North Fork Veterinary Service)	19228	6	Unhealthy habitats weaken the immune systems of life forms making them susceptible to various diseases with increased morbidity and mortality. Increasing temperatures accompanying climate change directly or indirectly impact habitats and magnifies the adverse effects of environmental toxins such as heavy metals in water ways. An estimated one-third of tundra swans refueling and migrating through Coeur d'Alene, Idaho, will die of heavy-metal toxicity ingested from lake vegetation. For most of the 20th century, mining waste was discharged into the Coeur d'Alene River and tributaries. In 2019, the US Department of the Interior and US Geological Survey completed the scientific investigations report titled: "Arsenic, Antimony, Mercury, and Water Streams near Stibnite Mining Area, Central Idaho, 2011-17." In short, this study documents altered stream configuration and habitat in the study area. Dangerous toxin levels for aquatic and human life are directly associated with documented levels of arsenic, free cyanide, lead, mercury, silver, and zinc, and antimony. Even this most recent USGS study, many years after the most recent active mining activity in the Stibnite area, identified harmful levels of arsenic, antimony, and mercury contamination in those local waterways. From a veterinary perspective, I find this profoundly disturbing knowing that waters contaminated with heavy metals are the relied-upon water source for fishes, amphibians, insects, birds, domestic livestock, domesticated pets, wildlife and people. Heavy metal contamination of water ways is an evitable consequence of mega-scale mining, whether historical or contemporary.	WTR	No further response required. General in nature or position statement.
Karen Balch (North Fork	19228	8	I have serious concerns about the resulting heavy-metal contamination in the East Fork South Fork Salmon River and all downstream flows that will inevitably be associated with any new commercial mining in the Stibnite area. Detrimental impact on our future recreation in and around any associated	WTR	No further response required. General in nature or position statement.

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Veterinary Service)			rivers, streams, lakes, and reservoirs is truly secondary to the ongoing profound harm to impacted ecological systems. Ongoing heavy metal poisoning of rivers simply threatens the diversity and robustness of aquatic life (in particular protected fish) and, if eaten frequently enough, other life forms such as ospreys, waterfowl, and even humans.		
Karen Balch (North Fork Veterinary Service)	19228	14	Damage to water and water resources is among the worst environmental consequence of gold mining. As reported, gold mining in modern times is very destructive to water resources as evidenced in Nevada where there has been a huge gold mining industry. According to the US Geological Survey, some of the largest open-pit mines in northeastern Nevada have resulted in the water table dropping roughly 1,000 ft. in some areas. One gold mine may consume purportedly 100 million gallons per day. Water systems are commonly contaminated from cyanide, processing chemicals and acid mine drainage that runs off exposed rock. A Perpetua Official told me that 20 percent of the water for this project will originate from the East Fork South Fork Salmon River. Exactly how much water in quantity is that? And where is the other 80 percent coming from? During the Four Corners Fire of this year that occurred on West Mountain Road just across Cascade Lake, within a few days after initiating aerial attack an estimated 3.1 million gallons of water came from Cascade Reservoir; I have never seen that lake so low. I also adamantly oppose the use of Johnson Creek as the main route of transportation to the Stibnite Gold Project. Is it truly presumed that a toxic chemical spill, or diesel-gas spill couldn't happen on the first day or earlier that operations begin.	WTR	SDEIS Section 4.8.2.2 and Figure 4.8-3 describe the sources and amount of water that would be consumptively used by the Project. Position statement regarding the use of the Johnson Creek Route. No response required.
Olin Balch (North Fork Veterinary Service)	19234	2	Mining as proposed by the Stibnite Gold Project Supplemental DEIS profoundly threatens the quality and inherent safety of surface water and ground water. Contaminated water (containing arsenic, antimony, and mercury) in turn literally endangers all downstream aquatic species and their habitat, including ESA-listed Snake River Chinook Salmon, Snake River Steelhead Trout, and Columbia River Basin Bull Trout. Heavy-metal pollution starting at the headwaters of the East Fork South Fork Salmon River contaminates all downstream waters to the Pacific Ocean. ("The analysis shows that remaining rock in pit walls and the development rock, deposited in the TSF and pit back fills, would be largely non-acid generating, but would be capable of leaching aluminum, antimony, arsenic, cadmium, copper, manganese, mercury, zinc, sulfate and TDS into surface water and groundwater in concentrations that exceed water quality criteria. Therefore active contact water collection and water treatment would be required for a period of time during the operations and post-closure period until geochemical stability of mined materials could be achieved. In the case of the TSF where stabilization would depend on consolidation of tailings plus liner and cover installation over the tailing, this collection period would be approximately 40 years. USDA Stibnite Gold Project Supplemental DEIS, ES-14 – ES-15.)	WTR	No further response required. General in nature or position statement.
Olin Balch (North Fork Veterinary Service)	19234	5	I have serious concerns about the resulting additional heavy-metal contamination in the East Fork South Fork Salmon and all downstream flows that will inevitably be associated with any new commercial mining in the Stibnite area. Detrimental impact on our future recreation in and around any associated rivers, streams, lakes, and reservoirs is truly secondary to the ongoing profound harm to those associated ecological systems. Ongoing heavy-metal poisoning of rivers simply threatens the diversity and robustness of aquatic life (in particular protected fish) and, if eaten frequently enough, other life forms such as ospreys, water fowl, large and small aquatic wildlife, including humans.	WTR	No further response required. General in nature or position statement.
Joel Drake	19251	1	Please know that these comments and the information I have provided are unique. I reviewed hundreds of comments posted by others and only saw a few that briefly mention the large risks the Plan imposes on the water quality of Warm Lake. Please take time to thoughtfully review my comments and thoroughly consider my requested actions which are focused on protecting and preserving the water quality of Warm Lake.	WTR	No further response required. General in nature or position statement.
Joel Drake	19251	2	No Chemical Deicers (NaCl, MgCl, etc.) used within the Warm Lake drainage 1) The Plan and Draft EIS be revised to specifically state and contractually affirm that no chemical deicers will be applied to any section of Warm Lake Highway (Valley County road #10-579) to the East of Big Creek Summit.	WTR	The contents of agreements between Valley County and Perpetua are outside the purview of the Forest Service.

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			<p>2) Requirements in any Special Use permit issued by the Forest Service for transportation of materials to and from the mine site must specifically prohibit use of chemical deicers on the section of Warm Lake Highway (Valley County road #10-579) to the East of Big Creek Summit. With any violation of this prohibition serving as basis for immediate revocation of the USFS permit.</p> <p>3) Any Memorandum of Understanding (MOU) or Memorandum of Agreement (MOA) or other agreement between Valley County and Perpetua Resources for operations and maintenance of roads in the County shall specifically state and contractually affirm that no chemical deicers will be applied to any section of Warm Lake Highway (Valley County road #10-579) to the East of Big Creek Summit.</p>		
Joel Drake	19251	3	<p>Water Quality Monitoring - Periodic Sampling / Testing / and Public Reporting of Results</p> <p>4) The Plan and Draft EIS be revised to specifically state and contractually affirm that Baseline water quality values for Warm Lake and its tributary Warm Lake Creek (from its initial source at Landmark Summit to the creek's inlet at Warm Lake) will be independently secured and published before any stage of mine preparation or operations begins.</p> <p>5) Any Special Use permit issued by the Forest Service for transportation of materials to and from the mine site must require MONTHLY sampling / testing / and public reporting of water quality results for Warm Lake and its tributary Warm Lake Creek (from its initial source at Landmark Summit to the creek's inlet at Warm Lake) during the multi-year period that mine preparation, operations, and restoration is conducted. Sampling and testing should be conducted more frequently following any reported or suspected spill.</p> <p>6) Any permit issued to Perpetua Resources by the IDEQ (Idaho Department of Environmental Quality) concerning water quality must require MONTHLY sampling / testing / and public reporting of water quality results for Warm Lake and its tributary Warm Lake Creek (from its initial source at Landmark Summit to the creek's inlet at Warm Lake) during the multi-year period that mine preparation, operations, and restoration is conducted. Sampling and testing should be conducted more frequently following any reported or suspected spill. prepared and submitted: 01-10-23 Joel Drake Page 2 of 6</p> <p>7) A cognizant, lead agency for water quality impacts generated by the transportation of materials to and from the mine must be identified (presumably, this is IDEQ or a federal agency).</p> <p>8) The identified lead agency will directly conduct, or contract with a qualified third-party to perform, MONTHLY sampling / testing / and public reporting of water quality results for Warm Lake and its tributary Warm Lake Creek (from its initial source at Landmark Summit to the creek's inlet at Warm Lake) during the multi-year period that mine preparation, operations, and restoration is conducted.</p> <p>9) Public Reporting will include water quality measurements presented in table and graph format maintained and publicly accessible on the identified lead agency's website.</p> <p>10) Baseline and Monthly measurements are needed for these water quality attributes. [Note: these include the water quality measurements currently conducted in Valley County for Payette Lake and Lake Cascade] : a. Dissolved Oxygen b. Total Phosphorus c. Water Clarity (turbidity) d. Water Temperature e. Nitrogen f. Salinity g. Trace readings for Petroleum Distillates and Solvents</p>	WTR	Collection of baseline water quality data from Warm Lake Creek prior to the construction period has been added to the Water Resources Monitoring Plan. Additional sampling and analysis would be required following spill events as part of the spill response.
Joel Drake	19251	5	The SDEIS (Supplemental Draft Environmental Impact Statement) does not address risks to water quality for a uniquely sensitive, key waterway along the project's transportation route - Warm Lake and its tributary, Warm Lake Creek. Specifically, the SDEIS fails to identify impacts or provide clearly defined actions and countermeasures to sufficiently address spills of liquid hazardous materials (fuels, solvents, etc.) into the Warm Lake watershed.	WTR	SDEIS Sections 4.7.2.2 and 4.16.2.2 describe application of a Transportation Management Plan to minimize traffic incidents that potentially result in spills and the responses to those spills. The area covered by the Transportation Management Plan includes Warm Lake Road.
Joel Drake	19251	6	Warm Lake - a unique ecosystem reliant on clean, unpolluted water Warm Lake is the largest natural lake within the Boise National Forest, at a relatively small 420 acres. By comparison, Payette Lake is 5,000 acres and Lake Cascade is over 27,000 acres in size. Warm Lake's small size makes it many times more vulnerable to introduced pollutants. Even one spill of liquid hazardous materials into the Warm Lake drainage would be devastating.	WTR	No further response required. General in nature or position statement.

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Joel Drake	19251	9	<p>The SDEIS does not establish quantifiable measures or identify baseline values to assess proposed impacts to water quality on Warm Lake or its tributary Warm Lake Creek.</p> <p>At a minimum, before this SDEIS or Section 402 or 404 permits could be approved for this project, the SDEIS and project transportation plan would need to be revised to include requirements for; prohibition on use of chemical deicers on the Warm Lake Highway anywhere East of Big Creek summit, monthly sample testing of water in Warm Lake Creek at its entrance to Warm Lake by a federal agency or independent third party engaged by a federal agency, monitoring and follow up action by a federal waterways agency to enforce water quality compliance when pollution levels are detected, and that test results must be formally published each month to provide for public review and ensure transparency. Test results should be published in table and graph form that evidence the absolute levels of pollutants in the water over time (salts, fuel, hazardous materials, etc.) and the historic trends in those levels month-to-month over the life of the project. Federal waterways agencies need this information to hold the project management's team accountable for mitigation and clean up actions necessary to protect and preserve the water quality of Warm Lake Creek and Warm Lake itself.</p>	WTR	Monitoring of Warm Lake and Warm Lake Creek has been added to the Water Resources Monitoring Plan.
Joel Drake	19251	11	<p>The level of risk for accidents and rollovers and the direct impact hazardous spills would have within this segment are self-evident when considering the natural terrain and configuration of the road. This section of road was constructed in the 1930's by the CCC, is not sufficiently crowned, and its turns are not sufficiently banked for modern, large truck configurations. This road segment traverses and crosses over the primary headwaters of Warm Lake at numerous points and has extreme grade (8+%) through many tight, low-speed switchbacks through a steep, narrow canyon where all waters collected by Warm Lake Creek flow directly into Warm Lake. Warm Lake Creek is the primary tributary to Warm Lake, providing over 90% of all flowing water to the lake. Note: Perpetua's recap of route miles within 100 feet of streams on SDEIS page ES-18 omits miles for this section of road, which if added (5-miles) would represent 43% of total miles (11.5-miles) within 100 feet of streams. The hazardous features and location of this road segment are clearly insufficient to ensure reliable, safe, contained daily transport of the tons of environmentally destructive toxic mining chemicals, liquid fuels / oils / lubricants / solvents, and mining ore proposed for shipment to and from the mining site year-round through extremely severe weather conditions, over the extended twenty-year period call for under the Plan. Table 4.6-1 on page 4-98 of the SDEIS identifies this 5-mile section as having 36% of total route miles affected by avalanche hazard and that 29% of total avalanche chutes within the entire route, further increasing risk for transit of liquid hazardous materials during winter months. Due to the unique, physical attributes of the canyon and the road, it is hard to comprehend how risks to water quality imposed by the Plan on this fragile, unprotected watershed can be sufficiently managed or mitigated by any reasonable level of investment in the reconstruction / reconfiguration of the road or use of existing spill containment technologies.</p>	WTR	The EIS text has been revised to describe the length of Warm Lake Road miles within 100 feet of Warm Lake Creek. Sections 3.16 and 4.16 describe road conditions and potential traffic limitations on this road.
Joel Drake	19251	13	<p>The Plan and SDEIS fail to demonstrate how water quality of Warm Lake can or will be protected and preserved. Again, even one spill of liquid hazardous materials into the Warm Lake drainage would be devastating with long-term impacts to the lake, its aquatic life, and its residents. Simply put, Risk introduced by the Plan and the SDEIS on this fragile, unprotected water resource is NOT ACCEPTABLE - the risk is simply TOO HIGH.</p>	WTR	SDEIS Sections 4.7.2.2 and 4.16.2.2 describe application of a Transportation Management Plan to minimize traffic incidents that potentially could result in spills and the responses to those spills. The area covered by the Transportation Management Plan includes Warm Lake Road.
Joel Drake	19251	15	<p>Acting within their authority and responsibilities called for under the CWA, the USACE / EPA / USFS are compelled to weigh this information and assess the great risk imposed on water quality in this pristine area by the Plan. The probability of and damaging impacts from spills are supported by information disclosed in the Plan itself. The SDEIS clearly cannot be accepted as drafted, and action to impose restrictions which sufficiently mitigate the risk to Warm Lake, or a decision to fully deny the Sec 402 and 404 permits sought by the Plan, must be made.</p>	WTR	No further response required. General in nature or position statement.
Alan Haslam (Vice President, Permitting, Perpetua	19325	88	<p>These discrete ranges out to several decimal places imply much more certainty and uniformity to water quality conditions than does, or will, exist. Please cite the source of these values to allow the reader to look more closely at the expected conditions.</p>	WTR	The presentation of predicted surface water analyte concentrations reflects the reporting in the Site Wide Water Chemistry report. This report is cited in Section 4.9. Citations are not utilized in the summary table.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	89	These general groupings by waterbody are not telling the full story for temperature. For example, in the EFSFSR, stream temperatures are near or below baseline by EOY12. At the TSF on Meadow Creek, temperatures are elevated compared to baseline, but in Meadow Creek downstream from East Fork Meadow Creek, temperatures substantially decrease relative to the baseline conditions during mine operations and closure/reclamation activities. Please refine these groupings to reflect these details.	WTR	Stream temperatures are described more fully in SDEIS Section 4.9.2.2. Table 2.8-1 provides a summation of the impacts predicted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	90	Baseline East Fork SFSR Summer Max Temperature is (13.7 to 17.4); 2021 MMP Summer Max Temperature is (13.8 to 18.3); all mercury units are ng/L. Please revise.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	643	"Cumulative effects associated with the SGP consider the range of existing and foreseeable activities and their potential effects with respect to surface water and groundwater quality." Please replace " existing and foreseeable " with " past, present and reasonably foreseeable "	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	644	" Gold Stallion Horse Heaven Project " - As noted in previous comments, please provide definition of RFFA and rationale for including this project, or remove it. 36 CFR 220.3 defines Reasonably foreseeable future actions as: Those Federal or non-Federal activities not yet undertaken, for which there are existing decisions, funding, or identified proposals. To our knowledge, the Stallion Gold Horse Heaven Project meets none of these criteria and therefore should be removed as an identified RFFA.	WTR	The Gold Stallion Horse Heaven Exploration Project has been publicly announced by its proponent and represents a reasonably foreseeable future action subject to a Forest Service decision.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	645	"The continuation of approved exploration activities at the SGP by Perpetua could cumulatively increase stream sediment levels resulting from surface disturbance and erosion." This should be characterized as a small potential cumulative impact as its scope and disturbance area is quite small. Same as was done below where it is stated that: "However, as described in the Golden Meadows Environmental Assessment, the exploration and subsequent reclamation activities would have only a small direct effect on wetland and riparian resources, as the disturbance footprint is confined to exploration holes."	WTR	The description of the size of the potential impact has been added to the EIS text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	646	"Compared to the No Action Alternative, the 2021 MMP would remove additional legacy mining materials and further reduce their impacts on water quality but would also contribute new sources of mine waste material to the East Fork SFSR drainage." If the ASAOC will reduce legacy mining materials AND the 2021 MMP would remove additional legacy mining materials, then the result would be a beneficial cumulative impact - the reduction of legacy mining materials. Then when combined with the fact that the 2021 MMP would reduce constituent levels of arsenic and antimony, then there would also be a beneficial cumulative impact on water quality. Please include this information.	WTR	The conclusion regarding water quality has been added to the EIS text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	647	"Compared to the No Action Alternative, the 2021 MMP would remove additional legacy mining materials and further reduce their impacts on water quality but would also contribute new sources of mine waste material to the East Fork SFSR drainage." New sources of mine waste in far more protective storage areas and technologies are not equivalent to legacy mining materials that were disposed without such storage protections. It is incorrect to imply that they are equivalent. Please revise to reflect this.	WTR	Acknowledgment of the design and regulatory controls on the new sources of mine waste material has been added to the EIS text.
Alan Haslam (Vice President, Permitting,	19325	648	"This would increase traffic on Johnson Creek Route during the mine operational and reclamation period, leading to potentially higher erosion rates from the road surface along the Johnson Creek Route.	WTR	Revision not accepted. The statement acknowledges the potential for road usage to affect erosion.

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Perpetua Resources Idaho, Inc.)			" Please acknowledge in this statement that the use of binders and road resurfacing could lead to a net decrease of dust and erosion along Johnson Cr route.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	30	" <i>Though the Burntlog Route includes a greater number of stream crossings, the Johnson Creek Route includes greater proximity to water resources.</i> " The other information in this paragraph and further sections of the SDEIS indicates that Johnson Creek Route has more stream crossings. Please reconcile.	WTR	The inconsistent text has been removed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	33	" <i>Compared to existing conditions, project operations are predicted to increase temperatures in West End Creek and the East Fork SFSR below the Yellow Pine pit area.</i> " Please include also a summary of instances where temperatures would be decreased: P.4-337: " <i>Water temperatures in the warmer summer and fall months in Meadow Creek downstream from East Fork Meadow Creek substantially decrease relative to the baseline conditions during mine operations and closure/reclamation activities (Mine Year 6 through Mine Year 18), though there is an increase at Mine Year 27, which then continues to decline until Mine Year 112.</i> " P.4-337: " <i>The East Fork SFSR between Meadow Creek and YPP experiences decreases in summer maximum water temperatures relative to baseline conditions. There is a slight increase in temperatures, still lower than baseline, after Mine Year 22 once the low-flow piping along the TSF is removed, and temperatures continue to decrease once the revegetation efforts take effect.</i> " P.4-357 to 4-358; Table 4.12-6: <i>All Temperature WCI changes are negligible or beneficial (i.e. temps remain relatively consistent or drop) for all stream segments across the life of the project.</i>	WTR	The Executive Summary text has been revised to also include instances of cooler surface water temperatures.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	34	"...while formation of the West End pit lake raises temperatures in West End Creek. " West End Creek is not a flow through feature of the West End pit. Please revise.	WTR	The text has been revised to "... while surface water diversion to mine the West End Pit raises temperatures in West End Creek."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	35	"...predicted temperatures return to existing conditions over a period of approximately 100 years. " Please clarify that this time period only applies to the stream reaches on the TSF. In the EFSFSR below YPP, stream temperatures are near or below baseline by EOY12. In Meadow Creek downstream from East Fork Meadow Creek, temperatures substantially decrease relative to the baseline conditions during mine operations and closure/reclamation activities. Temperatures in the EFSFSR above YPP are similar to or below baseline through out the project.	WTR	The clarification for the location where surface water temperatures return to existing conditions over a period of approximately 100 years has been added to the Executive Summary text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	36	" <i>Surface water quality also could be impacted by increased sedimentation associated with mining activities, access road construction and use, and the construction and maintenance of required utilities, with the greatest potential for in-stream impacts occurring during times of higher overland flow.</i> " This statement is contradicted by Chapter 4 conclusions (included below) which state the potential for increased sediment associated with roads outside the mine site, but likely reduction to sediment within the mine site thanks to restoration of Blowout Creek in EOY -1. Please revise this statement to be consistent with the effects analysis conclusions. P.4-341: " <i>With the application of sediment reduction BMP's and surface runoff minimizing design techniques, the impacts of sediment in surface water to fish are predicted to be measurable but not severe, limited to the mine area, and occur during the active mining period. However, the restoration efforts in the EFMC would result in a substantial decrease in sediment input into Meadow Creek and the East Fork SFSR.</i> "	WTR	The description of sediment reduction has been added to the Executive Summary.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	37	"However, the 2021 MMP would have direct permanent impacts on water quality, as it would contribute new sources of mine waste material to the East Fork SFSR drainage." Please replace " would " with " could " as planned active water management should prevent this.	WTR	Revision not accepted. The section pertains to surface water and groundwater which would be affected by modified groundwater conditions that would contribute to surface water conditions.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	38	"Despite analysis area improvements to water quality as a result of the removal and reclamation of legacy mine wastes, exceedances of the most stringent water quality standards (including both human health and aquatic life) for water column antimony, arsenic, copper, and mercury are anticipated." Please qualify this statement with information regarding where and how long exceedances may occur. This statement appears to contradict the statement on pg ES15 regarding As, Hg, and Sb concentrations being "comparable to or less than the existing conditions."	WTR	A description of these predicted concentrations being comparable to existing conditions has been added to the Executive Summary.
Ruth Lewinski	19378	5	2.0 Unsafe/Unpredictable Contaminant Values in Water, Air and Soil Quality In many of the courses that I have taken, calculations for Chemicals of Concern have had somewhat standardized calculations, with a range/ standard deviation in predictive values. The MMP 2021 Water Chemistry Tables Tables 4.9-12 through 15 and 18 through 20 show predicted concentrations of various metals and other chemicals in West End, Midnight, Hangar Flats, and Yellow Pine Pits and Pit Lakes extrapolated out to 100 or 112 mine years. Interestingly, most sites also are projected to have no remaining toxins after 'mine-year' 40. I question the accuracy of these calculations, especially as comments elsewhere in the SDEIS indicate that there will be continued levels of contamination. The current predominant toxins currently are arsenic, antimony, and mercury. I understand that these calculations are based on a modeled program in which the mine-pits no longer release water after the operation of the mine (year 40). However, in most standardized equations, there is an 'uncertainty variable' that accounts for errors, leaks, changes in time/operation and reaccumulation of contaminants in downstream areas. Often, there is also a model outlier that discloses potential events from a natural disaster, such as an earthquake or avalanche, which happen frequently in central Idaho. The Preferred Alternative evaluated by the Forest Service relies on SGP assertions that Perpetua will adhere to the 2021 MMP, with an assertion that it will operate at 29% capacity. Perpetua has a PTC to construct a facility capable of operating at 180,000 tons/day capacity and an amendable permit condition limiting production to 135,000 ton/day (75% of capacity), There are no provisions in the PTC permit conditions to limit SGP to the Forest Service assumed production level. IDEQ permit conditions allow production up to the 75% of capacity TRACT limit, and is amendable without federal oversight. COMMENT: Please provide calculations used for modeling outcomes in addition to modeling factors of uncertainty as well as projection of values at the pump facility operating at 75% vs 29%.	WTR	SDEIS Section 4.9.2.4 describes the model uncertainty associated with water quality predictions. Details on modeling calculations and the modeling input files are included in the Site Wide Water Chemistry Report (SRK 2021b) which was cited in the SDEIS and released in its entirety at the same time as the SDEIS. The Forest Service decision on the SGP is based on the Project as described in the 2021 MMP and reasonably foreseeable future conditions. Worst case scenarios are not required to be analyzed. Compliance with the Forest Service decision requires adherence to its approval conditions.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	137	H. Water rights and consumptive uses Perpetua has four existing water rights for the project, and has applied to the Idaho Department of Water Resources for four new water rights and four water right transfers. The largest water right that Perpetua seeks would divert up to 9.6 cubic feet per second (CFS) of surface or groundwater from the East Fork South Fork Salmon River (EFSFSR). Additionally, Perpetua proposes to divert rain and snowmelt to use for ore processing. Under Idaho law, a water right is not required if the water is diverted prior to entering a "natural channel" or "watercourse." That is the case even where the rain or snowmelt would otherwise flow into the EFSFSR or contribute to groundwater recharge. As disclosed in the SDEIS, there are at least two minimum instream water rights that exist downstream of the proposed project: an instream minimum flow water right held by the state of Idaho to preserve fish and wildlife, scenic and recreational values, and to protect and enhance water quality; and a federal-reserved Wild & Scenic water right on the main Salmon River. However, the impact to these surface water rights were not sufficiently analyzed in the SDEIS. First, with respect to the state's instream minimum flow rights, the SDEIS discussed the potentially impacted minimum stream flows are	WTR	Predicted surface water flows following the diversion of water associated with the Project are described in SDEIS Section 4.8.2.2. Most flow reductions occur in the Project area and decrease downstream due to the inflows from surface water and groundwater not affected by the Project. Flow reductions below the East Fork SFSR confluence with Johnson Creek are less than one percent of mean flows. As described in SDEIS Section 3.8.3, IDWR is responsible for the administration of water rights and for mitigation requirements. The Forest Service is engaged in the IDWR permitting process regarding the mitigation requirements.

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			<p>subordinate to domestic, commercial, municipal, and industrial (DCMI) uses, and up to 8.2 cfs of new non-DCMI uses. SDEIS at 4-174. The SDEIS also discloses that the maximum diversion rate under existing and proposed surface water rights is approximately 20 percent of the base flow in the EFSFSR. Id. However, this section does not provide any flow data for either the state or federal minimum streamflow water right, nor does it provide usage periods and affiliated diversion rates for the EFSFSR. All this information is necessary for a realistic analysis of whether the minimum streamflow water rights are likely to be negatively impacted and, if so, what the impact to their values will be.</p> <p>Second, the Forest Service has an obligation under the Wild & Scenic River Act to protect outstanding remarkable values (ORVs) of the Wild & Scenic stretch of the Salmon River. There is no analysis of the potential impact Perpetua's proposed water rights applications might have on the federal reserved water right, and thus impacts to the ORVs on this stretch of the Salmon River, specifically between the South Fork Salmon/Main Salmon confluence and Long Tom Bar. Perpetua's own water right application indicates that mitigation may be required to protect such values. But the SDEIS leaves the analysis to the Idaho Department of Water Resources to do despite the fact that the state law's subordination provisions subordinate the federal water right to industrial uses such as mining. Id. at 4-175.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	138	Third, the National Forest Management Act requires that the Forest Service manage rivers found eligible for designation to protect the values that provide the basis for their suitability for inclusion in the system. The South Fork Salmon River was identified as a suitable river. The SDEIS failed to analyze the potential impacts of the water right applications on the management and ultimately suitability for inclusion in the Wild & Rivers Act system.	WTR	The eligible rivers for inclusion in the Wild and Scenic Rivers Act system in the Project area are the South Fork Salmon River at the Warm Lake Road crossing, Burntlog Creek, and a 2.9 mile segment of Johnson Creek. The potential impacts to WSRs are discussed in Section 4.23.2. The Project is not expected to affect stream flow volumes or water rights in these streams.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	139	Fourth, there is no analysis of the impact to the minimum streamflow water rights due to the combination of the proposed water rights and the capture and diversion of contact water to ore processing that does not require a water right under state law, but that the SDEIS admits would otherwise flow into the EFSFSR. See id. at 4-150 ("Capture of contact water for consumptive use would reduce the volume of runoff and hence, stream flow..."). In fact, the SDEIS incorrectly assumes that the diversion, storage, and beneficial use of contact water requires a water rights permit from the Idaho Department of Water Resources (IDWR) prior to use. See SDEIS at 2-66 ("Any contact water beneficially used in the ore processing or for dust control or stored for more than 24 hours then treated and discharged would require water rights permitting through the IDWR prior to use."). IDWR, however, has recently determined--specifically in the context of Perpetua's water right application--that it does not have jurisdiction to review or issue a water right for the diversion of the contact water (or what IDWR has termed "diffuse water") because Perpetua has claimed that the contact water will not enter a "watercourse" prior to its diversion. See In the Matter of Application for Permit No. 77-14378 in the Name of Perpetua Resources Idaho, Inc., Interlocutory Order Deciding Questions of Law at pg. 12 (Aug. 19, 2022). IDWR's stated lack of jurisdiction to issue a water right permit for the diversion of contact water is regardless of whether or not the contact water would have, if not otherwise diverted, entered the EFSFSR or become part of groundwater resources. It is unclear, based on this false assumption, how much the SDEIS analysis relies on the state water right permitting process to ensure that the use of water resources are accounted for in the impacts analysis. This issue needs to be clarified in the SDEIS.	WTR	The predictive assessment of stream flows includes the effects of contact water collection as described in the water quantity conceptual model (SDEIS Figure 4.8-1). The assessment predicts resulting streamflows based on the diversion of contact water flow. Chapter 2 of the EIS has been updated to reflect the IDWR determination.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	140	<p>Finally, the SDEIS water rights section fails to mention the potential impact the water diversions might have on federally protected treaty fishing rights to the Nez Perce Tribe, rights that may not be protected or even considered through the process of securing water rights under the state's water right permitting process.</p> <p>Because of the missing information and incorrect assumptions, the SDEIS lacks a true analysis of the water rights, and thus does not and cannot propose mitigation to lessen potential impacts. Further analysis of the impacts to other water rights--including those held by the United States--and natural resources are the responsibility of the Forest Service and should be disclosed in this environmental analysis during the NEPA process.</p>	WTR	Potential effects of the Project on treaty fishing rights are described in SDEIS Section 4.24.2.2 in the Tribal Rights and Interests section.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	160	<p>1. Overall arsenic burden</p> <p>An estimated 616,000 - 1,856,000 tons (average - 95th percentile) of arsenic will be mined in the SDEIS preferred alternative. Approximately 36% of site-wide arsenic (102,560 - 827,600 tons) is in Development Rock (DR) and historic overburden, and 64% (309,580 - 1,028,400 tons) in ore. Practically all of this arsenic will be disposed of on-site or released to the immediate environment. Three principal concerns associated with this disposal are arsenic in air from mining dust, impacts to groundwater and meteoric waters in locations where DR is disposed, and in ores disposed in the Tailings Storage Facility (TSF) after gold extraction. Over time, all three sources will inevitably release arsenic to the local environment (Table SD3 in SDEIS).</p>	WTR	Effects of arsenic contained in mined materials with regard to air quality (Section 4.3.2.2), water quality (Section 4.9.2.2), and the tailings storage facility (Section 4.2.2.2) are discussed in the SDEIS. Predicted releases of arsenic and other constituents are included in those impact analyses.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	163	<p>4. Arsenic in development rock</p> <p>Under the SDEIS preferred alternative, the TSF embankment and buttress will contain an estimated 115,317-425,957 tons of arsenic, 117-378 tons of mercury, and 13,145-17,566 tons of antimony (average - 95th percentile). Approximately 50% of DR arsenic will be disposed of in surface repositories and 50% in pits. Pit-disposed COCs will be exposed to groundwater wet/dry and redox cycles, and will release COCs to groundwater. Although additional protections will be afforded from meteoric waters, YPP disposal of COCs increases by 25% with similar increases in discharge to groundwater expected. Potential releases of COCs from DR to groundwater and consequent downstream effects should be re-evaluated by the Forest Service in a revised SDEIS.</p>	WTR	SDEIS Section 4.9.2.2 describes the releases of arsenic and other constituents due to interaction of groundwater with development rock in Tables 4.9-13, 4.9-14, and 4.9-15. The effects of groundwater discharge to surface water are incorporated into the predicted surface water analyte concentrations presented in Tables 4.9-18 through 4.9-21 and Figures 4.9-22 through 4.9-25.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	183	<p>2. Impacts to water quality from ROW infrastructure</p> <p>Numerous components compose the ROW infrastructure, including line towers, access roads and associated gates, and concrete tower support pads. While much of the transmission line construction will take place using helicopters to set the towers and string line, a significant amount of "on-the-ground" work is still required to update or construct the proposed transmission lines associated with the SGP. Further, the modification or construction of either proposed access route will require the use of heavy equipment. Many of the proposed construction activities will take place near surface water bodies.</p> <p>Construction of the transmission lines will also contribute significant amounts of sediment to the waters of the United States, which will further impact fisheries habitat and directly impact sensitive fish eggs and reproductive success. This is particularly evident along the proposed new transmission line at the bottom of Riordan Creek where, based on our geologic analysis, there is a recent history of slope instability and sediment movement following wildfires. These potential impacts exponentially increase when one takes into consideration locations where transmission line rights-of-way intersect with access roads or routes associated with the SGP. Please see our Specialists comments on sedimentation and the impacts to the environment, which are included as an appendix to this document (Newberry 2022, Item #13, pp. 45-53) and are summarized in our Executive Summary.</p> <p>Of the 37 streams within the APE, 11 are listed by the Idaho Department of Environmental Quality as impaired, primarily for phosphorus contamination, sedimentation, and water temperature. While the transmission towers themselves will not contribute to sedimentation and the transmission lines and associated activities will not likely affect phosphorus levels, the proposed activities will likely affect stream temperatures through vegetation removal and management at the crossing locations. Further, construction or line installation/upgrade equipment will likely cross streams at line access roads, between towers along the transmission line ROW, but the impacts remain unaddressed in the SDEIS. We are particularly concerned about impacts to Burntlog Creek and Johnson Creek, which are eligible Wild and Scenic Rivers. The SDEIS provides no mitigation measures designed to limit these potential impacts.</p>	WTR	SDEIS Section 4.9.2.2 describes the effects of the SGP and associated infrastructure on water quality, including erosion and sedimentation. Design features and Forest Service requirements for infrastructure development limit the effects on water quality. Vegetation removal along power lines affects localized areas of streams where the infrastructure crosses a channel. This localized modification to the vegetation is not expected to materially alter stream flow temperature.
Bonnie Gestring (Northwest Program Director,	17634	192	The Forest Service/Perpetua should also anticipate and have contingency plans at the mine site and at the water treatment facility if power is interrupted for long periods of time.	WTR	<p>Contingency plans for power outages are part of the water treatment plant design and approval under the Idaho State IPDES permit.</p> <p>An associated mitigation measure has been added to Section 4.9.3 of the Final EIS.</p>

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Earthworks) and seven others					
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	200	<p>10. No current road sediment production data was gathered, and no project monitoring methods were described for road sediment generated during use by the mine</p> <p>Sediment generated from existing roads, from construction and reconstruction of roads, and use of roads has been a major problem for fish and fish habitat in granitic streams for over 50 years. Several methods to model this sediment exist and have been a mainstay in FS project documents. The SDEIS does not show the use of any modeled sediment for the reconstruction or use of Johnson Creek and Stibnite roads, or the use, reconstruction of 20 miles of the Burnt Log Road, and the new construction of 15-20 miles of the Burntlog Route. This should be used as a comparison between alternatives. No data collection over time was shown in the SDEIS. Sediment changes in the substrate were not modeled or shown in the SDEIS as a monitoring tool to show changes in the fish habitat especially of Burntlog Creek, Trapper Creek, Riordan Creek, Johnson Creek and the East Fork South Fork Salmon River.</p>	WTR	Design features and Forest Service requirements for road construction and maintenance would be incorporated into the Project resulting in sediment generation consistent with approved Forest Service roadways.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	204	<p>14. Burntlog Route and associated roads and ROWs will contribute significant sediment to waterways</p> <p>As is documented in the Fisheries, Recreation, Soils and Reclamation, and Water Quality Specialist Reports associated with the SGP and SDEIS, and further supported by our own analysis and comments (Newberry 2022), the Burntlog Route and the associated Thunder Mountain Connector Road will contribute a significant amount of sediment to Burntlog, Trapper, Trout, Cabin, and Riordan creeks. During the Burntlog Route construction, including bridge and culvert installations, the potential exists for increased runoff, erosion, and sedimentation resulting from localized vegetation removal and soil excavation which could result in increased sediment load in streams. Construction of and upgrades to access roads creates a potential for increased runoff, erosion, and sedimentation as a result of localized vegetation removal and excavation of soil, rock, and sediment, which could result in increased sediment load in streams. Expected permit stipulations from IDWR and IDEQ would ensure streambank vegetation would be protected except where its removal is necessary. New cut or fill slopes not protected with some form of stabilization measures would be seeded and planted with native vegetation to prevent erosion. Use of temporary erosion and sediment control BMPs also would be employed.</p> <p>We are concerned that Perpetua has not proposed any fish habitat or sediment monitoring stations near the Burntlog Route extension. Further, there are no erosion monitoring sites for the proposed Trapper Creek and Riordan Creek headwater stream crossings, nor for the Cabin/Trout (FR 467) road in Cabin Creek and Trout Creek when 1.6 miles of avalanche hazards were recognized (Fig. 3.2-6; p. 3-29) in the transmission line and OSV reconstruction with bull trout and Chinook salmon and steelhead habitat downstream of this road.</p> <p>We believe that without these critical monitoring site locations, neither the Forest Service nor Perpetua will be able to accurately assess the impacts to water quality and fisheries from sediment delivery. This becomes even more critical from the point the existing Burnt Log Road ends, and increases from that point towards the mine site. This is directly attributable to the region's erosive geology, which becomes more erosive nearer the SGP mine site. Further, the highly erosive local granite has yet to be tested and quantified for hardness, and is likely inappropriate for use during Burntlog or other road/route construction as it would contribute to sediment rather than contribute to sediment or dust control when placed on roadbeds.</p>	WTR	Sediment monitoring is required in the Project area as part of an approved Water Resources Monitoring Plan.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	217	<p>In addition, the Cabin Creek route includes seven stream crossings. OSV use has the potential for releasing burned and unburned fuel and lubricants into the environment, which can result in adverse impacts to water quality and alter snowmelt patterns. Research has shown that snowpack concentrations of ammonium, sulfate, toluene, xylene, and benzene are positively correlated with snowmobile traffic. When the snow melts, these pollutants, which are stored in the snowpack throughout the winter, are released in a concentrated pulse.</p>	WTR	<p>OSV usage has the potential to release fuel and lubricants to snowpack. However, concentrations of these constituents rapidly decrease with distance from roadways as reported by the USGS in their 1999 study at Yellowstone National Park.</p> <p>The EIS has been revised to describe this potential effect and its OSV route-related spatial nature.</p>

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
David Chambers	17634-A	8	<p>2.4.7.13 Post Closure Water Treatment Post-closure water treatment, if required, typically doubles the amount of financial assurance required for a mine. For the Stibnite Project, the requirement for post-closure water treatment depend on two potential sources of contaminated water; (1) pit lake water in the West End Pit could exceed discharge water quality standards (SDEIS 2022, Section 2.4.7.5); and, (2) consolidation water from the tailings, and any ongoing seepage from the waste rock buttress (SDEIS 2022, Section 2.4.7.6).</p> <p>According to the SDEIS, water treatment will no longer be required after Mine Year 40 (SDEIS 2022, Section 2.4.7.6). In order for this to occur, water treatment would no longer be required for the West End Pit, and the seepage from the tailings consolidation and from any buttress seepage would need to be de minimis.</p> <p>The estimate for consolidation of the tailings, along with the cessation of seepage, at Mine Year 40 appears to come from the Tierra Group (2020). This reviewer is familiar with one lined mine waste impoundment, the New World waste facility in Montana, where waste consolidation water has continued to accumulate since the impoundment was sealed, necessitating the annual pumping and disposal of accumulating water. This is probably due to liner leakage, but a definitive source of the accumulating water at New World has not been identified. All liners leak – it’s just a matter of how much.</p> <p>The Stibnite TSF Buttress contains a large amount of non-potentially acid generating material, and some potentially acid generating material (SDEIS 2022, p. 4-191). All of this material can leach antimony, arsenic, cadmium, chromium, copper, fluoride, manganese, mercury, nickel, lead, selenium, silver, sulfate, thallium, zinc, and total dissolved solids above surface water quality standards (SDEIS 2022, Table 4.9-3). The predictions are that the seepage will exceed groundwater quality standards for antimony and arsenic (SDEIS 2022, Table 4.9-4).</p> <p>Low Grade Ore stockpiles could be left at mine closure. The seepage from any residual log grade ore would be worse than from the other waste in the buttress. Water quality modeling assumed the Low-Grade Ore would be processed prior to mine closure, but there is no guarantee this will happen.</p> <p>The waste rock in the tailings dam buttress will have a liner on top, but no liner on the sides or bottom. A top liner is a good idea, but it does not guarantee de minimis seepage after the initial drain down of the waste. It is quite likely that seepage from the waste rock could exceed the 5% infiltration of incident water assumed in the SDEIS. Any seepage will contain high contaminant levels of antimony and arsenic.</p> <p>The actual infiltration rate and contamination loads can only be established by actually measuring seepage rate and contaminant levels post-closure, once all reclamation activities are complete.</p> <p>The assumption for the SDEIS appears to be that there will be no seepage from the tailings after initial seepage drain down. In the SDEIS, it is noted; “From Mine Year 41 onwards, it is expected that consolidation would be complete and pore water drainage from the tailings would cease (Brown and Caldwell 2021b).” (p. 4-207)</p> <p>The interpretation of little to no post-closure seepage is supported by the data presented in Figure 4.9-3 Tailings Storage Facility Buttress Seepage Volume (SDEIS 2022), which shows the pop-out seepage and toe seepage going to zero after the liner is installed. In Figure 4.9-6 Tailings Storage Facility Seepage Volume (SDEIS 2022), cover infiltration and consolidation water are essentially zero after Mine Year 40.</p> <p>Until an actual post-closure seepage rate can be established for both tailings drain down and buttress seepage, it is not reasonable from a public-liability perspective to assume seepage from the waste rock in the buttress will be low enough, and/or contain only low levels of contaminants, that there is no possibility that long-term treatment might be required. Provision for water treatment in perpetuity should be assumed until it can be demonstrated by post closure monitoring that water treatment will not be required beyond Mine Year 40.</p> <p>If water treatment is needed for the West End Pit water, neither the need for, or the length of time required, has been established in the SDEIS. However, since the potential for Wend End water treatment</p>	WTR	<p>Uncertainties regarding the long-term water quality predictions are described in SDEIS Section 4.9.2.4 with mitigation measures to address those uncertainties described in SDEIS Section 4.9.3.</p> <p>The assumptions utilized for reclamation cost estimates and the establishment of closure bond amounts are determined by the Forest Service in an administrative process that recognizes potential uncertainties and the need for monitoring and updating in response to observed changes in facilities and facility closure.</p>

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
			<p>has been identified, financial provision for West End Pit water treatment should be provided in the postclosure financial assurance.</p> <p>The point to take from these concerns for the need for potential long-term water treatment is that there is significant uncertainty in the potential requirement for water treatment. Only empirical data collected post closure will confirm or deny this assumption. Geochemical and hydrological predictions covering post closure are not accurate enough on which to base major decisions.</p>		
Samuel Penney (Chairman)	19396	15	<p>Clean water is vital for the Tribe's cultural, spiritual, and economic uses. The Tribe has a vested interest in protecting water resources both on the Nez Perce Reservation and in its treaty territory throughout the Clearwater, Snake, Salmon, and Columbia river basins. As part of the foundation of Nez Perce history, the Earth (wéet'es) itself was pulled out of the water (kúus) by "the old man" (qíwn), as the first step in the creation process and has significant spiritual importance to Tribal members. Clean water is materially essential in contemporary tribal life as well, providing a home for the fish that are central to tribal cultural identity, and also in its role as important healing medicine that is consumed at the beginning of traditional dinners and utilized in the sweathouse.</p> <p>The Nez Perce have always revered the purest, direct sources of water in their lands, with seeps, springs, and cold mountain streams being very important. The United States has a general trust responsibility to protect tribal lands, assets, and resources and these include the water that flows over and through tribal lands and the natural resources that depend on that water.</p>	WTR	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	34	<p>The existing conditions section does not characterize and describe the existing geochemical conditions or provide information as to the present contributions of and impacts from existing sources and/or discharges of contamination on baseline water quality within and adjacent to the Project area. In addition to the Yellow Pine/Pit Lake there are five adits or tunnels, three sources of waste rock, three sources of tailings or spent heap leach piles, and a mill and smelter site that the U.S. Environmental Protection Agency ("EPA") has identified as being sources of contamination at the Project site.</p> <ul style="list-style-type: none"> In DEIS Section 3 Affected Environment, the Yellow Pine Pit Lake is identified 79 times. However, it is only identified in terms of its impact as a barrier on existing fisheries, with the following exceptions. Section 3.2.3.3 Legacy Mine Features identifies it as a legacy mine feature. Section 3.5.3.3.4 Soils and Reclamation Materials identifies it as a past mine activity where little or no soil cover is present. Section 3.8 Surface Water and Groundwater Quantity identify it as a surface water feature, and it is identified in Section 3.11 Wetlands and Riparian Resources. Outside of Section 3.12 Fish Resources and Fish Habitat, the only other mention is in Section 3.18 Public Health and Safety where it is mentioned as part of a past public health assessment. 	WTR	<p>SDEIS Section 4.9.4.5 describes the geochemical conditions of the existing Yellow Pine pit lake.</p> <p>The historical adits are depicted on Figure 3.9-6 with their geochemical implications captured by the surface water sampling and characterization described in SDEIS Section 3.9.4.3 and Figures 3.9-7 through 3.9-10.</p>
Samuel Penney (Chairman)	19396	35	<ul style="list-style-type: none"> The EPA and Tribe have identified five different adits and/or tunnels that are sources of contamination at the Project site: (1) Bailey Tunnel; (2) Bonanza Adit; (3) DMEA Adit (includes DMEA Waste Rock Dump); (4) Meadow Creek Mine Adit; and (5) Monday Tunnel/North Tunnel/Cinnabar Tunnel. SDEIS Section 3.2.4.3 Legacy Mine Features only identifies the Bailey Tunnel and Monday Tunnel as legacy mine features. The DEIS does not characterize and describe the existing geochemical conditions or provide information as to the present contributions of and impacts from existing contamination from the adits and tunnels that have been identified at the Project that impact existing baseline water quality. 	WTR	<p>The five adits were incorporated into the baseline characterization of surface water conditions.</p> <p>The historical adits are depicted on Figure 3.9-6 with their geochemical implications captured by the surface water sampling and characterization described in SDEIS Section 3.9.4.3 and Figures 3.9-7 through 3.9-10.</p>
Samuel Penney (Chairman)	19396	36	<ul style="list-style-type: none"> EPA has identified the following waste rock piles as sources of contamination at the Project site: (1) NW Bradley Dumps & Hennessy Creek; (2) Bradley Mancamp Dumps; and (3) Bradley Northeast Oxide Dumps. SDEIS Section 3.2.4.3 identifies the Bradley Dumps as legacy mine features. SDEIS Section 3.7.4.3 identifies a portion of the Bradley dumps as part of the removal actions and Section 3.9.4.3 identifies the Bradley dumps as having a geochemical influence. The SDEIS does not characterize and describe the existing geochemical conditions or provide information as to the present contributions of and impacts from existing contamination from the waste rock piles that have been identified at the Project that impact existing baseline water quality. 	WTR	<p>The historical surface facilities were incorporated into the baseline characterization of surface water conditions.</p> <p>The historical adits are depicted on Figure 3.9-6 with their geochemical implications captured by the surface water sampling and characterization described in SDEIS Section 3.9.4.3 and Figures 3.9-7 through 3.9-10.</p>

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Samuel Penney (Chairman)	19396	37	<ul style="list-style-type: none"> EPA has identified the following tailings piles as sources of contamination at the Project site: (1) Keyway Dam/Keyway Marsh; (2) spent ore disposal area and Bradley Tailings; and (3) Hangar Flats (Pioneer) Tailings Pile and Hecla Heap Leach. The Keyway Marsh is identified as a seep in Table 3.9-7. SDEIS Section 3.9.4.3 Geochemical Influence of Historical Mine Wastes notes dissolved antimony concentrations in Meadow Creek increase from an average of 0.32 µg/L at YP-T-33 above the spent ore disposal area (Figure 3.9-7) to 6.1 µg/L at YP-T-27 below Keyway Marsh. The water quality of nearby seeps associated with the Bradley tailings, spent ore disposal area, and Keyway Dam also was elevated in metals, an indication that historical mining features are impacting the alluvial and bedrock aquifers. The spent ore disposal area and Bradley Tailings are also mentioned elsewhere in Section 3. The Hangar Flats Tailings are not identified in Section 3. The Hecla Heap Leach is identified in Sections 3.2.4.7, 3.9.4.2 and 3.18.4.1 as a historic mine feature. <p>The existing conditions section does not characterize and describe the existing geochemical conditions or provide information as to the present contributions of and impacts from existing contamination from the tailings and heap leach piles that have been identified at the Project that impact existing baseline water quality.</p>	WTR	<p>Tailings in the Hangar Flats area are identified on Figure 3.9-6.</p> <p>SDEIS Section 4.9.4.5 describes the geochemical conditions of the existing Yellow Pine pit lake.</p> <p>The historical adits are depicted on Figure 3.9-6 with their geochemical implications captured by the surface water sampling and characterization described in SDEIS Section 3.9.4.3 and Figures 3.9-7 through 3.9-10.</p>
Samuel Penney (Chairman)	19396	38	<ul style="list-style-type: none"> EPA identified the Meadow Creek Mill and Smelter as a source of contamination. The SDEIS identifies mill and smelter sites that have been remediated in the past but not specifically the Meadow Creek Mill and Smelter. The existing conditions section does not characterize and describe the existing geochemical conditions or provide information as to the present contributions of and impacts from existing contamination from the Meadow Creek Mill and Smelter have been identified at the Project that impact existing background water quality. 	WTR	<p>Surface water sampling locations used to characterize surface water quality affects associated with historical mined materials including the mill and smelter are shown in the inset on Figure 3.9-7. Further details regarding these samples and analyses are included in the referenced Surface Water Quality Baseline Study (HDR 2017f).</p>
Samuel Penney (Chairman)	19396	45	<p>2.4.5.10 Surface Water and Groundwater Management</p> <p>In Table 2.4-10, The total estimated gross fresh and recycled water usage being 4,431 gallons per minute (“gpm”), with “ore processing facility operations representing approximately 97 percent of water use associated with the SGP.”92 A water right of 9.6 cubic feet per second (“cfs”) (4,308 gpm) was also applied for, yet the SDEIS states that the majority of the water needed for ore processing would be recycled from the TSF. If that is the case, please explain why the water right application amount is so high?</p>	WTR	<p>Diversion of water for consumptive use by the process is required to build sufficient water inventory in the mill process and tailings storage facility to allow subsequent water recycling. Thereafter, ore processing would require make-up water to maintain its water balance by replacing water lost to evaporation during processing and from the tailings storage facility plus water entrained within the tailings material stored in the tailings storage facility.</p>
Samuel Penney (Chairman)	19396	85	<p>3.8 Surface Water and Groundwater Quantity</p> <p>SDEIS Section 3.8 summarizes the existing conditions of groundwater and surface water hydrology at the SGP and surrounding areas. As noted in the SDEIS, the SGP and surrounding area “consists of mountainous terrain dissected by typically narrow valleys with steep slopes” and “[t]he hydrology of the analysis area is strongly influenced by seasonal patterns of snow accumulation during the winter, and snowmelt in the spring and early summer.” Despite the apparent water-scarcity of the area, the SGP will require large amounts of water for ore processing, dust control, and other uses to support mining operations. Approximately 2.2 pounds of gold requires, on average, 70,000 gallons of water to produce.</p>	WTR	<p>Comment noted. Statement of position. No response required.</p>
Samuel Penney (Chairman)	19396	86	<p>The SDEIS notes that Perpetua’s existing water rights are valid, however, “the specific points of diversion, place of use, and beneficial use [do] not reflect planned SGP activities and [will] need to be adjusted through the transfer process, and through filing additional applications for permit.” The SDEIS points out that it is the responsibility of Idaho Department of Water Resources (“IDWR”) to “ensure enough water is available for the water right and that the oldest (senior) water rights are satisfied first.” Per IDAPA Code 37.03.08 Water Appropriation Rules, IDWR relies on protestants to “bear the initial burden of coming forward with evidence for those factors relevant to [the public interest criteria described in]...Section 42-203A(5), Idaho Code....” Although the SDEIS notes that Perpetua submitted additional water right applications for permit in December 2021, the SDEIS fails to disclose that several administrative protests concerning negative impacts to the public interest criteria have been filed with IDWR. The Tribe asks that the number and nature of protests filed with IDWR regarding Perpetua’s pending water rights be formally added to the record. The Forest should not proceed with an FEIS while the necessary water right applications (and numerous other environmental permits) are pending.</p>	WTR	<p>Protests filed with IDWR and their resolution is outside the scope of the EIS as they are part of an independent permitting process managed by IDWR.</p>

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Samuel Penney (Chairman)	19396	87	<p>3.9 Surface Water and Groundwater Quality</p> <p>The SDEIS states that “[t]he IDEQ is responsible for coordinating and administering groundwater and surface water downgradient of the mining activity must meet the water quality standards? quality protection programs in the state of Idaho. IDEQ also is responsible for establishing a point of compliance location, if applied for by a mine operator and pursuant to the Idaho Ground Water Quality Rule... where groundwater and surface water downgradient of mining activity must meet established water quality standards. If a point of compliance is not applied for, the mine operator must meet the ground water quality standards in ground water both within and beyond the mining area.” Where are the locations where groundwater and surface water downgradient of the mining activity must meet the water quality standards?</p>	WTR	<p>The locations where groundwater and surface water downgradient of the mining activity must meet water quality standards would be determined by IDEQ as part of its permitting processes.</p> <p>The EIS examines predicted groundwater and surface water chemistry compared to existing conditions and water quality standards at a number of locations as described in SDEIS 4.9.2.2. That examination describes potential Project impacts to groundwater and surface water quality and develops mitigation measures for those effects but does not establish points of compliance which are within IDEQ's purview.</p>
Samuel Penney (Chairman)	19396	88	<p>Table 3.9-6a shows more analytes with exceedances than are mentioned in the text. In addition, there are several analytes with the non-detect levels greater than the Strictest Potentially Applicable Standards (ex. Cd, Cu, Pb). Please acknowledge these and discuss any ramifications.</p>	WTR	<p>The text has been revised to note constituents from Table 3.9-6a with concentrations greater than standards and acknowledges the limitations of non-detect levels.</p>
Samuel Penney (Chairman)	19396	89	<p>Section 3.9.4.2, Tailings Decant Solution Chemistry subsection, page 3-158.</p> <p>Only five samples of synthetic tailings materials appear to have been analyzed. Based on Table 3.9-7 results are shown for samples from five different areas. Does this mean only one sample per area was analyzed? This does not seem to be a sufficient number to fully characterize the decant solution, as results would feed into the water treatment plant design and groundwater chemistry under the TSF.</p>	WTR	<p>There would be five types of ore mined and processed during the Project lifetime, and hence, would produce tailings with decant solution. The number of samples is based on the number of ore types present. Most constituents analyzed are present in the decant solution chemistry at concentrations greater than water quality standards making the results informative for water treatment plant designs which need to account for a variety of analytes and analyte concentrations.</p>
Samuel Penney (Chairman)	19396	90	<p>Section 3.9.4.2, Humidity Cell Test Results subsection, page 3-166.</p> <ul style="list-style-type: none"> • Explain the purpose of this test. What are the Phase 1 and Phase 2 HCT cells? • The SDEIS on page 3-166 and Table 3.9-8 have some conflicting information. The table lists other constituents that exceed the strictest potentially applicable water quality criteria that are not mentioned in the text or incorrectly listed as not exceeding (e.g., Pb, Ni, Se, Ag, Th, F). Were all the data used for all the analytes when modeling source terms? 	WTR	<p>Humidity cell tests are laboratory tests designed to simulate oxidation reactions and metal leaching from mined materials. An initial phase of tests (Phase 1) was conducted based on the understanding of the distribution of rock types in mined materials at the conception of the testing plan. Phase 2 was added to supplement the Phase 1 testing to provide additional information on rock types present in the mine design but not tested as part of Phase 1.</p> <p>The text has been revised for consistency.</p> <p>SDEIS Section 4.9.1.1 describes the development of source terms from the humidity cell test data. In brief, all the tests were utilized to develop source terms based on their steady-state leachate results. The implications for excluding first-flush humidity cell leachate data are described in SDEIS Section 4.9.2.4.</p>
Samuel Penney (Chairman)	19396	91	<p>In the SDEIS, copper analysis criteria was derived using the Biotic Ligand Model per guidance contained in IDEQ's Implementation Guidance for the Idaho Copper Criteria for Aquatic Life (2017). A conservative chronic copper analysis criteria was estimated by applying the lowest of the 10th percentile chronic criteria based on regional classifications for the Salmon River basin, Idaho Batholith, and third order streams, which led to an applied acute criterion of 2.4 µg/L.</p> <p>However, the SDEIS should have also applied the site class + river/stream metric, where rivers are defined as any water with stream order 2:5 and streams are defined as any water with stream order <5. Using that metric, the conservative acute and chronic copper criteria estimates would be 1.0 and 0.6 µg/L, respectively, based on a Mountain Stream site class designation.</p>	WTR	<p>SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.</p>
Samuel Penney (Chairman)	19396	92	<p>The SDEIS relies on an arsenic water quality criterion of 10 µg/L. In September of 2016, EPA disapproved Idaho's human health criteria of 10 µg/L for both consumption of fish only and consumption of fish and water. EPA entered into a consent decree with Northwest Environmental Advocates that requires EPA to either approve of a new criterion submission by Idaho or to propose and finalize federal criteria for Idaho in the absence of EPA approval of a criterion adopted by Idaho. It is not appropriate to use a disapproved criterion for this assessment that has since been extended twice by Idaho for a period of six years and has yet to be approved of by EPA. Instead, the SDEIS should utilize EPA's National Recommended Water Quality Criteria for Human Health for the consumption of Water + Organism of 0.018 µg/L.</p>	WTR	<p>SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.</p>

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Samuel Penney (Chairman)	19396	93	The SDEIS lists Aluminum as a constituent of concern. There are no promulgated standards for Aluminum in Idaho, and in the absence of a state water quality standard, the authors of the SDEIS refer to the an analysis criterion for Aluminum of 0.38 mg/L, based on the EPA "Recommended Aquatic Life Criteria". Rather than a static number, EPA's Recommended Aquatic Life Criteria for Aluminum in Freshwater for the Protection of Aquatic Life is dependent upon the water chemistry parameters found at a particular site. These criteria use Multiple Linear Regression ("MLR") models to normalize the toxicity data and provide a range of acceptable values. The criteria are calculated based on a site's pH, total hardness, and DOC. The EPA has a tool called the Aluminum Criteria Calculator that should be used to determine both acute and chronic criteria for sites throughout the Stibnite project area. It is unclear if this methodology is being used to determine the analysis criteria. Regardless, the strictest applicable surface water quality standard (0.05 mg/L) should be used as the analysis criterion.	WTR	SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.
Samuel Penney (Chairman)	19396	94	The SDEIS uses 0.0015 mg/L as the strictest standard to be applied for selenium,166 and cites EPA's Freshwater Aquatic Life Criteria. However, 0.0015 mg/L is only the chronic criterion for lentic waters. EPA recommends a multi-media criterion consisting of four elements, two of which are based on the concentration of selenium in fish tissue (eggs and ovaries, and whole-body or muscle) and two elements are based on the concentration of selenium in the water-column (two 30-day chronic values and an intermittent value). EPA recommends that when implementing the criterion, the fish tissue elements take precedence over the water column elements.	WTR	SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.
Samuel Penney (Chairman)	19396	95	The SDEIS uses EPA's Drinking Water MCL of 2,000 µg/L for the analysis of barium. Instead, the SDEIS should utilize EPA's National Recommended Water Quality Criteria for Human Health for the consumption of Water + Organism of 1,000 µg/L.	WTR	SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.
Samuel Penney (Chairman)	19396	96	The SDEIS uses the narrative, "No numeric human health standard has been established for beryllium. However, permit authorities will address beryllium in NPDES permit actions using the narrative criteria for toxics in Section 200 of IDAPA 58.01.02, which states: Surface waters of the state shall be free from toxic substances in concentrations that impair designated beneficial uses. These substances do not include suspended sediment produced as a result of nonpoint source activities." Instead, the SDEIS should utilize EPA's Drinking Water MCL of 4 µg/L as the surface water quality standard for beryllium.	WTR	SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.
Samuel Penney (Chairman)	19396	97	The SDEIS uses IDAPA 58.01.02 - CCC (chronic) criterion for the analysis of cadmium. This calculated criterion is dependent upon hardness and is appropriate to use so long as the criterion is less than EPA's Drinking Water MCL of 5 µg/L. If the calculated criterion for a data point exceeds 5 µg/L, then EPA's Drinking Water MCL for cadmium becomes the most stringent criterion and should be used for analysis.	WTR	SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.
Samuel Penney (Chairman)	19396	98	The SDEIS uses the IDAPA 58.01.02 - CCC (chronic) criterion for the analysis of lead. This calculated criterion is dependent upon hardness and is appropriate to use so long as the criterion is less than EPA's Drinking Water MCL of 15 µg/L. If the calculated criterion for a data point exceeds 15 µg/L, then EPA's Drinking Water MCL for lead becomes the most stringent criterion and should be used for analysis.	WTR	SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.
Samuel Penney (Chairman)	19396	99	The SDEIS uses the IDAPA 58.01.02 - CCC (chronic) criterion for the analysis of nickel. This calculated criterion is dependent upon hardness and is appropriate to use so long as the criterion is less than EPA's Drinking Water MCL of 58 µg/L. If the calculated criterion for a data point exceeds 58 µg/L, the EPA' s Drinking Water MCL for nickel becomes the most stringent criterion and should be used for analysis.	WTR	SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.
Samuel Penney (Chairman)	19396	100	The SDEIS uses the IDAPA 58.01.02 criterion range of 6.5-9.0 for the analysis of pH. Instead, the SDEIS should utilize EPA's Secondary Drinking Water Standard of 6.5-8.5 µg/L.	WTR	SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.
Samuel Penney (Chairman)	19396	101	The SDEIS uses the IDAPA 58.01.02 - CMC (acute) criterion for the analysis of silver. This calculated criterion is dependent upon hardness and is appropriate to use so long as the criterion is less than EPA's National Recommended Water Quality Criteria for Aquatic Life - CMC (acute) of 3.2 µg/L. If the calculated criterion for a data point exceeds 3.2 µg/L, then EPA's National Recommended Water Quality	WTR	SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.

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			Criteria for Aquatic Life - CMC (acute) for silver becomes the most stringent criterion and should be used for analysis.		
Samuel Penney (Chairman)	19396	102	The SDEIS uses the IDAPA 58.01.02 - CCC (chronic) criterion for the analysis of zinc. This calculated criterion is dependent upon hardness and is appropriate to use so long as the criterion is less than EPA's National Recommended Water Quality Criteria for Aquatic Life of 120 µg/L. If the calculated criterion for a data point exceeds 120 µg/L, then EPA's National Recommended Water Quality Criteria for Aquatic Life for zinc becomes the most stringent criterion and should be used for analysis.	WTR	SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.
Samuel Penney (Chairman)	19396	103	Mercury. While water column methylmercury concentration predictions are important to elucidate the long-term impacts of the proposed mining at the site, the applicable water quality standard applies only to fish tissue on the basis of human consumption. Many tribal members continue to exercise their treaty reserved rights to fish for salmon and steelhead in the EFSFSR downstream of the proposed mine site. In order to ensure the proposed action will not negatively affect tribal health or impact tribal treaty rights in the EFSFSR, fish tissue samples need to be analyzed throughout the site and the potential tribal health impacts need to be addressed in the SDEIS.	WTR	The migratory nature of fish in the system makes fish tissue monitoring indeterminate as to the source of constituents identified in fish tissue. Therefore, monitoring on benthic invertebrates would be the preferred monitoring approach.
Samuel Penney (Chairman)	19396	104	Methylmercury impacts have been detected hundreds of miles downstream of mine point sources. Treaty-reserved rights to fish at usual and accustomed places are already impacted by methylmercury issues in the Snake River downstream of the Hells Canyon Complex, leading to the proposed Total Maximum Daily Load for Hg currently being negotiated between Idaho, Oregon, and EPA. Due to bioaccumulation of mercury, sturgeon harvest advisories from the Tribe's Fishery Commission have been in place since 2015 for sturgeon over three feet total length. Any increase in total mercury discharge from the Project may result in increased methylmercury concentrations in the mainstem Salmon and Snake Rivers, and would continue to threaten tribal members ability to harvest and consume sturgeon within the 1967 Indian Claims Commission aboriginal territory for the Nez Perce Tribe.	WTR	Predicted total mercury concentrations in surface waters are described in SDEIS Tables 4.9-18 through 4.9-21. Predicted concentrations are comparable to existing site conditions and below surface water quality criteria. Site methylmercury concentrations are also estimated based on conservative estimates for methylation rates on-site. The Project is not expected to affect methylation rates downstream, and those rates have not been quantified as part of the EIS analysis scope. However, methylation rates in the Salmon River watershed, typically between 0.37 and 1 percent (Fleck et al. 2017), are not expected to be modified by Project effects (see Section 4.9.2.2).
Samuel Penney (Chairman)	19396	105	The SDEIS fails to address potential nitrogen contamination resulting from the proposed actions. Potential sources of nitrogen components in the proposed actions include leftover residues from explosives, precipitate from cyanide ore processing, domestic wastewater effluent, and increased sediment pollution. Since all these potential sources are included in the proposed Project, the following nitrogen components should be addressed specifically in the SDEIS and in the Sanitary Wastewater Individual Permit Application. The Sanitary Wastewater Idaho Pollutant Discharge Elimination System Program ("IPDES") permit or permit application has yet to be shared for review.	WTR	SDEIS Section 4.9.2.2 describes predicted nitrate and ammonia concentrations resulting from the Project. The IPDES permit for wastewater discharge is still under consideration by IDEQ. The EIS analysis is based on operation of a wastewater treatment under IPDES program requirements on discharges.
Samuel Penney (Chairman)	19396	106	Ammonia is highly toxic to aquatic organisms, particularly to salmonids and mussels. In high enough concentrations, ammonia can build up in the internal tissues and blood of aquatic organisms, often leading to death. Ammonia can also absorb to several metal ions and be deposited into sediments which can be toxic to benthic or surface aquatic biota. Potential sources of ammonia in the proposed action include residue from Ammonium Nitrate Fuel Oil, residual cyanide from the cyanide neutralization facility where oxidized cyanide forms carbonate and ammonia, and waste effluent from the housing facility. Water quality criteria have been established by EPA and are dependent upon pH and water temperature. Individual criteria should be calculated for each data point collected at each monitoring location. Due to its close association with mining operations and its high toxicity, especially to salmonids, current conditions must be characterized and the potential impacts should be included in the SDEIS. Ammonia criteria should also be addressed in the Sanitary Wastewater IPDES permit that has yet to be shared for review. The ammonia water quality standard value of 2.1 mg/L is not explained in the SDEIS nor is it the strictest potentially applied water quality standard.	WTR	SDEIS Section 4.9.1.5 describes the predicted ammonia concentrations associated with the Project. The 2.1 mg/l standard is based on the Idaho Surface Water Criteria for Cold Water Biota for chronic exposure using the pH and temperature-dependent calculation found at Http://www.deq.idaho.gov/water-quality/surface-water/water-quality-criteria/ .
Samuel Penney (Chairman)	19396	107	Nitrate is relatively harmless in drinking water at low concentrations, but can contribute to eutrophication in streams and rivers. However, nitrate can go through partial denitrification by bacteria to form the less stable and more toxic nitrite ion. In addition, no surface water quality criterion was	WTR	Conditions for eutrophication and reduction from nitrate to nitrite are not anticipated under predicted site conditions.

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			<p>assigned for nitrate+nitrite but the SDEIS uses the groundwater quality standard value of 10 mg/L for the surface water assessment and the Target Post-Water Treatment Plant Effluent Analyte Treatment Objective standard. EPA established ambient water quality criteria recommendations for nitrate+nitrite in the western forested mountains guidance (Ecoregion II, Level III ecoregion 15). The guidance recommends a nitrate+nitrite water quality criterion of 0.02 mg/L. However, detection limits reported for nitrate+nitrite in the Surface Water Quality Baseline Study were 0.05 mg/L, which is higher than the recommended water quality criterion so additional data should be collected at the site and analyzed with a lower detection limit in order to accurately characterize current site conditions.</p> <p>Total Kjeldahl nitrogen is the sum of organic nitrogen and ammonia nitrogen and is often monitored in wastewater effluent and its receiving body. Kjeldahl nitrogen was monitored in the current conditions analysis but was not included in the site-wide water chemistry modeling report. In addition, no water quality criterion was assigned for Kjeldahl nitrogen in the Surface Water Quality Baseline Study; EPA established ambient water quality criteria recommendations for Kjeldahl nitrogen in the western forested mountains guidance (Ecoregion II, Level III ecoregion 15). The guidance recommends a Kjeldahl nitrogen water quality criterion of 0.08 mg/L. Since potential sources of Kjeldahl nitrogen are included in the proposed action, Kjeldahl nitrogen should be reanalyzed against this criterion and included in the SDEIS and IPDES permits, or supporting documents.</p>		<p>There are no adopted nitrate+nitrite standards aside from the drinking water criteria. There are also no adopted standards for Total Kjeldahl nitrogen.</p> <p>The SDEIS Section 4.9.2.2 describes the predicted nitrogen compounds associated with Project activities (i.e., nitrate and ammonia).</p>
Samuel Penney (Chairman)	19396	108	<p>Total nitrogen is the sum of Kjeldahl nitrogen and nitrate+nitrite and is often monitored in wastewater effluent and its receiving body, and is often also correlated with sediment erosion.</p> <p>Total nitrogen was monitored in the current conditions analysis but was not included in the sitewide water chemistry modeling report. Why was it omitted? Also, no water quality criterion was assigned for total nitrogen in the Surface Water Quality Baseline Study; EPA established ambient water quality criteria recommendations for total nitrogen in the western forested mountains guidance (Ecoregion II, Level III ecoregion 15). The guidance recommends a total nitrogen water quality criterion of 0.20 mg/L. Since potential sources of total nitrogen are included in the proposed action, it should be reanalyzed against this criterion and included in the SDEIS and IPDES permits, or supporting documents.</p>	WTR	<p>There are no adopted nitrate+nitrite standards aside from the drinking water criteria. There are also no adopted standards for Total Kjeldahl nitrogen.</p> <p>The SDEIS Section 4.9.2.2 describes the predicted nitrogen compounds associated with Project activities (i.e., nitrate and ammonia). Monitoring requirements associated with total nitrogen could be applied as part of IDEQ's IPDES permit, but the nitrogen compounds related to proposed activities have been included in the SDEIS.</p>
Samuel Penney (Chairman)	19396	109	<p>Phosphorus is relatively harmless in drinking water at low concentrations, but can contribute to eutrophication in streams and rivers. Sources of phosphorus include human or animal waste, detergents, food waste, and sediment erosion. While both total and dissolved phosphorus concentrations were included in the current conditions monitoring, only dissolved phosphorus was included in the current conditions and predictive modeling. Why was total phosphorus omitted?</p> <p>Total phosphorus is highly correlated with sediment and should have been included in the sitewide water chemistry analysis. In addition, no water quality criterion was assigned for total phosphorus in the Surface Water Quality Baseline Study; EPA established ambient water quality criteria recommendations for total phosphorus in the western forested mountains guidance (Ecoregion II, Level III ecoregion 15). The guidance recommends a total phosphorus water quality criterion of 7.75 µg/L. Since potential sources of phosphorus are included in the proposed action, it should be reanalyzed against this criterion and included in the SDEIS and IPDES permits or supporting documents.</p>	WTR	<p>Conditions for eutrophication are not anticipated under predicted site conditions.</p> <p>Phosphorus concentrations in baseline surface water were typically below analytical method detection limits. Likewise, they were seldom detected in the geochemical testing of mined materials. Therefore, predicted phosphorus concentrations in surface water do not vary from existing conditions as presented in SDEIS Tables 4.9-18 through 4.9-21.</p>
Samuel Penney (Chairman)	19396	110	<p>Since the publication of many of the proposed project's technical reports, several federal and state water quality standards have been changed. The following is a summary of constituents that need to be reanalyzed to reflect the most current and strictest potentially applicable standards: (TABLE)</p>	WTR	<p>SDEIS Table 3.9-1 provides the rationale for standards used for water chemistry comparison in the water quality analysis. These values represent the currently adopted regulatory criteria for comparison at the time of the SDEIS publication.</p>
Samuel Penney (Chairman)	19396	111	<p>The SDEIS and its supporting documents provide abundant evidence that the SGP has been heavily influenced by historic mining. Under the Idaho Ground Water Quality rules, the natural background level is defined as “[t]he level of any constituent in the groundwater...unaffected by human activities.” Historic mining legacy impacts make it difficult to establish baseline conditions for water quality comparisons. As stated in the Water Resources Summary Report, “[t]he areas with little or no historical mining...on the west side of the District such as the Fiddle and North prospects, may provide opportunities to establish natural background water quality in seeps and springs or groundwater monitoring wells.” A hydrology field survey completed in November of 2012 shows fairly significant</p>	WTR	<p>Existing water quality conditions were utilized as a basis of comparison for predicted water quality conditions associated with Project effects. The Project is not expected to affect water quality in seeps and springs in the headwaters of drainages above the Project location. Therefore, water chemistry observations from these locations were not utilized as part of the basis of comparison for Project effects.</p>

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			<p>(>5 gallons per minute) springs and seeps located in and that provide flow to the headwaters of perennial and intermittent drainages including Hennessey Creek, Fiddle Creek, Meadow Creek, East Fork Meadow Creek (Blowout Creek), Garnet Creek, Midnight Creek, West End Creek, and the EFSFSR. In low flow conditions, it is surmised that springs and seeps sustain flows within these streams in the absence of precipitation.</p> <p>Although water quality samples “were collected for analytes that could be of interest to one or more agencies [involved in the permitting process with respect to surface water quality regulations]”, baseline water quality testing performed on the seeps and springs in the headwaters of various streams within the Project area were not tested for constituents of concern including metals like arsenic and antimony. A more accurate picture of how the SGP will influence water quality may have been generated if these seeps and springs, particularly those with no legacy mining impacts in the headwaters of Fiddle Creek, had been tested and included as baseline water quality conditions rather than conditions at already degraded stream sampling sites.</p>		
Samuel Penney (Chairman)	19396	186	<p>4.8 Surface Water and Groundwater Quantity</p> <p>Section 4.8 of the SDEIS defines the environmental consequences of the proposed action to surface water and groundwater quantity. Throughout the SDEIS, the Forest Service highlights the interplay between seasonal surface precipitation (i.e., snow accumulation, melt, and runoff), streamflows, groundwater expressions as springs and seeps at the surface, and groundwater flows. Given the complexities of this interconnected hydrology, the Tribe is concerned that the SDEIS is grievously underestimating the impacts to surface flows, groundwater levels, and groundwater dependent ecosystems.</p>	WTR	<p>SDEIS Section 4.8.2.2 describes predicted effects on surface water flows, groundwater levels, and groundwater dependent ecosystems. Reductions in stream flow are presented in Figures 4.8-11 through 4.8-17 with groundwater drawdown depicted in Figure 4.8-9 and its relationship to groundwater dependent ecosystems presented in Figure 4.8-10.</p> <p>As presented, these effects occur through much of the analysis area.</p>
Samuel Penney (Chairman)	19396	187	<p>For surface flows, the SDEIS correctly notes that the Idaho Water Resource Board holds two minimum flow water rights located downstream of the proposed project area: #77-14190 for the EFSFSR and #77-14174 for the SFSR.370 The SDEIS fails to include minimum flow water right #77-14193 on Sugar Creek.</p>	WTR	<p>The minimum flow rights on Sugar Creek has been added to the description of minimum flow water rights in the EIS.</p>
Samuel Penney (Chairman)	19396	188	<p>Additionally, it is unclear how alterations within the West End drainage - specifically, the stream diversion and the creation of the West End pit lake - will impact flows within Sugar Creek. The SDEIS states that the minimum flow water rights are subordinate to future Domestic, Commercial, Municipal, and Industrial (“DCMI”) uses and, in some cases, future non-DCMI allotments. The Forest Service, however, fails to provide important context. Although Idaho’s minimum flow protections for streams are woefully inadequate, the primary goal of the settlement agreement provisions detailed in the 2004 Snake River Water Rights Agreement were “to conserve and enhance fish habitat in order to address ESA concerns.” As a result, minimum stream flow water rights were established in streams within the Clearwater and Salmon River Basins that, according to the State of Idaho’s water management plan, “provide significant protection for steelhead, salmon, and bull trout.” Furthermore, IDWR has a responsibility to “regulate the delivery of the instream flows through the designated stream reaches.” The Tribe wonders how this can be achieved when, to date, it is unknown whether the EFSFSR, the SFSR, or Sugar Creek are meeting minimum stream flows.</p>	WTR	<p>As described in Section 4.8.2.2, Table 4.8-4, and Figure 4.8-15, Project effects on Sugar Creek flows are predicted to be minimal, less than 3 percent of monthly flows.</p>
Samuel Penney (Chairman)	19396	190	<p>For groundwater levels, the hydrologic model appears to consider the water table as a static parameter that remains constant despite pumping, capture of runoff/contact water, and changes in groundwater loss/recharge due to stream diversions. It seems reasonable that stream diversions and capture of runoff may alter the water table in such a way that negatively impacts groundwater recharge. Furthermore, the SDEIS notes that “[c]limate change impacts to groundwater could decrease the availability of groundwater...in the area...[and that] [c]limate change induced changes in precipitation and evaporation could also impact the overall site-wide water balance which could result in significant changes to the amount of water being treated and discharged.”</p> <p>This statement, followed by a lack of meaningful discussion on how climate change induced changes could impact the site-wide water balance, highlight the inadequacy of the Forest Service’s reliance on water rights permitting requirements to protect water quantity.</p>	WTR	<p>The SDEIS accounts for changes in groundwater levels as depicted in Figure 4.8-9. These changes include the effects of groundwater pumping and loss of recharge associated with stream diversion.</p> <p>Quantitative description of potential climate change effects on precipitation and evaporation is outside the scope of the EIS analysis. Qualitative descriptions of the potential effects of climate change on the affected environment are included in SDEIS Section 4.4.</p>

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Samuel Penney (Chairman)	19396	191	The SDEIS states, “Instream rights on the SFSR are subordinate to 20.6 cubic feet per second (“cfs”); maximum diversions proposed by Perpetua from all sources and uses would be 9.68 cfs, within the allowance of the SFSR instream rights.” Where did 20.6 come from? Please provide additional information to clarify. Related, it poses an important question on whether a single applicant can command nearly half of the legally appropriable water in the stream. A recent legal review of Idaho case law found that “[c]ases involving surface water consistently have held that an appropriator may not command the entire flow of a stream to effect an appropriation of only a portion.”	WTR	The SDEIS describes the existing water rights and the predicted Project effects associated with those water rights. The subordination of water rights is described in Water Right 77-14174. Appropriation of water rights in a stream is the purview of IDWR.
Samuel Penney (Chairman)	19396	193	<ul style="list-style-type: none"> Flows from springs and seeps are expected to be reduced in the areas where groundwater levels are lowered. This impacts the associated vegetation and ecosystems, etc. 	WTR	Comment noted. This is consistent with the impact assessment as presented in SDEIS Section 4.8.2.2.
Samuel Penney (Chairman)	19396	194	<ul style="list-style-type: none"> Reductions are expected in stream flows, particularly in baseflow in certain mining years for certain streams/reaches. These could cause flows less than the minimum stream flows if IDWR approves the water right application. 	WTR	Stream flow reductions are expected to occur due to effects of the Project. However, flows less than minimum stream flows are not expected and further, would not be authorized by IDWR under its water rights approval.
Samuel Penney (Chairman)	19396	195	<ul style="list-style-type: none"> What are the impacts in Mine Year-1 from filling the TSF? This doesn’t appear to have been modeled. Please provide additional details. 	WTR	Effects of Project water usage on stream flows are depicted starting in Year -2 in Figures 4.8-11 through 4.8-17. Discharge of tailings solution to the Tailings Storage Facility would start in Year -1 as depicted in SDEIS Figure 2.4-10 and Figure 4.8-3 and has been included in the analysis.
Samuel Penney (Chairman)	19396	196	<ul style="list-style-type: none"> Is there enforcement for minimum stream flow diversions? Where are there locations that surface water flows need to be met? 	WTR	The locations for minimum stream flows are described in SDEIS Section 3.9.4.4. Enforcement of minimum stream flows is within the purview of IDWR.
Samuel Penney (Chairman)	19396	199	Based on the predicted surface water chemistry, elevated concentrations of arsenic, antimony, mercury, and residual cyanide will be present and subsequently leaching at increasing rates during this time frame. Compared to the entire water storage capacity (maximum of one foot of hydraulic head allowed to persist above tailings) of the TSF this volume is relatively small, but still remains an entirely unacceptable amount of contaminated water entering the watershed. The underdrain is designed to collect much of this seepage water but according to the SDEIS “[w]aters infiltrating into the subsurface under the mine facilities would mix with alluvial groundwater and are not subject to water treatment except in instances where alluvial groundwater is subsequently pumped for mine dewatering.”	WTR	Comment noted. This is consistent with the impact assessment as presented in SDEIS Section 4.8.2.2.
Samuel Penney (Chairman)	19396	204	The SDEIS states ammonia concentrations were not explicitly modeled. An explanation is provided in the Water Quality Specialist Report in Section 5.2.5. The SDEIS should provide the reasoning in this report.	WTR	The ammonia explanation from the Specialist Report has been included in the SDEIS.
Samuel Penney (Chairman)	19396	205	Figure 4.9-3 shows a large spike in TSF Buttress seepage volume to the alluvial aquifer during the year of cover placement. Please explain why. Also, if the cover is placed, why are the alluvial recharge volumes similar to or higher than before the cover?	WTR	The volume of predicted TSF Buttress seepage with the potential to recharge alluvium is based on an estimate of preferential flow of meteoric water through the buttress material. The amount of meteoric water incident on the buttress reaches a maximum at full facility buildout prior to the installation of a geosynthetic liner over the buttress which would subsequently reduce the volume of meteoric water contacting the buttress material.
Samuel Penney (Chairman)	19396	206	Tables 4.9-2 and -3 show concentrations of constituents that exceed the strictest potentially applicable surface water quality criteria from runoff and seepage from the TSF Buttress and Embankment, respectively. The SDEIS states toe seepage and runoff go to the contact water pond that is treated. However, some of the water infiltrates into the aquifer. They discuss the modeled results of mixing this water with groundwater, which shows antimony and arsenic above the water quality standards during operations and post cover (Table 4.9-4). To prevent the degradation of groundwater, why isn’t there a liner under the embankment and buttress?	WTR	SDEIS Figures 3.9-20 and 3.9-21 illustrate baseline arsenic and antimony concentrations in groundwater beneath the TSF buttress. Under existing conditions, groundwater concentrations exceed antimony and arsenic water quality criteria. SDEIS Table 4.9-4 presents the predicted groundwater concentrations below the TSF Embankment and Buttress. These concentrations vary little from existing conditions during operations, increase during closure activities as covers are placed on the facility, then decrease to near existing conditions thereafter. Therefore, use of a liner under the TSF Embankment and Buttress would have limited effect on groundwater antimony and arsenic concentrations.
Samuel Penney (Chairman)	19396	207	Water Treatment New Source Performance Standard on page 8-2 of the 20220131 Water Management Plan for Stibnite states, “In addition to the Idaho surface water standards, the SGP is also subject to the ELGs as codified in the New Source Performance Standards for gold mines in 40 CFR 440.104.	WTR	The EIS has been revised to include the treatment target for copper. Water treatment designs target reductions in constituents in the feed water that are above water quality criteria. To address TSS in feed water, water treatment processes include clarification and filtration steps as part of their processing to remove solids from the treated water so that the chemical water treatment is effective. Therefore, the water treatment designs

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			The parameters with ELGs are pH, total suspended solids, cadmium, copper, lead, mercury, and zinc.” The target post-water treatment plant effluent analyte concentrations in Table 4.9-10 do not include copper or TSS. Would the WTP design be able to meet these standards? In addition, these parameters should be included in all appropriate surface water monitoring locations.		do not include a criteria for TSS in their discharge. However, the discharge would be subject to monitoring and permit thresholds for TSS for compliance with IPDES permits.
Samuel Penney (Chairman)	19396	208	The SDEIS states after closure and a liner on the TSF, the water treatment plant solids would go on top of the liner. Please describe the water cycle associated with this (ex. water capture and treatment).	WTR	Water treatment residuals generated from the water treatment plant following placement of the TSF liner would be located in an 8.5-acre area near the northeast corner of the TSF. Berms or cofferdams would be used to contain the residuals along with a temporary cover to minimize contact of the residuals with meteoric water. Following cessation of water treatment, a permanent geosynthetic cover would be applied over the residuals then growth material would be placed over the geosynthetic cover and revegetated. Residual water collected from the TSF would be conveyed to the closure water treatment plant located on the TSF buttress. The treatment process for the collected water is described in SDEIS Figure 4.9-12 which would discharge the treated water to Meadow Creek.
Samuel Penney (Chairman)	19396	209	West End Pit Lake Chemistry The SDEIS predicts post closure exceedances of water quality standards for dissolved antimony, arsenic, and mercury (the table also shows lead in some years). The only outflows appear to be groundwater. In the Groundwater Chemistry section, it says if groundwater is below water quality standards this may raise concentrations, but if they are above the standards then the new concentrations result in little change. This information is vague. How does the lake chemistry impact groundwater concentrations?	WTR	Existing groundwater arsenic and antimony concentrations in the West End Pit area are characterized via monitoring well MWH-B20 which exhibits concentrations above water quality standards (see SDEIS Figures 3.9-20 and 3.9-21). Based on comparison to water quality data from MWH-B20, pit lake outflows would not affect local groundwater concentrations relative to water quality criteria. While mercury concentrations in the West End Pit lake are predicted to be above surface water criteria, they are below groundwater criteria. Existing groundwater mercury concentrations in the West End pit area are also below groundwater criteria and pit outflow to groundwater would not affect those concentrations relative to the groundwater criteria.
Samuel Penney (Chairman)	19396	210	Midnight Backfill Porewater chemistry exceeds the water quality standards for antimony, arsenic, manganese, lead, sulfate, and TDS. How does this impact groundwater quality beneath the pit?	WTR	The Midnight pit backfill is above the level of local groundwater. Reclamation and closure of the backfilled pit would involve grading of the surface to promote drainage away from the backfill plus growth media placement and revegetation. These closure steps would inhibit movement of pore water from the backfill to groundwater.
Samuel Penney (Chairman)	19396	211	Although the SDEIS states the backfill would be mounded at closure to promote runoff, why isn't a cover proposed over the Midnight backfill?	WTR	The regrading, growth media placement, and revegetation are anticipated to be sufficient to retain pore water in the unsaturated Midnight Pit backfill and limit migration to the water table.
Samuel Penney (Chairman)	19396	212	Section 4.9.2.2, Yellow Pine and Hanger Flats Backfill subsection: Water chemistry in the inundated backfill within these pits is expected to have antimony and arsenic concentrations above groundwater quality standards, and elevated concentrations of mercury that are below groundwater standards but may contribute water quality standard exceedances in surface water. The SDEIS does not provide information on when these exceedances occurred, but Tables 4.9-14 and 4.9-15 show concentration exceedances post closure. How does this affect groundwater concentrations beneath these pits?	WTR	Inundation of backfill in the Hangar Flats and Yellow Pine pits would occur post-closure when groundwater drawdown by dewatering recovers to elevations above the pit bottoms. As described in SDEIS Section 4.9.2.2, interaction between the backfill material and groundwater would result in groundwater antimony and arsenic concentrations above groundwater quality criteria within the backfill. In many instances, this would occur in groundwater where antimony and arsenic concentrations are already above water quality criteria in their existing condition.
Samuel Penney (Chairman)	19396	213	Figure 4.9-15. The points (locations) at which water quality predictions are made are missing from the Yellow Pine and Hanger Flats pit drawings. Also, there is no water table shown on the Yellow Pine pit figure. Please add.	WTR	Predicted pit backfill pore water chemistry is developed for the entirety of the backfill based on an aggregation of the materials placed as backfill. The components of that aggregated composition are described in SDEIS Figure 4.9-16. The recovered groundwater level in the Yellow Pine pit has been added to Figure 4.9-15.
Samuel Penney (Chairman)	19396	214	Section 4.9.2.2, Groundwater Chemistry subsection: Midnight pit backfill, A groundwater discharge location to surface water isn't mentioned. Please include a discussion.	WTR	Groundwater discharges from the West End area (including the Midnight pit area) to surface waters are depicted in the bottom portion of Figure 4.9-20.
Samuel Penney (Chairman)	19396	215	The SDEIS states, “Existing groundwater monitoring data near the confluence of Meadow Creek and the East Fork SFSR exhibit antimony and arsenic concentrations above groundwater standards, indicating the mixture of leachate with these waters would result in little change to groundwater concentrations relative to standards. This is also the case for groundwater concentrations with the Sugar Creek	WTR	Comment noted. This is consistent with the impact assessment as presented in SDEIS Section 4.9.2.2.

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			drainage.” Suggesting minor effects to groundwater. “Major effects would be limited to the groundwater area (i.e., around MWH-A17 and SRK-GM-04S) where antimony and arsenic concentrations are below groundwater standards.” These wells appear to be along Hennessy Creek, upstream of the confluence with Sugar Creek and EFSFSR. These predicted exceedances are concerning.		
Samuel Penney (Chairman)	19396	216	The SDEIS states, “The effects of the infiltration of leachate from the TSF, TSF Buttress, stockpiles and Midnight pit backfill...” However, leachate effects to groundwater from stockpiles isn’t discussed. Please include.	WTR	Stockpile leachate contributions to infiltration are minimal because the stockpiled materials are located on top of the other facility materials and the presence of the stockpiled material is temporary. Comparison of constituents of interest in stockpiled materials (i.e., antimony and arsenic) indicate that the concentrations of these analytes in low grade ores are not significantly different from the development rock materials that make up the TSF Buttress and other facilities.
Samuel Penney (Chairman)	19396	217	Surface Water Chemistry Figure 4.9-21- This figure shows baseline, operations, and post-closure values for each surface water site. Please add that these are average concentrations shown in the tables.	WTR	The use of average values in the figure presentation has been added to Figure 4.9-21 legend.
Samuel Penney (Chairman)	19396	218	This figure shows a predicted dissolved mercury concentration during operations over four times the standard at West End Creek node YP-T-6. The SDEIS states this is because the surface water in upper West End Creek is above the standard under existing conditions due to the diversion of West End Creek around the operations associated with the West End pit. The increase in mercury is concerning; West End Creek fully supports its designated uses. What else could be done to decrease the mercury concentrations to below water quality standards?	WTR	West End Creek is a steep gradient creek with relatively low flow under existing conditions. The creek does not accommodate fish habitat and is a minor contributor to conditions downstream in Sugar Creek.
Samuel Penney (Chairman)	19396	219	Tables 4.9-18 and 4.9-19 provide data for two of the seven sites. It would be helpful to show similar tables for the other sites that show predicted exceedances of water quality standards.	WTR	Please see the data tables in SDEIS Tables 4.9-20 and 4.9-21. The remaining three locations are described in tables and graphically in the referenced source document (SRK 2021).
Samuel Penney (Chairman)	19396	220	Organic Carbon subsection: The SDEIS states the potential impacts of the additional organic carbon added is expected to be low given overall discharge rate is small. This is a qualitative assessment with the potential for OC to cause an increase in methylation. The text in Section 6.4.1.4 (Organic carbon) of the Water Quality Specialist Report provides additional information and should be summarized here to provide additional context. We recognize no organic carbon samples were analyzed in the Water Quality Baseline Study. Organic carbon should be added to future analyses.	WTR	The information from the Water Quality Specialist Report has been added to the EIS document.
Samuel Penney (Chairman)	19396	222	Surface Water Temperature An increase in TSS could also raise surface water temperatures. Please add mention of this and how it could be incorporated into the model/results/interpretation.	WTR	Project activities associated with the repair of Blowout Creek are expected to remove the most significant source of sediment in the Project area. Therefore, sediment loads are not expected to increase relative to existing conditions.
Samuel Penney (Chairman)	19396	223	Please add a legend to Figures 4.9-27, 4.9-28, and 4.9-29 (ex. CW, BT, SS, A, B).	WTR	The abbreviations utilized in the figure graphics have been added to the figure legend.
Samuel Penney (Chairman)	19396	224	The predicted surface water temperatures are elevated in the TSF and TSFB area for certain mine years as well as farther down gradient (see Figures 4.9-27 and -28). This is concerning.	WTR	Comment noted. This is consistent with the impact assessment as presented in SDEIS Section 4.9.2.2.
Samuel Penney (Chairman)	19396	225	4.9.2.4 Model Sensitivity and Uncertainty The SDEIS states, “Incorporation of first-flush chemistry in the model predictions would slightly increase predicted analyte concentrations.” This should be elaborated on (briefly described on page 43 of the Water Quality Specialist Report). Would different analytes exceed water quality criteria? What would the expected concentrations of constituents of concern be? How long would the exceedances last? What would the anticipated or potential effects be?	WTR	The use of first flush kinetic test leaching data is described in SDEIS Section 3.9.4.2 with potential implications for predictive modeling described in SDEIS Section 4.9.2.4.
Samuel Penney (Chairman)	19396	226	The SDEIS states, “Effects of model uncertainty from simulating dissolved rather than total concentrations have not been evaluated, but total concentrations of analytes that appear in particulate form would be greater than the simulated dissolved concentrations.” The report states mercury is found more-so in particulate form rather than dissolved. The surface water quality standard value for mercury is listed in Table 3.9-1 (12 ng/L in total form). “The EPA recommends that a human-health methylmercury criteria of 0.3 mg/kg that is translated to a total-mercury concentration of 2 ng/L in surface water be utilized in the analysis. This recommendation is incorporated into the impacts analyses, but table-reported standard values utilize the 12 ng/L (0.00012 mg/L) representing the lowest	WTR	The geochemical equilibrium model used for water chemistry predictions (i.e., PHREEQC) is the publicly available, accepted modeling code for assessing mining effects on groundwater and surface water. The PHREEQC model utilizes dissolved fraction water chemistry for its calculations. The Site-Wide Water Chemistry Report, cited in the SDEIS and released at the same time as the SDEIS, describes the relationship between total and dissolved analyte concentrations indicating that instances with higher total concentrations are related to storm and snowmelt runoff of the native ground surface. Control measures would be put in place to

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			concentration adopted as a standard.” By modeling the dissolved fraction of mercury, total mercury may very well be higher and exceed the water quality standard, which is in total form. Quantification of total mercury concentrations should be performed in the stream predictions.		manage mine contact water. Therefore, runoff contributions of solids in stream flow would be near the existing conditions.
Samuel Penney (Chairman)	19396	227	Top of page 4-280 3rd bullet: please provide the duration.	WTR	The bullet has been clarified that the duration of exceedances extended to the end of the mining period.
Samuel Penney (Chairman)	19396	228	4.9.3 Mitigation Measures The SDEIS states, “The mitigation measures described below are in addition to the Forest Service requirements and EDFs accounted for in the preceding impact analysis.” It would be helpful to list what these are or include a reference to ensure all the impacts identified have mitigation measures covered (ex. see Table 2-3 of the Water Quality Specialist Report for EDFs). Figure 4.9-29 – Please include a timeframe for this figure, either on the figure or in the text reference (ex. x years post operations). Please also include a legend.	WTR	A reference to the Water Quality Specialist Report table of Forest Service requirements has been added to the text. The timing for the sensitivity analysis presented in Figure 4.9-30 (formerly 4.9-29) has been added to the figure legend.
Samuel Penney (Chairman)	19396	275	● Increases in fine sediment delivered to streams has been shown to negatively alter habitat for Chinook salmon and steelhead spawning and rearing in the SFSR. Both of the action alternatives would deliver sediment to live water from proposed road construction and maintenance, increased traffic use, removal of vegetation, pit highwalls, mining activity, fugitive dust and Project related mass wasting events.	WTR	Comment noted. This is consistent with the impact assessment as presented in SDEIS Sections 4.9.2.2 and 4.12.2.2.
Samuel Penney (Chairman)	19396	308	Water Quality The Stibnite area continues to exhibit impaired water quality due to historic mining activities. No stream on the SGP mine site is considered within acceptable risk levels for chemical contamination. The SDEIS notes most metals analyzed in mine site streams occur at concentrations below water quality standards with the exception of arsenic, antimony and mercury. With concentrations of these metals already elevated, it is unacceptable that water chemistry at the Project continues to further degrade post mine closure for certain reaches that contain listed fish species. As noted in the SDEIS on Table 4.12-4, antimony, arsenic and mercury seasonally increase in YP-T-6 (West End Creek) and YP-T-1 (Sugar Creek) and exceed the mercury analysis criteria for mercury for numerous stream reaches within the Project area. The toxic metalloids arsenic and antimony, either individually or in combination, have caused adverse environmental effects in the vicinity of contaminated mines around the world. Metal contamination in stream waters or sediments can be detected up to hundreds of kilometers from their source, and their presence can impose direct and indirect deleterious health effects on salmonid-bearing watersheds.	WTR	Comment noted. This is consistent with the impact assessment as presented in SDEIS Sections 4.9.2.2 and 4.12.2.2.
Samuel Penney (Chairman)	19396	309	Antimony can be toxic to aquatic life and bioaccumulate in tissue. Ambient water quality for the protection of aquatic life has not been established for antimony so thresholds to fish are not established. It is known that antimony and arsenic is currently exceeding the state criteria listing streams in the project as impaired. The analysis shows that the rock in the pit walls and development or waste rock is capable of leaching antimony and other elements into surface and groundwater in concentrations that exceed water quality criteria.	WTR	An antimony standard of 0.0052 mg/L applied for surface water was based on a drinking water standard. This value is lower than the 0.190 mg/L standard for aquatic life.
Samuel Penney (Chairman)	19396	310	Arsenic is highly toxic to aquatic organisms. Arsenic is a suspected carcinogen to fish and is associated with necrotic and fibrous tissues and cell damage, especially in the liver. Arsenic concentrations currently exceed the analysis criteria in all assessment nodes except YP-	WTR	Comment noted. This is consistent with the impact assessment as presented in SDEIS Section 4.9.2.2.
Samuel Penney (Chairman)	19396	311	Mercury is harmful and biomagnifies in the aquatic food web particularly when it is in the organic form (methylmercury). Dissolved mercury currently exceeds the 2.0E-6 mg/L analysis criteria at six of the ten nodes. Table 4.12-4 in the SDEIS highlights that mercury concentrations will exceed baseline conditions for post project closure.	WTR	Comment noted. This is consistent with the impact assessment as presented in SDEIS Section 4.9.2.2. However, the applicable standard for surface water mercury concentrations is 12 ng/L.
Samuel Penney (Chairman)	19396	314	● There are so many factors that will influence site water chemistry (tailing liner leaks, water contacting development rock, seep and spring inputs, water levels). The level of confidence in stream chemistry modeled data should be discussed and uncertainties highlighted.	WTR	Uncertainties regarding water quality predictions are described in SDEIS Section 4.9.2.4.

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Samuel Penney (Chairman)	19396	316	<ul style="list-style-type: none"> Why is the modeling of water chemistry at stream reaches stopped at Sugar Creek? The potential to impact the EFSFSR and SFSR water chemistry should be explored, the downstream boundaries of impacts should include stream reaches below Sugar Creek. 	WTR	Predicted surface water concentrations at location YP-SR-2 downstream of the Stibnite Mine Area are at or below existing conditions for that location (see SDEIS Figure 4.9-25). Therefore, Project-related impacts are not expected relative to existing conditions or water quality standards downstream of that location.
Samuel Penney (Chairman)	19396	317	<ul style="list-style-type: none"> Mine reclamation at Cinnabar mine site should be examined as potential mitigation measures for water chemistry in the EFSFSR due to the Project. 	WTR	The Forest Service is not able to require reclamation of a site not owned by the Project proponent as mitigation for the Project.
Samuel Penney (Chairman)	19396	319	<ul style="list-style-type: none"> If antimony is not mined due to low economic value this would dramatically change the water chemistry model results, this should be discussed and modeled. 	WTR	Mining and production of antimony is a component of the Project as proposed. Therefore, it is considered in the analysis of effects from the proposed activities. The antimony is comingled with the gold ore and must be separated to produce gold.
Samuel Penney (Chairman)	19396	321	<p>As described in the SDEIS, the Project will reduce the quantity of groundwater and surface water within the analysis area. Flow predictions for specific streams and time frames (years) have such wide ranges (i.e., 0-100%), that it is impossible to adequately gauge flow reduction impacts to fish.</p> <p>Mine dewatering would lower groundwater levels around the open pits. The lowered groundwater levels would have the potential to reduce surface water flows in areas where streams, seeps, and springs are recharged from the deeper groundwater aquifer. The impacts of pit dewatering on surface and groundwater resources must be further detailed. Assessment of the total deficit, water required to replenish deficits, and the time estimated for the system to reach equilibrium need to be conducted with specific regard to fish.</p>	WTR	SDEIS Section 4.12.2.2 provides a description of how modifications in surface water flows would affect fish species.
Samuel Penney (Chairman)	19396	322	The SDEIS documents a decrease in stream flows and at the same time recognizes that the mine will need to acquire additional water rights. These water rights may or may not be approved as they are currently being protested. The impacts to fish from reduced stream flows does not seem to encompass the entire water budget needed by the Project activities.	WTR	The effects of the entire water budget as depicted in SDEIS Figure 4.8-3 are incorporated into the analysis of effects on stream flows.
Samuel Penney (Chairman)	19396	326	The 2019 Stream Functional Assessment report uses a ledger system as a tool based on a rating system of Watershed Condition Indicators (“WCI”) and other aquatic resource elements at multiple spatial and temporal scales. It is not a sediment model although it combines results of complex models (e.g., groundwater modeling, stream temperature modeling, water chemistry modeling, etc.) to evaluate impacts of the project. A peer-reviewed, repeatable sediment model must be conducted and incorporated into this analysis, with predictions of sediment loading in all of the impacted reaches and streams at various phases of the mine.	WTR	Sediment associated with the Project would be controlled via management practices and Forest Service requirements that would limit sedimentation to levels typical for Forest Service land use. Therefore, a numerical sediment model is not part of the EIS scope.
Samuel Penney (Chairman)	19396	327	The SDEIS relies heavily on the assumption that BMP’s and regular road maintenance will minimize stream delivery to streams. While the SDEIS notes that the potential exists for increased runoff, erosion, and sedimentation which could result in a sediment load into streams during the building of Burntlog route, however sedimentation would be minimized using BMP’s and required maintenance. As noted in the SDEIS, Table 4.12-6, all stream segments currently analyzed for sediment and turbidity in the project area are currently Functioning at Unacceptable Risk (“FUR”) as defined by WCIs. These streamside roads are currently maintained by Perpetua using BMP’s, however the streams adjacent to these roads continue to be categorized as FUR.	WTR	These stream segments are currently affected by contact with legacy mining activities and sediment generation from unstable bank conditions at Blowout Creek. These sediment generating conditions would be addressed as part of the Project proposal.
Samuel Penney (Chairman)	19396	328	<p>The SDEIS inadequately addresses the addition of new roads and their associated disturbance on aquatic ecosystems. Road density is positively correlated with subsurface fine sediment in adjacent streams. As noted in Table 3.12-7 the streams within the Project site are largely listed as FUR for Road Density/Location. While the SDEIS quantifies Road Density/Location in the baseline section it omits a critical WCI of Road Density/Location in its environmental consequence analysis section. The Burntlog Route would require approximately 15 miles of new access road construction. Numerous roads would need to be constructed within the mine site to access and haul mineralized rock and development rock, however these do not appear accounted for in the SDEIS.</p> <p>The Project would construct 9 miles of new roads for transmission lines, however, the SDEIS fails to describe how the Watershed Condition Indicator for Road Density/Location will be altered by the</p>	WTR	Road density was considered as a component in forecasting Watershed Condition Indicators. For streams listed at FUR under existing conditions, the consideration of additional road development did not alter the listing. SDEIS 4.12.2.2 discusses the effect of road density on aquatic resources.

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			Project and what it means for fish if subsurface fines increase in adjacent streams. An analysis of changes to the WCI Road Density/Location is needed in the FEIS.		
Samuel Penney (Chairman)	19396	329	The SDEIS did not include modeling to quantify sediment delivery to streams from upgrading transmission line roads and widening of existing access roads along Johnson Creek during the first two years of the mine. The SDEIS notes that utilities associated with the Project (existing transmission line grades and structure work, right-of-way clearing, new transmission line, and transmission line access roads) would cross 37 different streams and upgrade 63 miles of road. The Johnson Creek route crosses 43 different streams including 27 miles of road that are within 0.5 miles of surface water resources. Johnson Creek road will need to be widened to accommodate mining machinery and traffic. Widening roads and clearing roadside ditches of vegetation has been shown to exponentially increase sediment delivery to streams. Once again it is assumed that BMP's and federal regulations will minimize sediment delivery to streams based on professional judgment with no analysis.	WTR	Sediment associated with the Project would be controlled via management practices and Forest Service requirements that would limit sedimentation to levels typical for Forest Service land use. Therefore, a numerical sediment model is not part of the EIS scope.
Samuel Penney (Chairman)	19396	330	The SDEIS lacks modeled results showing how increases in Project related traffic will impact sediment delivery to streams. The SDEIS notes that during the construction phase traffic would increase by 65 vehicle trips per day and during the mining and operation phase (approximately 15 years) traffic would increase a total of 50 trips per day. It is not clear in the SDEIS if Project related road maintenance traffic is also included in these numbers. Increased vehicular traffic causes sediment detachment and can contribute substantially to stream sedimentation. The Watershed Erosion Prediction Project model allows for several options for road configurations, soil, climate, traffic use, gradient, length, and width as well as fill slope and buffer characteristics. The Tribe recommended that in the FEIS there is analysis regarding impacts of traffic on sediment delivery to streams. All Project related traffic including personnel, supply vehicles and associated road maintenance should be included.	WTR	Sediment associated with the Project would be controlled via management practices and Forest Service requirements that would limit sedimentation to levels typical for Forest Service land use. Therefore, a numerical sediment model is not part of the EIS scope.
Samuel Penney (Chairman)	19396	337	The SDEIS insufficiently analyzes sediment impacts to surface water from factors other than roads. The Yellow Pine pit lake has been acting as a sediment trap for Meadow Creek, the East Fork of Meadow Creek and the upper EFSFSR. With the new fish passage tunnel during mine year 1-23, this will no longer be the case. When the fish passage tunnel is constructed and water is allowed to enter this tunnel, it can be expected that the river's sediment will be released downstream. With a large amount of disturbance proposed, the FEIS needs to include more robust quantification and analysis on sediment delivery to area streams.	WTR	Design features and Forest Service requirements as described in SDEIS Chapter 2 would be implemented to control sediment associated with Project development. Application of these measures is expected to be effective in controlling sediment to levels associated with typical Forest Service authorized roadways and activities. Section 2.4.5.10 describes how existing streams would be managed including the voluntary remediation of the Blowout Creek watershed, which has historically been a major contributor of sediment to the Meadow Creek drainage. Sediment monitoring would be used to assess the effectiveness of these design features and controls on downstream effects on sediment.
Samuel Penney (Chairman)	19396	358	The 2021 BC Stream and Pit Lake Temperature Model report goes into more details about the enhanced riparian planting zone extending 16 - 18 feet from 7 feet and revised to include taller species. This speculative assumption is questionable due to the difficult planting conditions at the altered site. Perpetua understands the challenges of plant survival at this elevation and contaminated soil conditions. It is well known that restoration strategies rarely go as planned. Yet the model is optimistic about the shading and the subsequent lower stream temperatures resulting. There are a lot of questionable assumptions in this temperature model starting with the Stibnite Hydraulic Site Model and relating to the outfall location being undetermined as well as the water treatment plant phasing is preliminary and draft.	WTR	The assumptions incorporated in the prediction of future surface water temperatures are described in SDEIS Section 4.9.2.2 with key uncertainties described in Section 4.9.2.4. Section 4.9.3 described mitigation measures applied to reduce the uncertainties in predicting future water temperature conditions.
Samuel Penney (Chairman)	19396	407	5.8 Surface Water and Groundwater Quantity The Tribe disagrees with the Forest Service's assessment that "there are no RFFAs that have or would affect surface water and groundwater quantity in the CEA." Halofsky and others note that "timing of water availability is likely to shift, and summer flows may decline." The Tribe argues that changes in water supply due to a changing climate should be considered as a potential RFFA. The SDEIS notes that the "effects of these natural changes [regional climate change] cannot be accurately quantified." The Tribe wholeheartedly agrees with this statement; hence, why it is so critical for the Forest Service to carefully consider all impacts and not simply dismiss or not quantify impacts because it is too difficult.	WTR	RFFAs included in the NEPA analysis involve anthropogenic activities that have either been developed or approved. Climate change is considered as part of the direct and indirect effects of the Project as described in the SDEIS in Section 4.4.

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Samuel Penney (Chairman)	19396	408	The SDEIS fails to compare water quantity cumulative effects between the No Action Alternative and the 2021 Modified Mine Plan.625 It seems reasonable that the removal of legacy mining materials in contact with surface waters in Meadow Creek and the EFSFSR under the ASAOC Phase I could impact groundwater recharge and/or streamflow gains from groundwater by diverting streams away from their historical channels. Additionally, the Tribe is concerned that the Forest Service dismissed other projects and has not looked at cumulative downstream effects on the EFSFSR, SFSR, and the mainstem Salmon River. The SDEIS should be revised to include these analyses. As the Tribe has commented previously in this letter regarding the SDEIS, the Forest Service's reliance on external agency permitting requirements is inadequate to protect water quantity and the Tribe's treaty-reserved rights.	WTR	The effects of the ASAOC on surface water quality have not been quantitatively assessed and would have a similar effect on water chemistry under the No Action and Action Alternatives. Downstream effects of the Project on stream flow rates are described in SDEIS Section 4.8.2.2 and are not expected to be measurable below the East Fork SFSR confluence with Johnson Creek. SDEIS Section 4.9.2.2. describes that analyte concentrations in streams downstream of the Project are expected to be the same or lower than current conditions.
Samuel Penney (Chairman)	19396	409	5.9 Surface Water and Groundwater Quality As noted above, the SDEIS fails to consider a changing climate as a RFFA in their cumulative effects analysis. Halofsky and others indicate "increased magnitude of peak streamflows will damage roads near perennial streams..., thus affecting...water quality and aquatic habitat." Additionally, "[w]ater quality will decrease in some locations if wildfires and floods increase, adding sediment to rivers."	WTR	Explicit numerical modeling of climate change effects is outside of the scope of the EIS analyses. Potential effects associated with climate change are described qualitatively in SDEIS Sections 4.4.2.2., 4.8.2.2, and 4.9.2.2.
Samuel Penney (Chairman)	19396	414	Assumptions stated in the SDEIS Section 4.12.2.2 are that much of the fish habitat modeling and analysis presented in this section are based on the hydrologic and site-wide water chemistry modeling performed by Midas Gold Idaho, Inc., or its consultants. Predictions generated by groundwater and hydrologic models are associated with a degree of uncertainty and can be limited in their predictive power. Yet many of the results in the SDEIS are based on these models. Errors in the input files of any of the models compound as the models are cumulatively used. So many of the conclusions in the SDEIS are based on problematic simulated model results cited in these comments are reason enough for this mine plan approval should be denied.	WTR	Limitations and uncertainties associated with the numerical models used in the EIS analysis are acknowledged and described in SDEIS Sections 4.8.2.4 and 4.9.2.4. Mitigation measures to address modeling uncertainties are described in SDEIS Sections 4.8.3 and 4.9.3.
Samuel Penney (Chairman)	19396	435	Water Quantity Specialist Report The Water Quantity Specialist Report ("WQSR") states, "maintain instream flows for fish... to the maximum extent practicable." What does to the maximum extent practicable mean? Will Perpetua reduce water use and scale back production?	WTR	The Water Management Plan cited in the SDEIS describes steps to maintain instream flows in the Project area including targeted discharges in Meadow Creek during low flow periods and maintaining water balances through process water recycling.
Samuel Penney (Chairman)	19396	436	The Figure 7-8a blue box is for EOY 12 pit extent for both figures but the areas in blue are different. Please provide additional information to explain this figure. Should the figure on the left be EOY 5 pit extent?	WTR	The blue box's label has been revised to "EOY 5 Pit Extent".
Samuel Penney (Chairman)	19396	437	<ul style="list-style-type: none"> Impacts to Groundwater Levels - The WQSR states, "Lowered groundwater levels in the vicinity of the TSF and TSF Buttress are predicted to slightly reduce flows in underdrain systems constructed below the facilities and their liners..." Impacts to Groundwater Flow - The WQSR states, "The presence of the fully lined TSF and TSF Buttress..." However, in the SDEIS the TSF Buttress is not lined. Please reconcile. How were the models run? There is no figure in this document that shows a liner. 	WTR	The statement regarding the fully lined TSF and TSF Buttress pertains to lining of the top surface of the facilities at closure. This clarification has been added to the EIS. Conceptual representations of the liner systems appear in SDEIS Section 4.9.2.2 and in the Water Quality Specialist Report. A citation to the companion documents has been added.
Samuel Penney (Chairman)	19396	438	The WQSR discusses the reduction in stream flow in Meadow Creek between the TSF and Hangar Flats pit compared to baseline of up to 40% (because the creek is lined so no recharge from groundwater), but that the IPDES permitted outfall will largely offset this by the addition of treated water. How long of a stream section is reduced before the outfall? It would be helpful to have a series of figures that show stream reduction percentages in map view over time.	WTR	The IPDES permitted outfall is upstream of the 0.4 mile long stream segment between the TSF and Hangar Flats pit. While not consolidated on a single figure because of the scale needed to illustrate predicted stream flows, SDEIS Figures 3.8-2 and 3.8-3 show the stream locations that correspond to the stream flow predictions depicted in SDEIS Figures 4.8-11 through 4.8-17.
Samuel Penney (Chairman)	19396	439	Stibnite Gold Project Stibnite Hydrologic Site Model Refined Modified Proposed Action (ModPRO2) Report The Hydrologic Site Model Refined Modified Proposed Action (ModPRO2) Report does not model the filling of the TSF in Mine Year -1, even though the model includes Mine Year -1. This is a concern, as the October 8, 2020 Brown and Caldwell memo on water right diversion rates and volumes mentions	WTR	As depicted in SDEIS Figure 4.8-3 mill demand (i.e., filling of the TSF) starts in Year -1 and was incorporated into the effects analysis.

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			filling the TSF in Mine Year-1 may result in the need for mitigation for Forest Service water rights for Wild and Scenic Rivers on the Salmon River. Was a hydrologic model done in order to know this is an issue and that mitigation may be needed? Why wasn't it done with the current hydrologic model for a cumulative effect?		
Samuel Penney (Chairman)	19396	440	Section 3.2.1. For West End pit lake development, the 100-year post-mining SHSM climate scenario is based on historical data from 1918 to 2017. Is this a valid assumption? How might climate change affect these scenarios (more water, less water, precipitation more as rain versus snow, earlier or later peak flows, etc)?	WTR	Explicit numerical modeling of climate change effects is outside the scope of the EIS analyses. Potential effects associated with climate change are described qualitatively in SDEIS Sections 4.4.2.2., 4.8.2.2, and 4.9.2.2.
Samuel Penney (Chairman)	19396	441	TSF consolidation water is treated in the post-mining period through Mine Year 40. What happens if treatment is needed beyond Mine Year 40? Will Perpetua be required to continue treating?	WTR	The volume and water chemistry of mine effluents would be monitored through operations and into the closure and post-closure periods. Water treatment would be required until discharge volumes decreased to minimal flow rates.
R. Skipper Brandt, Ted Linsely, Denis Duman		4	Throughout the site, old tailings piles left by previous mining companies were never properly constrained and currently leach metals into nearby streams and the groundwater, the Modified Mine Plan in the SDEIS plans will include activities to improve water quality, such as removing legacy waste rock, removing old underground workings and removing legacy tailings to reprocess and safely store them. It is very important that if mining operations are approved, these proposed actions to address legacy impacts remain in the final plan for the Stibnite Gold Project. As it stands, the only opportunity on the table today to address legacy waste and contamination of the site is through approval of this project. What is not clear is what will happen if a No Action alternative is selected? Will the current levels of contamination of our Salmon River continue?	WTR	If the No Action Alternative is selected, additional removal of legacy mine wastes from the East Fork SFSR would currently be limited to those included in Phase I of the ASAOC work described in Section 1.3.
R. Skipper Brandt, Ted Linsely, Denis Duman		10	With respect to the chemistry of the tailings deposited into the TSF, chemicals such as mercury, cyanide and arsenic will be neutralized, stabilized or removed as part of the processing cycle before any tailings material is deposited into the TSF, further reducing risk of impacting water quality.	WTR	No further response required. General in nature or position statement.
R. Skipper Brandt, Ted Linsely, Denis Duman		11	Over the past few years, the ongoing study of the Stibnite Gold Project has highlighted the poor environmental conditions that exist today at Stibnite because of past operators. Arsenic levels in the East Fork of the South Fork of the Salmon River are far beyond safe standards. Each year, hundreds of tons of sediment continue to be dumped into the East Fork of the South Fork of the Salmon River and other waterways from Blowout Creek, impacting water quality and aquatic habitat.	WTR	No further response required. General in nature or position statement.
Margaret Conway		1	I am familiar with the mine, as I was a biotech and hydrotech for 30 years on the Payette National Forest, including the East Fork South Fork Salmon River areas. I also produced the air quality monitoring report for PNF, which included finding sources affecting the PNF, such as visibility and particulate matter, precipitation, and fish habitats and lake chemistry monitoring sources. I surveyed high mountain lakes throughout the PNF. I am concerned (as many others are) about acid mine drainage and other contaminants (arsenic, antimony, mercury, etc.) that may be present in the waters discharged by the Stibnite Gold Project. The PNF study stated that water studies showed that the pit lake and the waste rock pile would need permanent water treatment (!) to stop toxic metals from leach into water and contaminating the East Fork. I also read that the Yellow Pine Pit would be drained to mine, before it was partially refilled with rock and "the pit would be shaped then lined with a cover (!) to prevent toxic metals from leaching into Stibnite Lake which the East Fork will flow through (!)". I think your ideas about what would happen to fish and wildlife and water quality have not been studied enough. The idea that the lake and rock pile would need permanent water treatment is unreasonable as is the idea that any cover would be sufficient to protect the East Fork. You are taking an incredible chance that this project would not affect water quality, wildlife, fish, and fish habitat; and could possibly put the adjacent wilderness at risk; and destroy endangered salmon, steelhead and bull trout; and the anadromous streams forever!	WTR	Effects of the SGP on water chemistry, wildlife, and fish/fish habitat are described in SDEIS Sections 4.9.2.2, 4.13.2.2, and 4.12.2.2, respectively. These include assessments of the potential for acid mine drainage and leaching of constituents from mined materials which conclude that the potential for acidic drainage is very low but that controls for leached constituents need to be included in the Project. These controls include water treatment that is expected to be required for a period of up to 40 years plus geosynthetic liner systems over mined materials to limit their contact with meteoric waters and the environment. These effects are based on studies conducted over the past seven years. The SDEIS recognizes the limitations on forecasting future conditions as described in Sections 4.8.2.4 and 4.9.2.4. Mitigation measures to limit forecasting uncertainty are described in SDEIS Sections 4.8.3 and 4.9.3.

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			I am against this Project. I think the Forest Service should deny the Stibnite Gold Project.		
Q. Barrett		1	The Stibnite Mine will have irreversable habitat loss + other negative impacts on fish, mammals, vegetation + recreation for over 100 years. This land is home + sacred to the Nez Perce Tribe who use the land for traditional hunting, foraging, + fishing under the protection of treaty. How will the water stay pristine? How will heavy metals not leak? It is wilderness for a reason. How will the habitat of ESA listed species not be harmed? NO FISH TUNNEL.	WTR	The existing condition of the mine site area is a largely unreclaimed historical mining operation site that is not considered wilderness. Protective measures for stream water chemistry and fish/fish habitat are described in SDEIS Chapter 2 with the predicted effects of the Project described in SDEIS Sections 4.9.2.2 and 4.12.2.2, respectively. Further, the potential water chemistry and fish/fish habitat on Tribal Treaty Rights and Interests are described in SDEIS Section 4.24.2.2.
Sharon Morning		2	I also stand with the threatened bull trout. Officials with the Idaho Conservation League cited a fisheries specialist's report indicated "a net decrease in quantity and quality of bull trout habitat would occur" despite Perpetua Resources' plans to remove barriers to fish passage and increasing lake habitat.	WTR	No further response required. General in nature or position statement.
John Rygh		10	<p>Water Quantity and Quality</p> <p>Increasing lack of access to freshwater resources is a well-documented global trend. In terms of essential benefits to humans, freshwater is far more valuable than any amount of gold. The SDEIS analysis of effects to water resources is somewhat improved over the previous DEIS, but the results are still fraught with such a high degree of uncertainty, that the Forest Service will be hard pressed to base any reasonably defensible decisions on it. Future predictions by their nature contain uncertainty, but more thorough analysis could have been done to reduce that uncertainty, yet that did not happen. The reliance on 'industry standard' methods often sets a much lower bar than the "best available science" that NEPA calls for.</p> <p>Way back when that first draft plan landed on my desk at the Forest Service, I told my boss that the FS had better retain the services of some top-notch geochemists and hydrologists well versed in numerical modeling if they hoped to conduct an adequate analysis of the project. I even suggested a few names.</p> <p>Well, that went nowhere and now eight years later it is apparent that this still hasn't been done. Almost all affected resources are linked to water in some way and the predicted effects to those resources are dependent upon predictions of water quality and quantity. These predictions are all based on computer models produced by contractors hired by the project proponent. The lack of any critical review in the SDEIS of the model data inputs, assumptions, conceptualizations, and process steps suggests that either the Forest Service and its NEPA contractors did not have the experience to conduct an in-depth critique, or that they simply accepted the model results at face value. The Forest Service needs to address the following model-related issues, and to do this they need expertise that is currently lacking.</p>	WTR	<p>Limitations and uncertainties associated with the numerical models used in the EIS analysis are acknowledged and described in SDEIS Sections 4.8.2.4 and 4.9.2.4. Mitigation measures to address modeling uncertainties are described in SDEIS Sections 4.8.3 and 4.9.3.</p> <p>The groundwater flow modeling was subject to a third-party review as described in the Final EIS.</p>
John Rygh		12	<p>This particular document was foundational in determining climatology input parameters for the Meteoric Water Balance (MWB), therefore I am prevented from evaluating whether the choice of dataset was appropriate. The Forest Service needs to obtain this document and review the conclusions. A basic problem with the climatology data is the fact that there are only a few years of site-specific data.</p> <p>The alternative PRISM dataset is based on extrapolated precipitation and temperature data primarily from SNOTEL sites far away from the project site. The following excerpt from the Water Quantity Specialist Report raises some questions.</p> <p>A long-term climatological record is not available for the SGP. Therefore, Parameter-elevation Regressions on Independent Slope Model (PRISM) data compared with the National Weather Service and Snow Telemetry (SNOTEL) Secesh Summit site is used to develop average precipitation and temperature estimates (Table 6-1). The Secesh Summit site is located 35 miles northwest of the SGP, at a comparable elevation (Brown and Caldwell 2017).</p> <p>First of all, since the PRISM data is based on SNOTEL data the utility/validity of comparing it with a dependent variable (a single SNOTEL site) is questionable. Then one wonders why the Secesh site was chosen for this comparison. The elevation is only comparable to the valley floor at Stibnite, not the surrounding uplands. The Deadwood Summit SNOTEL site is of similar elevation and much closer to Stibnite than Secesh Summit. Why wasn't this used? It appears that there are many other steps in the</p>	WTR	<p>The elements of the meteoric water balance are provided and described in the Site-Wide Water Balance Report. This document provides the data and conclusions on which further modeling was based.</p> <p>The selection of SNOTEL data was based on identification of a nearby location at a comparable elevation to the Project with a long record of data collection. The PRISM dataset is then able to account for changes in elevation around the area of analysis.</p> <p>The water balance model has a non-proprietary reader that allows inspection of the model data and results.</p>

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			MWB model, however the model is proprietary so confirmation of its validity is not possible unless the Forest Service can obtain the program from Brown & Caldwell.		
John Rygh		13	<p>The glaring fundamental flaw in the MWB model is a failure to take climate change into account. The project effects are expected to extend up to 100 years into the future. To rely on a dataset from the present back to 100 years in the past is absurd. Was this a case of overlooking the obvious, or willful ignorance? Having cobbled so many different models together for this analysis, was there some reason why even rudimentary climate projections were not accounted for? All subsequent model outputs rest on this MWB. The term "castles made of sand" comes to mind. The Forest Service needs to demand that climate change considerations are incorporated into all modeling. The latest CEQ guidance (CEQ- 2022-0005) on the matter is clear:</p> <p>As discussed in this guidance, when conducting climate change analyses in NEPA reviews, agencies should consider: (1) the potential effects of a proposed action on climate change, including by assessing both GHG emissions and reductions from the proposed action; and (2) the effects of climate change on a proposed action and its environmental impacts.</p>	WTR	Explicit numerical modeling of climate change effects is outside of the scope of the EIS analyses. Potential effects associated with climate change are described qualitatively in SDEIS Sections 4.4.2.2., 4.8.2.2, and 4.9.2.2.
John Rygh		14	<p>The subsequent hydrologic models suffer from a variety of shortcomings. Sensitivity and uncertainty analyses were done for some, but not all models. Output from one model serves as input for another in many cases, greatly compounding uncertainty. Was this accounted for and quantified? Some models (e.g. the SHSM) are created using the MWB and MODFLOW6, but appear to be coupled in only one direction. It is not clear how evapotranspiration (ET) was modeled in the MWB. It appears that potential ET was used (Site Wide Water Balance, p. 38) instead of actual ET. This introduces significant error in the MWB. The ET tool available for MODFLOW6 may do a better job. The use of monthly timesteps in various models is not particularly useful when analyzing effects to fisheries since hydrologic events (e.g. rain-on-snow events that are expected to increase in frequency with climate change (Espinoza, et. al., 2018) that can have significant impacts to fish habitat are averaged out thus failing to account for their out-sized impacts on channel morphology. Previous recommendations to use fully integrated, physically-based, daily timestep models (of which there are plenty of choices) seem to have been ignored.</p> <p>The Water Quantity Specialist Report at page 85 makes a blanket excuse for failing to adequately evaluate model uncertainty by selectively paraphrasing Rzepecki (2012), claiming it would be too expensive and time consuming.</p> <p>Many of the other, more sophisticated approaches listed above for evaluating model uncertainty can be quite involved and, due to limitations of software and hardware, combined with the budgetary and time constraints of most projects, are still not practical outside of the realm of research (Rzepecki 2012). Rzepecki acknowledges the difficulty of implementing better approaches, but does not consider them impractical and goes on to present a simplified approach that compares favorably with Calibration Constrained Monte Carlo methods. Why was this approach not subsequently investigated? Rzepecki's paper is ten years old and there are likely significant improvements made in uncertainty analysis since then that should be investigated. The expense excuse doesn't hold much water when one considers that Perpetua has just received a huge Department of Defense grant earmarked to conduct further environmental studies. So do it.</p>	WTR	Limitations and uncertainties associated with the numerical models used in the EIS analysis are acknowledged and described in SDEIS Sections 4.8.2.4 and 4.9.2.4. Mitigation measures to address modeling uncertainties are described in SDEIS Sections 4.8.3 and 4.9.3.
John Rygh		15	<p>Other model-related issues</p> <p>The SHSM model boundary is located too close to the YP pit which will produce erroneous groundwater drawdown predictions. The Meadow Creek alluvial aquifer needs further testing. This is the most extensive aquifer in the project area, and expected to supply most of the groundwater for process makeup water, yet it has only received one aquifer test that supports the modeled Gestrin feature.</p> <p>Given the usual heterogeneous properties of glacial outwash deposits, further aquifer testing would seem to be warranted to confirm model predictions.</p>	WTR	<p>The SHSM model boundary is defined by topography. The groundwater drawdown predictions are extensive within the analysis area but subject to limitations and uncertainty associated with predictive modeling. These drawdown forecasts would be confirmed based on monitoring data and modeling updates over the course of the Project.</p> <p>There have been three tests of the alluvial aquifer in the Meadow Creek area that define the hydraulic properties there. The Gestrin Well test was the most recent of those tests and indicated a zone of higher alluvial permeability compared to the other test work.</p>

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John Rygh		16	There are errors in the West End pit lake model. The Meadow Creek Fault Zone was modeled, but the West End Fault Zone (WEFZ) was not. Why? Given the fact that wells drilled into the WEFZ have produced up to 50 gallons per minute of high-concentration arsenic water (Rygh, 2015), and that the fault strikes northeastward under Sugar Creek, the Forest Service should investigate the possibility that it could form a preferential groundwater flow path from the West End pit lake to Sugar Creek.	WTR	Available hydrologic data from the West End area indicates that the fault zone is a low permeability feature with hydraulic parameters represented by the bulk properties assigned in the groundwater flow model.
John Rygh		17	Other hydrologic issues Speaking of the West End pit lake, the SDEIS at 2.4. 7.5 states that if spillage of surface water from the West End pit lake becomes imminent, a portable system would be brought to the site to treat and discharge pit lake water to maintain levels below the rim of the lake and prevent uncontrolled release of lake water. So would this option be in place forever? Would the Forest Service assume responsibility for this after all reclamation bonding has been refunded to Perpetua?	WTR	Responsibility for reclamation, closure, and post-closure activities would be retained by the Project operator until release of the reclamation closure bond. Project effects with the potential to occur over long time periods would require financial bonds to cover those mitigation of those effects.
John Rygh		18	The protection of springs, seeps, and associated groundwater dependent ecosystems (GDEs) appears to be non-existent. Impacts are discussed on page 4-162 of the SDEIS but only springs within the model predicted 10-foot groundwater drawdown would be monitored for any changes. To imagine that effects (e.g. reduction/cessation of flow, death of dependent flora & fauna) would not occur with less than 10 feet of drawdown is completely unrealistic. The proposed solution to this potential problem is to monitor select seeps and springs (SDEIS, p. 4-178) and if groundwater drawdown is not behaving as predicted, then maybe do some more monitoring to maybe figure out what to do about it. Seriously. It appears that this mitigation is designed to validate groundwater modeling, not protect GOE resources. Since Perpetua is diverting water left and right out there, perhaps a mitigation measure of supplemental watering of at least the highest priority (in terms of unique GOE components) is warranted if they become dewatered by drawdown.	WTR	An associated mitigation measure has been added to Section 4.9.3 of the Final EIS.
John Rygh		19	There does not appear to be any discussion of the effects of using geosynthetic liners in stream reconstructions (during & post-mining). Of particular relevance are the implications of curtailing any surface water/ groundwater exchange through the hyporheic zone. Despite the significance of hyporheic zones to aquatic biota, the term is mentioned only in passing in section 3.12.4.1 of the SDEIS where it states: "... there are diurnal variations and hyporheic conditions that protect the eggs and alevins reducing mortality rates. Therefore, while summer temperature thresholds may show zero miles of suitable habitat, this may not be a true representation of the conditions in the river. This appears to suggest that hyporheic flow may act to mitigate the poor temperature predictions of the model while simultaneously questioning the real-world validity of the model. Interesting. Oddly enough no synoptic surveys were conducted in the area streams to determine losing and gaining reaches, so little is known about the existing conditions of groundwater flux. If, for example a lined reconstructed stream replaces a natural reach which was gaining during summer base flow conditions, a source of cold flow upwelling into the hyporheic zone would be lost. This would have deleterious effects on the survival of various salmon id eggs and fry. If the proposed stream channel reconstructions incorporate a significant amount of clean non-PAG/non-metal leaching material into the floodplain within the lined volume, that may act as a limited perched water table/ hyporheic zone that could drain to base flow in the summer months. Whether this would be enough to replace the natural groundwater contribution to base flow would depend on the storage volume of that material. Have any mitigations addressed the potential loss of hyporheic flow?	WTR	The use of geosynthetic liners to inhibit contact between mined materials and surface water for water quality protection also inhibits hyporheic flow of groundwater to surface water. The cooling effects of the hyporheic flow on surface water would need to be replaced via other measures such as riparian shading.
John Rygh		21	Water Quality/ Geochemistry Many issues with the geochemical modeling remain in the SDEIS. Unfortunately I have run out of time to address them, and other commenters have done a more thorough job. I will simply reiterate the concerns expressed by D. Kirk Nordstrom (Nordstrom, 2019) in the original DEIS comments. I have attached a copy of his review. Some of the points he raised have since been addressed in the SDEIS and	WTR	No further response required. General in nature or position statement.

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			can be ignored, while I have a strong suspicion that other fundamental problems have not been corrected. Please consider his points carefully, as there a few other geochemists with his level of expertise.		
Samuel Stone		2	<p>Thankfully there is a difference between Colorado in 1850 and mining today: we have proven the risks of mining, and proactively enacted measures to protect our precious watersheds and ecosystems. Legal measures were enacted to protect the South Fork Salmon River. The South Fork Salmon river, threatened by the Stibnite Gold Project, is a major tributary to the Wild and Scenic Main Salmon river. The South Fork Salmon and many sections of its tributaries have been deemed eligible and suitable under the Wild and Scenic Rivers Act by the U.S. Forest Service. These rivers and tributaries are essential to the health of major ecosystems, the health of the people, and the health of the wildlife. Habitants of the South Fork Salmon include endangered Chinook salmon and steelhead, protected by the Endangered Species Act of 1973.</p> <p>The South Fork Salmon also offers essential habitat and breeding grounds for migratory fish. With the South Fork Salmon at the head of the tributaries, it is of utmost importance to conserve and protect the precious water for everyone downstream. Completing and operating the mine would put Perpetua Resources Corp. at substantial risk for litigation in violation of the Endangered Species Act, the Wild and Scenic Rivers Act, Clean Water and Air Acts (CWA, CAA), and the National Environmental Policy Act (NEPA) for various crimes against the environment and its inhabitants (Coriell et al. 2020).</p>	WTR	No further response required. General in nature or position statement.
Deborah Trent		1	<p>I am commenting about what appears to be a major shift in direction from the mining of gold, to the mining of Antimony. The recent large sum of money from the US Department of Defense to Perpetua Resources to do an environmental and engineering studies on antimony trisulfide, has me very concerned.</p> <p>There has been recent research about Antimony in 2021 by a group of International Scientists (see enclosed document: Environment International) that proves that the mining of Antimony is potentially toxic to ecosystems and public health via the accumulation in the food chain.</p> <p>However, there are gaps in understanding how poisonous and carcinogenic it is. Also unclear is what are the mechanisms that cause the toxicity.</p> <p>Antimony in certain biochemical states is one of the most explosive elements on earth! The transportation, storing, and processing of it is very dangerous. Will it be stored on site? If not where and what kind of transport in and out of the mountains and on our Highways 55 and 95 would permit it? What if there was a fire in the area that would come into contact with it? OR God forbid, an act of terrorism?</p> <p>If Antimony leaches into the South Fork of the Salmon or Antimony dust particles build up in the soils, how would this affect fish, wildlife, and the entire ecosystem for years to come?</p> <p>It seems to me that there is no amount of money in the world that would cover all these "what ifs" with a 100% guarantee that some sort of event could be avoided. Any of these situations could happen and the close proximity to our communities and Wild and Scenic Salmon River, would be complete devastation.</p> <p>The RISKS OUTWEIGH THE BENEFITS here. This is a short term bad decision that could have very irreversible long term damaging consequences.</p> <p>Please, chose the NO- Action alternative! I do not see any way that the Stibnite Mine should be allowed to proceed.</p>	WTR	<p>The handling and transportation of an antimony concentrate that would be produced by the Project are described in SDEIS Section 2.4.5.7. Measures to containerize and limit exposure risk of produced antimony concentrate have been incorporated into the Project. Antimony concentrate consists primarily of antimony sulfide minerals and is not explosive in that form.</p> <p>Controls and effects of antimony leaching from mined materials to surface waters are described in SDEIS Section 4.9.2.2.</p> <p>Controls and effects of antimony present in dust generated from Project activities are described in SDEIS Section 4.3.2.2.</p>
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		1	<p>1.0 Surface Water and Groundwater Quantity and Surface Water and Groundwater Quality</p> <p>We found Sections 3.8 and 3.9 overall provide a reasonable characterization of water quality and quantity for existing water resource conditions at the SGP site. Sections 3.8 and 3.9 conveyed the existing environmental conditions accurately. The summary of baseline surface water and groundwater monitoring data from recent years, as well as, the vast information contained in agency reports and published technical papers yields an appropriate representation of the groundwater and surface water</p>	WTR	No further response required. General in nature or position statement.

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			conditions at the SGP. Particularly, we appreciate the discussion of the extensive testing and knowledge of groundwater in Section 3.8. Comments on these two sections are in Attachment A.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		2	<p>2.0 Calculation of Percent Difference in Streamflow</p> <p>The discussion in the Surface Water Quantity subsection of Section 4.8 beginning on page 4-163 and including Table 4.8-4 should be clarified. It is difficult to replicate the values from the cited source and values presented should be percent change, (i.e., (MMP – EC)/EC) and show the direction of change.</p> <p>Similarly, references to relative percent difference should be replaced with percent change and the title of Table 4.8-4 should be modified to describe the calculation performed, such as “Average Monthly Percent Change in Stream Flows during the Mine Operations Period”. Additionally, please clarify if the row labeled “Maximum Monthly Reduction” in Table 4.8-4 is maximum reduction in cubic feet per second (cfs) or a maximum percent change. A minimum percent change and the durations and periods of such occurrences would be helpful to assess impacts. Lastly, please verify calculations to confirm values are correct and describe the calculation performed for transparency.</p> <p>The description also reads as biased toward maximum negative impact without a description of duration, actual magnitude of change in flow rate, and minimum impact or positive impact. The percentages used can be misleading because there is a not a description of the actual change in flow.</p> <p>Please clarify this information with a presentation of the duration of maximum impact and add magnitude of change to the discussion.</p>	WTR	<p>Table 4.8-4 has been clarified to indicate that the maximum monthly reduction is a maximum percent change. Other items on the table provide an appropriate description as presented.</p> <p>The intention of the table is to provide information as to the locations where stream flows are affected by the Project and the relative magnitudes of those effects. Information regarding the durations of effects are presented in Figures 4.8-11 through 4.8-17.</p>
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		3	<p>3.0 Discussion of Groundwater Drawdown</p> <p>The discussion in the Impacts to Groundwater Flow subsection of Section 4.8 describes groundwater level drawdown. Perpetua Resources largely agrees with the interpretation and discussion. A point of clarification in the discussion surrounds the depictions of groundwater drawdown associated with dewatering in the Hangar Flats and Yellow Pine pit areas where changes in existing topography are not considered. Not including discussion of this important change in topography may lead to interpretations that groundwater levels do not recover and remain depressed even at 100 years post-mining (SDEIS, Figure 4.8-9).</p> <p>Groundwater level drawdown is calculated as the difference between groundwater elevations in the existing conditions and groundwater elevations measured or predicted at a future date. It is important to recognize that existing conditions groundwater elevations reflect levels of saturation in consolidated and unconsolidated materials. If those materials are removed by mining, groundwater elevations are necessarily lowered. This condition does not mean that groundwater levels in the post-mining period remain at a great depth below the post-mining surface topography. In fact, the depth to groundwater in locations where materials will be removed may be similar to depths below ground surface during existing conditions.</p> <p>The inactive cells in Figure 4.8-9 are areas where proposed mining will remove geologic materials, lowering the topographic surface. Cells cannot be deleted from the model, but they can become inactive, and simulation of the groundwater surface is then characterized in the underlying active cells.</p> <p>The areas of greatest persistent drawdown generally coincide with these mined out areas, creating an easily misunderstood depiction of the state of recovery of the groundwater system post mining, whereas the trough-like areas of significant drawdown represent changes from the existing conditions groundwater levels without regard to changes in topography rather than depression of the post-mining water table. Thus, the general character of groundwater flow through the mining area is anticipated to be similar to existing conditions in the post-mining period. Perpetua Resources suggests that an interpretation of groundwater levels include a discussion of topographical changes and changes in depth to groundwater to further qualify the information presented.</p>	WTR	<p>The role of topographic changes in depth to groundwater interpretations in the areas that have undergone permanent topography changes has been added to the Section 4.8.2.2.</p>

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		4	4.0 Groundwater Dependent Ecosystems The effects of dewatering on groundwater dependent ecosystems (GDEs) are discussed in the SDEIS in Section 4.9 and shown in Figure 4.8-10 as the presence of seeps and springs that are within the predicted extent of the 10-foot groundwater drawdown contour. While text on page 4-162 provides discussion on the uncertainties associated with the 10-foot drawdown contour, the visual depiction on Figure 4.8-10 and the legend to that figure do not capture those uncertainties, including that impacts to specific seeps or springs would depend on the degree of interconnection between the perennial surface water and the aquifer affected by mine-related pumping. It should also be noted that many of the GDEs depicted on Figure 4.8-10 are within the mine disturbance footprint and will be directly lost during construction and should not be double counted by including them with GDEs with a potential to be affected by dewatering and water supply pumping. Perpetua Resources suggests that the document should reiterate the uncertainty with the 10-foot contour, discuss interpretation of the 10-foot contour, and show only the seeps and springs that will physically exist after mining and reclamation.	WTR	The uncertainties in predicting groundwater drawdown effects on groundwater dependent ecosystems are described in Section 4.8.2.2. These uncertainties are associated with each site-specific relationship between a GDE and local groundwater. These site-specific relationships typically cannot be determined until the groundwater aquifer is affected by large scale pumping for a period of time. Therefore, they are not currently known and not represented on Figure 4.8-10 which presents the conservative extent for GDE effects. The figure also depicts the stream locations that would be within the areas of surface disturbance so that these areas can be differentiate from locations with groundwater drawdown outside the disturbance footprint.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		5	Paragraph 3 on page 4-151 omits that the groundwater model also predicts streamflow. While baseflow is described in the 4th bullet of the last sentence, this neglects to include runoff contributions to streamflow and the predictions of peak flows in the annual hydrograph. The suggested clarification to the sentence is "...4) streamflow from groundwater discharge and runoff."	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		6	The idea of a steady-state calibration is inaccurate. The model was calibrated to transient groundwater level and streamflow calibration targets. Steady-state calibration is discussed in the last sentence of the fourth paragraph on page 4-154. Steady-state calibration should be struck.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		7	As well, the third paragraph on page 4-152 incorrectly states pre-mining steady state conditions and transient conditions associated with the pumping test. While the model was calibrated to the transient conditions of the pumping test, the model was also calibrated to the transient conditions of groundwater level in the monitoring wells and streamflows. A suggested correction to the statement is, "Model calibration was accomplished using a process that included transient simulation of pre-mining conditions followed by localized calibration of transient response to pumping tests."	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		8	The last sentence of the third paragraph on page 4-152 is mostly correct but would benefit from additional detail. The suggested revision is "...locations by varying input to the Meteoric Water Balance (MWB) including precipitation bias, deep percolation rate, and porosity coupled with variation in MODFLOW of horizontal hydraulic conductivity, specific yield and specific storage within ranges of measured values for each parameter in each of the modeled hydrologic units."	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		9	Elements in addition to the partitioning of unconsolidated dominated areas and bedrock dominated areas are included in the MWB. The Lower East Fork of the South Fork of the Salmon River (EFSFSR), Upper EFSFSR, Meadow Creek, and Sugar Creek were calibrated for precipitation bias and temperature was adjusted based on elevation. The discussion of the components of the MWB in the last paragraph on page 4-151 continuing into the first paragraph on page 4-152 is incomplete with the omission of components. Perpetua Resources suggests that this additional detail is added for completeness.	WTR	Revision not accepted. The SDEIS Section 4.8.2.2 summarizes the more detailed calibration information which can be found in the referenced model documentation.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		10	6.0 Discussion of Groundwater Model Sensitivity The discussion of groundwater model sensitivity would be significantly improved by simplifying clarifying misstatements and being directly applied to the Stibnite Hydrologic Site Model (SHSM). The following sections provide recommendations to make the groundwater model sensitivity discussion focused and to increase accuracy.	WTR	General sources of model uncertainty are included in the SDEIS Section 4.9.2.4 because they are applicable to the use of model predictions to evaluate Project effects.

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			Some of the description in this section is inapplicable to the SHSM and it is suggested that the following be removed to avoid potential confusion: • The second set of bulleted items on page 4-175 are not specific to the SHSM and don't add to the description of uncertainty relevant to the SDEIS.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		11	The first 2 paragraphs on page 4-176 are not relevant to the SHSM. An approach is discussed of altering a model through a sensitivity analysis process and recalibrating prior to use for predictive purposes. The SHSM used for predictions during and following mine operations was not altered by the sensitivity analysis. These two paragraphs should be deleted to avoid potential confusion around the use of the SHSM and the role of the sensitivity analysis that was performed.	WTR	The first paragraph on SDEIS page 4-176 notes the limitations of using sensitivity analyses when the modification of model parameters results in de-calibration. This paragraph has been retained while the following paragraph has been removed as it reiterates the content of the first paragraph.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		12	Similarly, the third paragraph on page 4-176 points out that while there are other approaches to uncertainty evaluation, they are not typical nor practical for model applications such as the SHSM. Since these alternative methods were not used for evaluating uncertainty in the SHSM this discussion seems out of place and not relevant to the discussion of uncertainty specific to the SHSM and should be deleted to avoid confusion.	WTR	The SDEIS examines the range of model predictions as indicated via sensitivity analyses. Therefore, the limitations of sensitivity analyses are included in the discussion in SDEIS Section 4.8.2.4. The rationale for not applying other approaches is responsive to other comments on the modeling that seek application of these more intensive approaches.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		13	The next paragraph (paragraph 4 on page 4-176) includes an assertion that "Parameter value selection for the hydraulic characteristics simulated in the SGP hydrologic model is the primary source of uncertainty..." for the SHSM. A reference that supports this conclusion is not included and this was not a conclusion of the SHSM calibration report (Brown and Caldwell [BC] 2021e) or sensitivity analysis report (BC 2021h). The SHSM sensitivity analysis has a contrasting conclusion and demonstrates the model is not sensitive to bedrock hydraulic conductivity or specific yield. Many of the scenarios tested using substantially higher bedrock hydraulic conductivity resulted in a poorly calibrated model. A reference supporting the conclusion in the SDEIS should be included or the statement revised to accurately represent the technical papers cited in this comment.	WTR	The text is appropriate as written and supported by the information presented in Brown and Caldwell 2021h.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		14	The final conclusion in paragraph 4 on page 4-176 is that the "...bedrock aquifer hydraulic characteristics are important because bedrock-hosted groundwater is extensively present throughout the Analysis Area". This statement is not referenced and is not supported by the Hydrologic Conceptual Site Model (HCSM), or the results of aquifer testing provided in the SHSM model report (BC2021e) and the SGP Hydrogeologic Data Adequacy Review (BC 2021g). Specifically, the HCSM includes bedrock groundwater flow present, in any substantial quantity, in the transition zone only (SHSM layer 3) and the deeper bedrock zones are substantially less permeable and no significant groundwater is present (SHSM layers 4 and 5). The sensitivity analysis clearly demonstrates that increasing hydraulic conductivity in SHSM layers 4 and 5 results in a poorly calibrated model that would be unsuitable for use in evaluating mine impacts. Perpetua Resources recommends that this sentence be deleted.	WTR	No revision made. Bedrock groundwater is present throughout the area of analysis.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		15	Paragraph 6 introduces a comparison of pit dewatering without the context discussed in previous paragraphs establishing the poorly calibrated condition of the SHSM under the increased hydraulic conductivity conditions. To avoid misunderstanding the pit dewatering comparison the following text should be added, "This comparison of pit dewatering rates illustrates the conclusion that a very poorly calibrated model is required in order to generate pit dewatering rates that are substantially different from those estimated by the fully calibrated SHSM." The calibrated SHSM predictions for pit dewatering are therefore suitable for evaluating mine impacts because "... there are no substantially different combinations of input parameters that would result in a more closely calibrated model and thereby potentially change predictions of future mine impacts. (BC2021h)."	WTR	No revision made. The intent of the SDEIS Section 4.9.2.4 is to provide some context around the range of potential pumping rates.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		16	Paragraph 7 on page 4-176 that continues into first paragraph on page 4-177 and the second paragraph on page 4-177 speculate on potential impacts of simulations made using a model based on hydraulic parameters other than those in the fully calibrated SHSM. This discussion is potentially misleading because the predictions were made with a poorly calibrated model, and are, by definition, untested and include potentially unacceptable uncertainties. Because of the uncalibrated model condition of these sensitivity analysis scenarios, the dewatering comparisons and inferred impacts that form the basis of	WTR	No revision made. The intent of the SDEIS Section 4.9.2.4 is to provide some context around the range of potential pumping rates.

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			these paragraphs do not add to the understanding of uncertainty in the calibrated SHSM. These two paragraphs should be deleted.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		17	<p>7.0 Discussion of Water Rights</p> <p>The description of water rights in section 4.8 is generally accurate but could benefit from some additional clarifications. We suggest that discussion surrounding the water rights application status, description of the application, description of the proposed mitigation plan, and the state and federal instream flow water rights could be provided in greater detail. As well, an explanation of the diversion rates cited would provide greater clarity. Suggested comments on each of these items is below.</p> <p>The water right application status is described in the future tense with phrasing such as “Perpetua plans to apply” and “After a water right application has been filed”. This tense is not current now and will not be current when the FEIS is published. The water right application was submitted to the Idaho Department of Water Resources (IDWR) in October 2021. Since that time, the application has been in review, posted for public comment and Perpetua Resources has been working to address issues raised during public comment. We suggest that the phrasing of the application submittal status be updated to accurately describe current status with wording such as “Perpetua submitted a water right application in October 2021...” and “IDWR is performing an analysis...”.</p>	WTR	The verb tense around the water rights applications has been modified per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		18	The description of the Idaho Water Resource Board (IWRB) and federal minimum instream flow water rights would benefit from additional detail. It is not stated that Perpetua Resources’ water right application is within the subordination clause of the water right since authorization is being sought for industrial beneficial use. Currently, it is difficult to understand how the IWRB and federal reserve water right would impact Perpetua Resources application. Further, paragraph 5 on page 4-174 states, “...and up to 8.2 cfs of new non-domestic, commercial, municipal, and industrial uses”. This does not apply to Perpetua Resources; however, this is not stated. In the discussion of Water Right 77-14190 and minimum steam flow on the South Fork of the Salmon River (SFSR), the description could be improved by stating, “Instream rights on the SFSR and the EFSFSR are subordinate to all future domestic, commercial, municipal, and industrial (DCMI) uses. There is additional allowance for non-DCMI uses; however, this does not apply to Perpetua Resources because the water right application seeks industrial beneficial use. Perpetua Resources water right applications are within the allowance of the IWRB instream rights.” Additionally, the IWRB Water Right 77-14174 is not identified by water right number in the discussion of the SFSR minimum flow water right. Finally, domestic, commercial, municipal, and industrial uses are commonly referred to as DCMI and we suggest using this more recognizable wording.	WTR	No revision made. The description of water rights in Section 4.8.2.2 is consistent with the relevant water rights Orders. The EIS analysis does not draw any conclusions regarding Perpetua's water rights applications or the IDWR review and decision on those applications.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		19	Similarly, the discussion of the Federal Reserve Water Rights for the Salmon Wild and Scenic River (WSR; 75-13316 and 77-11941) would improve with additional detail of the water right and discussion of how this could impact Perpetua Resources. The Federal Reserve water rights are subordinate to up to 150 cfs of new diversions; however, diversion to storage is explicitly not subordinated. Perpetua Resources water right application is within the diversion allowance of the water right and Perpetua Resources proposed diversion is not junior to the Federal Reserve water rights. However, diversion to storage is a junior use to the Federal Reserve water rights.	WTR	No revision made. The description of water rights in Section 4.8.2.2 is consistent with the relevant water rights Orders. The EIS analysis does not draw any conclusions regarding Perpetua's water rights applications or the IDWR review and decision on those applications.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		20	The first paragraph on page 4-175 introduces water right mitigation measures that will be determined by IDWR. This is correct; however, the discussion does not specify conditions when mitigation would be required, does not state that Perpetua Resources has submitted a proposed mitigation plan, and does not describe the proposed mitigation. Mitigation is anticipated to be required only when Perpetua Resources is diverting to storage and the minimum instream flow in the Federal Reserve Water Rights for the Salmon WSR (75-13316 and 77-11941) are not being met. This condition is expected to be a limited occurrence because diversion to storage is modeled to be required only during initial fill of the tailings storage facility (TSF). Perpetua Resources’ proposed mitigation plan is to mitigate diversion to storage by non-use of irrigation water rights on the Salmon River and Morgan Creek that authorize diversion of up to 10.75 cfs. The proposed mitigation plan over mitigates 1) annual diversion volume to storage, 2) length of affected WSR stream length and, 3) duration. Perpetua Resources suggests that describing the	WTR	No revision made. The EIS analysis acknowledges the potential for mitigation measure requirements associated with the IDWR review and decision on Perpetua's applications but does not draw any conclusions regarding their details which are pending decision by IDWR and are not included in the SGP description reviewed by the Forest Service for this EIS.

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			proposed mitigation, benefits, and conditions when mitigation is required will make this discussion more complete.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		21	With the submittal of Perpetua Resources’ application, the description of the water right can include elements of the water right application. Important elements to include, in addition to the diversion rate, is the diversion to storage rate (9.6 cfs), the annual storage volume (600 acre-feet), and the beneficial use (industrial). These elements are critical to understand how the water right interacts with the minimum instream flow water rights.	WTR	The elements of the water rights application have been added to the revised text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		22	<p>Finally, the discussion cites diversion rates that are different from the diversion rate seeking authorization of 9.6 cfs. Diversion rates of 4 cfs, 4.05 cfs, and 9.68 cfs are used in the text as,</p> <ul style="list-style-type: none"> • “Typical rates of surface water diversion during the build-up of project water inventory would be approximately 4 cfs” • “The maximum diversion rate under existing and proposed surface water rights is 4.05 cfs...” • “...maximum diversions proposed by Perpetua from all sources and uses would be 9.68 cfs...” <p>It is not transparent how these diversion rates were estimated and how the values were applied. A discussion of the 4 cfs and 4.05 cfs and how these apply to the 9.6 cfs sought in the water right application would help clarify the first two bullets. The 9.68 cfs could be a typo because the total authorized water diversion for industrial and mining purposes with existing and proposed water rights is 9.86 cfs. We suggest that the generation of the values be described and why these are different from the diversion rate in the water right application or use the diversion rate in the water right application and existing water rights for clarity.</p>	WTR	<p>The value of 9.68 cfs has been corrected to 9.86 cfs.</p> <p>The discussion of typical diversion rates has been revised based on Brown and Caldwell 2021j (technical memorandum from December 2021 added to reference list).</p>
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		23	<p>8.0 Mercury Water Quality Standards</p> <p>In the Ore Stockpiles sub-section of Section 4.9.2.2 on page 4-190 in paragraph four there is reference to a non-regulatory water quality value calculated by the United States Environmental Protection Agency (EPA), “Other metal leaching concentrations were predicted to be below surface water standards with mercury concentrations between 7 nanograms per liter (ng/L) and 11 ng/L (SRK Consulting, Inc. [SRK] 2021a, Appendix A), but above the 2 ng/L concentration calculated by the EPA”. The meaning of the final phrase of this statement is not clear, but Perpetua Resources is not aware of any “calculation” of a 2 ng/L concentration criteria by EPA. Idaho’s approved Water Quality Standards (WQS) include a fish tissue methylmercury criterion (0.3 milligrams per kilogram) for the protection of Human Health, which Idaho asserts is also protective of aquatic life.</p> <p>The WQS also indicate that, for Clean Water Act purposes, the 12 ng/L total recoverable mercury value from the 2004 Idaho Administrative Procedures Act regulations continues to apply. The Implementation Guidance for the Idaho Mercury Water Quality Criteria published by the Idaho Department of Environmental Quality in 2005 notes a value of 2 ng/L total mercury as the most stringent extreme in a sensitivity analysis to evaluate its methylmercury criteria, and then points to how overly protective such a value would be. Comments from EPA on documents prepared by Perpetua Resources suggested using a 2 ng/L value, but that value is not an adopted or approved water quality criterion. Perpetua Resources notes that National Pollutant Discharge Elimination System permits recently written by EPA for mines in Idaho contain daily discharge limits such as 26 ng/L (US Silver Coeur and Galena Mine – 2019), 53 ng/L and 57 ng/L (Hecla Grouse Creek Mine – 2018), and 40 ng/L, 99 ng/L, and 130 ng/L (Hecla Lucky Friday Mine - 2019), all of which are well above the concentrations predicted for the SGP. Based on the promulgated standard and this additional information, predicted mercury values should only be compared to the applicable standard (i.e., 12 ng/L) and the reference to 2 ng/L should be removed.</p>	WTR	The discussion of the 2 ng/L criteria was included per information provided to the Forest Service by EPA. However, 12 ng/L remains the relevant standard for comparison. Comparisons are made to the 2 ng/L concentration because EPA utilizes that value as an indicator for the potential for methylmercury to accumulate in fish tissue to a concentration above the fish tissue criteria.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		24	<p>9.0 Acknowledgement of Benefits to Water Quality</p> <p>There are multiple occurrences of the SDEIS not acknowledging the positive impacts to water quality that will be realized because of the Project. Section 4.9 appears to be biased without full disclosure of these benefits. There is language in the section that describes significant improvements in water quality as “similar to existing conditions” where, in reality, modeling suggests that improvements can be as much 30 percent to 40 percent or more. The qualification of these benefits as similar to existing conditions understates anticipated improvements. Additionally, there is at least one instance where order of magnitude improvements are not recognized or discussed. Overlooking positive impacts and downplaying the magnitude of improvement renders Section 4.9 not a fully representative effects analysis and demonstrates a bias in the discussion. These occurrences are easily remedied, and Perpetua Resources has commented on these in the comment table with additional detail in the bullets below.</p> <ul style="list-style-type: none"> • In Section 4.9.2.2 on page 4-190 there is discussion of runoff chemistry and toe seepage that are predicted to be above the strictest water quality standard. There is, however, no discussion of improvements to groundwater. It should be stated that the groundwater quality predicted below the TSF Buttress is significantly improved compared to the current conditions as a result of removing the Hecla Heap and spent ore disposal area (SODA)/Bradley tailings. Groundwater arsenic and antimony concentrations are predicted to be an order of magnitude lower than the current conditions as a result of the mine plan. Furthermore, there is a significant reduction in infiltration from the TSF Buttress during the post-closure period as a result of placement of a geosynthetic cover and infiltration is reduced to near zero. The following text should be added to provide a full account of the predicted changes to groundwater in the Hangar Flats area: “Upon placement of the geosynthetic cover on the TSF Buttress, infiltration is significantly reduced and arsenic and antimony concentrations in groundwater decrease but remain elevated above groundwater standards due to the recharge of residual water within the TSF Embankment and Buttress. However, the predicted arsenic and antimony concentrations in groundwater during the post-closure period are significantly lower than the existing conditions due to the removal of legacy facilities (Hecla Heap and SODA/Bradley tailings) during mining. Based on average concentrations from MWH-A04, arsenic and antimony in groundwater are 1.8 and 0.06 milligrams per liter respectively under existing conditions. <p>Arsenic and antimony concentrations are predicted to be an order of magnitude lower for the postclosure period due to the removal of the legacy facilities but still elevated above the groundwater standards and background groundwater quality as defined by MWH-A01.”</p>	WTR	<p>The SDEIS describes water quality conditions as similar or improved compared to baseline conditions except for the case of the Hangar Flats and Yellow Pine Pit backfills that have the potential to increase analyte concentrations in groundwater.</p> <p>The predicted groundwater concentrations under the TSF buttress are described in SDEIS Table 4.9-4 and Figure 4.9-4. A sentence indicating that these concentrations have decreased based on comparison to MWH-A04 has been added to the paragraph referencing Table 4.9-4 and Figure 4.9-4.</p>
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		25	<p>In Section 4.9.2.2 on page 4-243, the discussion of groundwater chemistry is focused on potential negative impacts without mention of the significant improvement in groundwater quality in the Meadow Creek valley resulting from the removal of legacy material early in the mine life and pumping of contaminated groundwater in the dewatering process that is replaced with clean, unimpacted water into the currently contaminated area. The improvement of groundwater quality in the Hangar Flats area resulting from the removal of legacy facilities is not clearly captured in discussion of groundwater impacts. The following is a suggested replacement of the second paragraph on Page 4-243: “Effects of the TSF, TSF Embankment and Buttress, and stockpiles leachate infiltration on receiving alluvial groundwater were summarized in Figures 4.9-4 and 4.9-8.</p> <p>Limited infiltration from the lined TSF results in negligible changes to groundwater parameter concentrations under the TSF and no constituents exceed groundwater quality standards.</p> <p>Infiltration from the unlined TSF Buttress is predicted to result in an increase in groundwater analyte concentrations. Specifically, mixing of infiltrated leachate with alluvial groundwater is predicted to result in antimony and arsenic groundwater concentrations greater than unimpacted groundwater and both constituents are predicted to be above groundwater standards. Both arsenic and antimony concentrations decrease in groundwater after placement of the geosynthetic liner but remain above the groundwater standards. However, post closure arsenic and antimony concentration are predicted to be an order of magnitude lower in comparison to existing groundwater conditions due the removal of legacy</p>	WTR	<p>The text has been revised to indicate that compared to monitoring well MWH-A04, analyte concentrations have decreased compared to baseline conditions.</p>

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			facilities (e.g., Hecla Heap and SODA/Bradley tailings), representing an overall net improvement to groundwater quality as a result of mining activities.”		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		26	In Section 4.9.2.2 on page 4-248, the benefits to surface water chemistry during operations and the post closure period are minimized and incorrectly quantified. The water quality improvement with reductions in arsenic and antimony at YP-SR-4 should be quantified. Reductions are as much as 40 percent in the post closure period and greater during operations. The statement that, “Immediately downstream of the Yellow Pine pit on the East Fork SFSR at node YP-SR-4 (above the confluence with Sugar Creek), predicted surface water chemistry is similar to existing conditions with some variability in predicted antimony, arsenic, and mercury concentrations during the operating and initial closure period (Table 4.9-19 and Figure 4.9-23)” does not accurately portray the modeling results.	WTR	The text has been revised to read that "... predicted surface water chemistry is similar to existing conditions with reduced concentrations of antimony and arsenic during the operating and post-closure periods."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		27	In Section 4.9.2.2 on page 4-251, the statement regarding surface water quality predictions for YPSR-2, “Similarly, predicted arsenic concentrations decrease relative to existing conditions during the operating period then recover to a concentration comparable to existing conditions in the postclosure period”, is misleading. The results show arsenic and antimony at YP-SR-2 during post-closure conditions are significantly lower (30 percent to 40 percent) relative to existing conditions. This positive impact should be clearly stated and quantified.	WTR	The text has been revised to indicate that predicted arsenic and antimony concentrations recover to a concentration below existing conditions.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		28	In Section 4.9.2.2 on page 4-252, the SDEIS states that the “Effects of the project on surface water concentrations are expected to be negligible relative to applicable standards and calculated human health criteria, permanent, and localized”. However, it should also be acknowledged that there is a substantial improvement in surface water quality compared to existing conditions because of this project. The Project’s positive impact is downplayed in this discussion.	WTR	The SDEIS describes water quality conditions as similar or improved compared to baseline conditions except for the case of the Hangar Flats and Yellow Pine pit backfills that have the potential to increase analyte concentrations in groundwater (i.e., the groundwater sub-section of SDEIS Section 4.9.2.2).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		29	10.0 Interpretation of Particle Tracking and Groundwater Impacts Downgradient of Yellow Pine Pit The particle tracking results are not applied correctly in the discussion in Section 4.9.2.2 on page 4-244. Particle tracking does not account for changes in chemical mass in groundwater that naturally occur as the result of chemical interactions with minerals in the ground and dispersion of chemical mass as groundwater moves through the ground. Therefore, even though 2 percent of the particles were estimated to originate from the backfill, this does not automatically relate to groundwater concentrations, nor does it speak to the potential for the pore water to degrade groundwater. The potential to degrade groundwater depends upon the existing groundwater chemistry and how different it is from the pore water leaving the backfilled pit. In the case where the existing groundwater is already impacted and concentrations are higher than in the pore water, there could actually be an improvement in existing groundwater conditions. This potential to improve previously impacted groundwater downgradient of the YPP needs to be acknowledged.	WTR	The SDEIS describes water quality conditions as similar or improved compared to baseline conditions except for the case of the Hangar Flats and Yellow Pine pit backfills that have the potential to increase analyte concentrations in groundwater. Water movement from the pit areas downgradient is used to conservatively assess potential analyte concentrations downstream. Modification of pore water chemistry based on reactions with downgradient groundwater and aquifer material was conservatively not assessed in describing potential groundwater chemistry effects.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		30	Furthermore, the conclusion that some areas would see major negative effects is premised on the assumption that these areas are not already impacted by legacy mining materials and in-situ mineralized rock. The cited wells (i.e., MWH-A17 and SRK-GM-04S) are only drilled to about 100 feet and are screened at elevations of 6100 feet and 6040 feet respectively; approximately the same elevation as the existing pit lake (6040 feet) and elevation of future backfill. These screen elevations may not be sufficiently deep to adequately assess existing water quality of the receiving alluvial or bedrock aquifer where it could be impacted by pit backfill materials or pit wall contact. It is expected that water quality in the bedrock aquifer and alluvial aquifer downgradient of the Yellow Pine pit ore body and at depths below shallow wells, is already impacted by spatially extensive mineralization and alteration in the area as well as legacy facilities.	WTR	The SDEIS describes water quality conditions as similar or improved compared to baseline conditions except for the case of the Hangar Flats and Yellow Pine pit backfills that have the potential to increase analyte concentrations in groundwater. The SDEIS indicates that potential groundwater effects would be limited to areas that have not been previously impacted, but that pore water outflow from the backfilled pit areas could affect areas that have not observed arsenic and antimony concentrations previously.
Alan Haslam (Vice President, Permitting, Perpetua)		31	11.0 Conservative Assumptions in the Site-Wide Water Chemistry Model Similar to Item 9, the discussion surrounding model sensitivity and uncertainty in Section 4.9.2.4 on pages 4-279 and 4-280 presents uncertainties and potentially non-conservative assumptions. This may lead to a biased review of the model because conservative assumptions used in the model are not	WTR	The SDEIS refers the reader to the Site-Wide Water Chemistry Model report with regard to the development and assumptions utilized by the geochemical model. The conservative assumption regarding acid-generation versus the lack of historical observations of acid-generation on site is captured in the discussion in SDEIS Section 3.9.4.2,

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Resources Idaho, Inc.)			<p>sufficiently presented. Presenting only non-conservative assumptions without discussion of conservative assumptions or further qualifying the non-conservative assumptions leads to a misunderstanding that predictions made by the SWWC model underpredict negative impacts and overpredict positive impacts.</p> <p>This is not the case. Many conservative assumptions were used during model development and use. The bullets on page 4-279 and page 4-280 should be further clarified with the caveats noted below for a fair and balanced discussion.</p> <ul style="list-style-type: none"> • “During the geochemical characterization program, three development rock samples were reported with paste pH less than 6. Although materials submitted for kinetic testing did not generate acidity during the duration of those tests (up to 197 weeks, far longer than industry-standard Humidity Cell Test durations), actual long-term conditions for the proposed mine facilities could vary the rate of sulfide oxidation along with the leachate pH and/or leached analyte concentrations.” [Caveat: However, site data show that acid generation has not occurred from historical mine waste despite exposure at surface for several decades. Circum-neutral to moderately alkaline baseline surface water and groundwater chemistry (and pit lake chemistry) also supports the assumption there has been no/limited acid generation from historical mine wastes.] 		i.e., "Historic waste rock and tailings have been left at the surface for decades (a duration more than 50 years longer than the proposed SGP mine life), with little evidence of acid rock drainage."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		32	<p>“First-flush chemistry for contact water coming from development rock was not considered relevant to surface water quality predictions (SRK 2018a). This is deemed a non-conservative assumption. First-flush releases from the development rock material could cause short-term increases in downstream concentrations above and beyond what is currently predicted by the model.” [Caveat: However, it could be argued that the first flush chemistry will occur during operations, the majority of which will be managed as contact water and treated, therefore this will have minimal effect on in-stream concentrations. Furthermore, steady state chemistry is typically considered more representative for use in geochemical predictions (Maest and Kuipers, 2005; Price 1997). The initial flushing in humidity cells mobilizes oxidation products that formed prior to initiation of the test (i.e., they represent an accumulation of load derived at steady-state rates). This process represents a flushing effect in the lab but direct application of the humidity cell “first-flush” in the modeling is challenging since the load accumulation timeframe will be different in the field.</p> <p>Flushing effects can be accounted for using steady-state rates through accumulation of load during each time step. For example, the length of the timesteps of a pit lake model can vary from 1 year to 25 years. Flow always exists; however, the flushing load is inherently accounted for by releasing all load generated in each timestep in the estimated pit wall runoff volume.]</p>	WTR	The caveat regarding the first flush solute concentrations is captured in the discussion in SDEIS Section 3.9.4.2, i.e., "... because the first flush chemistries would be indicative of material leaching during the mine operating period, when leachate would be collected as contact water for water treatment or would be expected to dissipate in the near-term due to dilution and/or solubility controls."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		33	<p>“Air temperature from the site was used to scale laboratory reaction rates to field conditions and could underestimate actual reaction rates and chemical releases from mined materials, and hence, surface water quality impacts.” [Caveat: However, during colder months of the year, actual reaction rates and chemical releases from mined materials could be overpredicted. The most practical approach is to use the average temperature value and recognize there is a potential for constituents to be seasonally higher or lower than predicted. Based on the sensitivity analysis, concentrations are higher for the higher temperature scenario; however, the difference is not significant enough to change the overall conclusions.]</p>	WTR	No revision made. Further discussion of the sensitivity of model predictions to scaling are provided in the text below the text referenced by the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		34	<p>“Model-predicted concentrations generated by the SWWC Model are for the dissolved fraction only and may underpredict concentration levels for constituents such as mercury that have been shown to occur in particulate form.” [Caveat: However, surface water runoff will be managed during operations and a geosynthetic cover would be placed on the facilities at closure and overlain by an inert soil/rock layer and growth media and revegetated. These controls will limit the potential for particulates to contribute to constituent load in the surface water system.]</p>	WTR	Text has been added to reflect controls to limit particulate contributions to the surface water system.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		35	<p>"This is typically achieved by pumping from wells installed around the pit or sumps within the pit. " Both are typically needed. Please replace "or" with "and".</p>	WTR	Edit has been made.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		36	"Note that the SGP might still alter streamflow conditions (including access roads, utilities, and off-site facilities) outside the analysis area; however, such alterations are expected to be minor based on regulatory requirements for these alterations and the application of best management practices. " Changes in streamflow conditions would be limited to a change in the hydraulics at road crossing culverts only. No streamflow depletions would occur. Please consider deleting this sentence.	WTR	No revision made. The analysis reflects the potential for streamflow modifications which could occur as a result of the Project both on-site and off-site.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		37	"Low elevation snowpack usually melts quickly during the spring, but high elevation snow pact can persist into June or later " Please replace "snow pact" with "snowpack".	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		38	"The creek flows in the direction of, and then adjacent to, Stibnite Road (CR 50- 412) in a channel around the Bradley Northwest mine dump complex, disappears and then reemerges among historical mine development rock piles, and flows through a culvert before entering the East Fork SFSR. " Please update in the FEIS to reflect ASAOC diversion, which has the same surface course and outfall but eliminates it subbing out in the dump. Also, Hennessy Creek flows through 2 culverts before entering East Fork SFSR. Please replace "a culvert" with "two culverts".	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		39	"These values represent about 20 percent of the estimated annual precipitation for the SGP area , which is equal to 32.19 inches " Please define if "annual precipitation" is the MAP or the valley precipitation.	WTR	Clarification that the 32.19 inches pertains to the analysis area added to the text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		40	Section 3 describes existing conditions. For Figure 3.8-3, please delete information related to modeling and action alternatives.	WTR	No revision made. This figure is utilized both for the baseline and effects analysis.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		41	In Table 3.8-5, please add significant digits to the numbers for YP-SR-6 (8.00), YP-T- 11 (3.30), YP-T-40 (0.80 and 2.80), YP-T-43 (49.00), and YP-T-48 (1.0) for consistency	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		42	"Mean discharge measured at the sites ranged from 0.0023 cfs at YP-AS-7 in the Meadow Creek drainage to 0.25 cfs at YP-SEBS-2 in the East Fork SFSR drainage. " YP-SEBS-2 is the re-emergence of Midnight Creek and should not be included as a seep or spring. Please replace "0.25 cfs at YP-SEBS-2 in the East Fork SFSR drainage" with "0.21 cfs at YP-S-10 in the Meadow Creek drainage"	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		43	In Table 3.8-6, please add significant digits to the numbers for YP-AS-4 (0.30 and 0.10) for consistency	WTR	Edit has been made.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		44	"It is not necessary to record a water right for the random diversion of water for fire suppression purposes. " Please add "or for the purpose of capture and use of diffuse water runoff."	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		45	"Water Right 77-14190 is subordinate to future non-domestic, commercial, municipal, and industrial uses and future non-domestic, commercial, municipal, and industrial development up to 8.2 cfs. " Please replace "future non-domestic, commercial, municipal, and industrial uses and future non-domestic, commercial, municipal, and industrial development" with "all future domestic, commercial, municipal and industrial (DCMI) uses and future non-DCMI"	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		46	Table 3.8-8 - please identify the waterway this water right applies to. Please add "EFSFSR at SFSR" to the end of: "State of Idaho, IDWR Water Right No. 77-14190 Minimum Stream Flow "	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		47	"A discharge to Meadow Creek would be located adjacent to the TSF Buttress and discharges to East Fork SFSR would be located west of the Stibnite Worker Housing Facility and west of the Process Plant " Please indicate which discharges are sanitary (Stibnite Worker Housing Facility) and which would be industrial (other two).	WTR	The text has been revised to indicate that the discharge west of the Stibnite Worker Housing Facility would be a sanitary discharge permitted by the State of Idaho.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		48	"In select locations, historical mine workings, such as adits, that penetrate the bedrock units act to promote groundwater flow in bedrock " - Consider revising to reflect that they don't really "promote...flow in bedrock"; rather, they act as drains for GW and discharge it to the surface	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		49	"Most bedrock wells in the analysis area are screened within the batholith unit, with wells in the northeastern part of the project screened within the metasedimentary units " Please clarify that this is because of lithologic units are present in those areas, i.e., that the batholith occurs everywhere but the NE corner also includes a metasedimentary package of rocks.	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		50	"Tertiary intrusive rock units are interspersed within the other bedrock lithologies and are generally not specifically targeted by monitoring well completions due to their generally low permeability and small volumetric presence compared to the batholith and metasedimentary units. " Not targeted, but are intersected. Please replace " targeted " with " intersected "	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		51	For the Gestrin well, the Screened interval "To" depth is 109, not 209. Please correct.	WTR	Edit has been made.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		52	In footnotes, may want to clarify that UTM is in meters, as this may not widely known to the public.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		53	"Figure 3.8-10 shows water table elevation contours for the analysis area computed by the groundwater model calibrated to water levels " Model also calibrated to streamflow yield. Please edit this sentence to say "...groundwater model calibrated to water levels and streamflow yield. "	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		54	"Overall, the results reported by the investigations (from 1989 to 2013) for the alluvial groundwater system indicate hydraulic conductivity ranging from 1 to 100 feet/day, with an average of approximately 10 feet/day " Please clarify if this is geometric mean.	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		55	"A long-term pumping test has not been completed in the deeper bedrock portions of the Idaho Batholith rocks in the Analysis Area as zones of groundwater inflow at depth sufficient to sustain a multi-day constant rate test have not been typically encountered in drillholes " - Consider revising: This description discounts the Hangar Flats pumping test. That hole was drilled to the specific purpose of testing deeper bedrock in the IB and it could not because there was no water. "not typically encountered" understates this.	WTR	The text has been revised per the results of the Hangar Flats and Yellow Pine pit area bedrock drilling.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		56	"Anticipated project groundwater supply areas would be in the vicinity of Hangar Flats pit area south of the currently authorized points of diversion (77-7141 and 77-7285) plus in the vicinity of the Yellow Pine pit " - Please clarify that these are industrial supply wells - the future worker housing will have its own well near that facility, along EFSF above MC	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		57	"The supply well locations represented on Figure 3.8-12 are preliminary in that specific locations for have not been finalized and will depend on engineering site evaluations to finalize well designs. " Missing the word "wells" between "for...have".	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		58	"There would also be groundwater production from a well located near the worker housing facility. " Should also be mentioned above. Also the reader would benefit from some explanation as to the distinction between industrial supply, dewatering, and dual-use wells.	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		59	"Under the No Action Alternative, there would be no large-scale mine operations by Perpetua, and water resources would continue to be impacted by currently permitted Perpetua drilling activities for exploration " . - Stating that water resources would be "impacted" by exploration drilling activities is misleading and alludes to negative impacts. Activities approved by the exploration drilling EA assume a finding of no significant impact. Also, this passage does not acknowledge that these uses would occur in	WTR	Edit has been made.

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Resources Idaho, Inc.)			accordance with PRII's existing water rights. Please revise this to: "Under the No Action Alternative, MMP would not proceed and Perpetua Resources would not obtain a permit to acquire additional water rights. Perpetua Resources could continue to conduct approved exploration drilling activities and exercise their current water rights." This appropriately queues up the minimal impacts that follow.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		60	"Phase 1 of this agreement includes...This work is planned to occur between 2022 and 2024. " - The information in this passage is provided elsewhere, is more pertinent to water quality than quantity, and restating here is unnecessary and risks inconsistency with other locations in the document. Suggest replacing with a reference to the description of ASAOC activities in Section 1.3 and maintaining the last sentence, "These activities are not. "	WTR	No revision made. The text is necessary to establish the No Action effect on water quantity.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		61	"The SWWB evaluates operational consumptive use (e.g., mill water supply, dust control), TSF water volumes, and contact water volumes generated over the span of the project from construction through closure (Figure 4.8-2). " - There is no mention of water treatment here. Suggest it is applicable in the context of water quantity through storage of contact water and treatment capacity.	WTR	The text has been revised to add "... for contact water storage and water treatment capacity designs" to the end of the sentence.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		62	"The SHSM also forecasts the groundwater drawdown, and effects on groundwater discharge to surface water and the West End pit lake recharge".	WTR	The text has been revised to read (comma added) "... groundwater discharge to surface water, and pit lake recharge ..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		63	"Both the SWWB and SHSM provide input to the water chemistry and water temperature models described in the companion SGP Water Quality Specialist Report (Forest Service 2022f)." This sentence is inapplicable to a Water Quantity section. Suggest removing.	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		64	"Properties of the East Fork SFSR tunnel design include: " - Please include mention of the fishway for completeness. It is a very substantial element of the EFSFSR tunnel.	WTR	Text revised to read "Consistent with managing water and use of a fishway, properties of the East Fork SFSR ..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		65	" rock-cut, concrete-lined tunnel 15 feet wide by 15 feet high," - Please correct: Shotcrete and concrete are not the same product; the EFSFSR tunnel will be lined with shotcrete, steel sets, and rock bolts in various measures depending on local rock quality, but NOT concrete	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		66	For Fiddle Creek row, "pipeline" should be replaced with "culvert"	WTR	Edit has been made.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		67	For Meadow Creek row: Meadow Creek also has low flow pipes during operations and into closure. It would be good to highlight because these mitigate stream temps and also it is mentioned above. Please revise.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		68	"The effects of stream diversions on water quantity would be moderate, long- term, and localized. " - Please clarify how this impact is quantified or strike; there is nothing in the preceding discussion that indicates impacts to water quantity due to stream diversions.	WTR	Text revised to indicate that effects of stream diversion on water quantity would be negligible.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		69	Footnote N/A should be not applicable, and it would be helpful to explain that they do not have embankments but rather are excavated in the ground.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		70	"Capture of contact water for consumptive use would reduce the volume of runoff and hence, stream flow by between 0 and 1,600 gpm with typical average capture rates of approximately 800 gpm during the first 6 years of processing as the site water inventory is built (Figure 4.8-3) " Please correct, passage mixes volume with a rate. Moreover, these numbers are incorrect and conflate contact water storage with TSF inventory building for mill startup, and greatly overstate the rate and continuity of streamflow impact associated with contact water capture. Plus they presume a 1:1 ratio of contact water to streamflow. Contact water is generated from mine facilities that produce runoff at higher rates than wildlands. That contact water was destined for recharge or ET, not streamflow that same day. Please clarify (and correct) the source of the flowrates.	WTR	The capture rates are per the water balance figure from the Water Management Plan. The statement indicating the correlation with stream flow has been removed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		71	"Contact water that is not used consumptively would be routed to the water treatment plant to achieve a water chemistry suitable for discharge to surface water in accordance with Idaho IPDES permit requirements " - For completeness, water treatment and discharge rates should be noted here as an offset to the depletion noted in the contact water storage.	WTR	Text added "During these times, water treatment and discharge would partially or fully offset effects of contact water capture and storage on stream flow."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		72	"In addition, while much of the East Fork SFSR is not below the local water table, some sections of the East Fork SFSR tunnel may periodically..."	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		73	"Water demands for ore processing would necessitate the installation of production wells and a surface water diversion from the East Fork SFSR, in addition to the dewatering system ". Please insert " contact water that includes the dewatering system" to clarify this sentence.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua		74	"A detailed explanation of the conceptual hydrogeologic model, modeling approach and setup, steady-state and transient calibration..." - There is no "steady-state" calibration. Delete "steady-state"	WTR	Edit has been made.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		75	"No flow conditions..." - Add hyphen to no-flow to clarify appropriate meaning.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		76	"Model calibration was accomplished using a process that included simulation of pre-mining steady state conditions and then transient conditions associated with the pumping tests." - Delete 'steady state'.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		77	"...the hydraulic conductivity values to vary within the range of the aquifer test results for each unit." - Should also discuss that the MWB and SHSM were calibrated together. MWB included soil storage parameters (thickness, FC, WP).	WTR	No revision made. Text is appropriate as stated. SDEIS Section 4.8.2.2 provides information regarding the model calibration and selection of the hydraulic conductivity values utilized for model predictions.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		78	"...dewatering requirements to achieve dry mining conditions ..." - Dewatering is also important/more important for pit wall stability. Please revise.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		79	Paragraphs 2 and 3 are repeated paragraphs from above. Please revise.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		80	"Predicted dewatering rates and underdrain flows were combined with estimated volumes of mine-impacted waters from the SWWB to forecast the volume requirements for water treatment during operations and closure." - Incorrect. Underdrain water was assumed to be discharged without requiring treatment in the SWWB and SHSM models, based on predicted water quality assumed to likely to meet IPDES permit limits. Please revise.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		81	"These volumes ranged from 2,000 gpm during the years of highest dewatering production down to 150 gpm ..." - Please clarify that "these volumes" refers to the water treatment volumes. Also, predicted treatment volume goes to zero gpm many months, not just down to 150 gpm.	WTR	The text has been revised to state that the minimum water treatment volume is zero rather than 150 gpm.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		82	"...range between the 5th and 95th percentiles of meteoric inputs ..." - The reported 5th-95th stats are on the outputs (treatment, storage volume, etc.) not the meteoric inputs. Please revise.	WTR	Edit has been made.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		83	"Predicted flows averaging approximately 1,400 gpm would reduce to approximately 1,200 gpm in response ..." Please clarify what these flows represent (e.g. average, max, annual)	WTR	The text has been revised to indicate that this difference represents the maximum difference in flows.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		84	"Groundwater levels away from the pit dewatering focus areas would observe measurable reductions in water levels constituting a minor or moderate effect while groundwater levels in the dewatering focus areas would observe drawdown of several hundred feet, constituting a major effect " - Please provide context for the reader here as to how these assessments are made. Active dewatering only lasts single-digit years and rebound similarly only a few years after max extent at YP and HF.	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		85	"Away from the TSF area, groundwater levels would rebound during the post closure period, with most recovery occurring within 3 years following the cessation of groundwater pumping ..." - Please clarify that pumping of YP and HF stops long before overall site closure; this sentence alludes to it occurring in post- closure.	WTR	Revision made to remove "during the post-closure period."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		86	Please provide context for these figures in light of their titles; The apparent persistent and large drawdowns at YP and HF are entirely due to topographic changes not lingering effects of dewatering. Please revise.	WTR	The text has been revised to describe topographic changes.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		87	"Impacts to Groundwater Dependent Ecosystems " Section 4.8 Surface and Groundwater Quantity and Section 4.11 Wetlands and Riparian Resources both use groundwater drawdown as an important part of impact characterization. Section 4.8 refers to streams and wetlands and groundwater dependent ecosystems (GDEs) (Impacts to Groundwater Dependent Ecosystems) and Section 4.11 (Alteration of Wetlands and Riparian Areas Due to Changes in Water Balance) does not use this terminology at all, and only addresses wetlands, and not streams. The part of Section 4.11 that addresses groundwater drawdown effects on wetlands does not specifically reference Impacts to Groundwater Dependent Ecosystems. As a result, there are two sections that analyze the same thing, but are independent and present things differently. The analysis of groundwater dependent resources should be taken out of Section 4.8 and integrated into 4.11, and the terminology made consistent.	WTR	The analysis of groundwater dependent ecosystems has been retained in Section 4.8 because that effect is tied to the groundwater drawdown described in that section. Text has been added to Section 4.11 to reference the reader to the discussion in Section 4.8 and to standardize language.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		88	"This groundwater discharge may emanate from a local system or from the regional groundwater system " - There is no evidence of any "regional" GW system at the site. The term should be removed globally from the SDEIS document.	WTR	No revision made. Text is appropriate as stated. Regional groundwater refers to the deeper groundwater system that would be targeted via mine dewatering versus localized perched zones of subsurface water.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		89	"Potential impacts to seeps, springs, and GDEs were evaluated by comparing surface water locations to the predicted ten-foot drawdown contour resulting from mine dewatering and water production." - Additional clarification will be helpful here. With the statements above that, "For this impact analysis, the area that is predicted to experience a change in groundwater elevation of ten feet or more is used for quantification and comparison of project effects and baseline conditions. ", it should be clarified how the 10 ft contour is being used to evaluate impacts to the GDEs. Moreover, many of the GDEs shown on	WTR	The uncertainties in predicting groundwater drawdown effects on groundwater dependent ecosystems are described in Section 4.8.2.2. These uncertainties are associated with each site-specific relationship between a GDE and local groundwater. These site-specific relationships typically cannot be determined until the groundwater aquifer is affected by large scale pumping for a period of time. Therefore, they are not currently known and not represented on Figure 4.8-10 which presents the conservative extent for GDE effects. The figure also depicts

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Resources Idaho, Inc.)			Figure 4.8-10 are beneath the footprint of the TSF, which should be disclosed to put perspective on the impact; many of these wetlands and streams (GDE's) are "directly" impacted as they will be lost during construction, and so to point them out as being "indirectly" impacted due to groundwater lowering is misleading. Only GDEs that are not directly lost (and thus potentially impacted by groundwater lowering) should be presented. Please revise.		the stream locations that would be within the areas of surface disturbance so that these areas can be differentiated from locations with groundwater drawdown outside the disturbance footprint.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		90	"This rate would be for combined groundwater and surface water diversion in addition to existing water rights." Suggest adding to the end of this sentence, "...including dewatering flows that are treated and discharged,"	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		91	"Separate water rights applications would be submitted for each well" - These water rights applications have been submitted. Multiple references to pending applications in this document should be corrected.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		92	"Stream diversion around mine facilities" - Please clarify how modifying the location of a stream will impact water quantity.	WTR	Text has been added to clarify that diversions affect the path of surface water flows.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		93	"These activities have the potential to modify the location and flow rate of stream flows in the analysis are a." - This should be "and/or" if stream diversions must be included.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		94	This figure is misleading because the discussion above states essentially that drawdown of less than 10 ft is uncertain with the regional scale model and seasonal fluctuations. Here, there is no information aside from the 10 ft contour. The reader is left to guess if seeps/springs within the contour are affected, even though the model can't predict at that resolution. Also, it should show/explain that many GDE's shown here are directly lost to construction (direct impact) and should not be also shown as indirectly impacted, because they will not longer exist. Please revise discussion.	WTR	SDEIS Section 4.8.2.2 text acknowledges the uncertainties between comparing surface water locations to the 10-foot groundwater contour. The uncertainties in predicting groundwater drawdown effects on groundwater dependent ecosystems are described in Section 4.8.2.2. These uncertainties are associated with each site-specific relationship between a GDE and local groundwater. These site-specific relationships typically cannot be determined until the groundwater aquifer is affected by large scale pumping for a period of time. Therefore, they are not currently known and not represented on Figure 4.8-10 which presents the conservative extent for GDE effects. The figure also depicts the stream locations that would be within the areas of surface disturbance so that these areas can be differentiated from locations with groundwater drawdown outside the disturbance footprint.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		95	"The model predicts reductions in Meadow Creek flows between the TSF and Hangar Flats pit compared to baseline flows of up to approximately 40 percent during low flow periods...during the construction and operational period for the SGP ". This statement is misleading as presented, does not provide numerical flow rates provided for similar statements below, is provided without context as to the temporal range of this potential impact, and separated by 2 additional sentences from a design feature that is intended to ameliorate its impact. Please move the following passage: "However, baseflow depletion is largely offset by the addition of treated water in this portion of Meadow Creek via an IPDES permitted outfall. This offset is anticipated to be substantially effective because the predicted impact is primarily associated with dewatering of the Hangar Flats pit. " to follow it directly. Also, please provide	WTR	Edit has been made.

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			the reader with numerical flow rates (as with other examples below) as well as temporal context for this impact, which begins in year 5 and ends in year 6. As presented, the reader is left to understand this as an impact that occurs from construction through operations.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		96	Please verify that the streamflow impacts presented in Table 4.8-4 are aligned with those presented in Section 4.12.	WTR	The streamflow changes described in Table 4.8-4 were utilized in the analysis of Fish Habitat in Section 4.12.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		97	For the Station <i>East Fork SFSR below Sugar Creek (13311500)</i> - The location of this station is beyond the model domain and therefore point of comparison would be the same as 13311250. The reference to gauge 13311500 should be deleted.	WTR	USGS Gauge 13311250 is located above the confluence of East Fork SFSR and Sugar Creek. USGS Gauge 13311500 is located downstream of the confluence and is used for comparison of baseline conditions to model predictions downstream of Sugar Creek.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		98	"Flow reductions are predicted during the project's operational period with the largest flow reductions (i.e., on the order of 40 percent) occurring during Mine Years 4 through 8 as Hanger Flats pit is being dewatered." - Please provide the reader appropriate clarification here: the phrase "during...operational pd" makes it sound like the reductions are longer-term than they really are. There is only about 18 months of mining HF below the GWT.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		99	"Flows recover toward the No Action Alternative condition following the cessation of Hanger Flats dewatering and are near equivalent to the No Action Alternative conditions by Mine Year 12. " - Please correct: HF dewatering ends before 8, and by EOY 8 groundwater there is actually rebounded.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		100	"...minimum baseflows based on comparison of model results to the existing conditions model for the action alternatives would be approximately 6.6 cfs compared to 8.9 cfs (26 percent reduction) for the No Action Alternative attributable to the diversion and capture (contact water) of surface water as well as mine dewatering. Downstream of the Yellow Pine pit area prior to the confluence with Sugar Creek, minimum baseflows for the action alternatives are predicted to be 7.9 cfs compared to 11.3 cfs under the No Action (30 percent reduction) under the proposed water management scenario and its associated water balance " - Please provide additional context for the reader. Putting it in later sentences is misleading, and this ignores the treated water discharge.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		101	Referenced Figure 4.8-15 does not include Sugar Creek. Please add.	WTR	Figure title corrected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		102	"During the post-closure period when the West End pit lake is forming, predicted Sugar Creek flows decrease by up to 9 percent primarily. " - Please clarify what part of the flow regime / how long and often.	WTR	Edit has been made.
Alan Haslam (Vice President,		103	"Typical rates of surface water diversion during the build-up of project water inventory would be approximately 4 cfs ". - The reader may not be familiar with what "buildup of project water inventory"	WTR	Edit has been made.

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Permitting, Perpetua Resources Idaho, Inc.)			means. Moreover, it is misused elsewhere to refer to several years of mine ops. Please clarify its definition here.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		104	"and up to 8.2 cfs of new non-domestic, commercial, municipal, and industrial uses. This would allow authorization of up to 8.2 cfs of new non-domestic, commercial, municipal and industrial water rights to which Water Right 77-14190 would be subordinate. " - the term non-DCMI can be used here. Also, please clarify that the PRII water right applications are for industrial and domestic uses and thus the EFSFSR minimum streamflow right is subordinate to it.	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		105	"would be insufficient " should be "would be sufficient"	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		106	"Instream rights on the SFSR are subordinate to 20.6 cfs; maximum diversions proposed by Perpetua from all sources and uses would be 9.68 cfs, within the allowance of the SFSR instream rights. " For clarity and accuracy, this sentence should say, "Instream rights on the SFSR are subordinate to all future DCMI uses and up 20.6 cfs for future non-DCMI uses; maximum diversions proposed by Perpetua are within the allowance of the SFSR instream rights."	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		107	"The current seasonal low baseflow in the Salmon River is approximately 4,150 cfs near Shoup gage. " - Incorrect. Average flow at Shoup gage in late August and early September is 1400 cfs.	WTR	Revision made. The seasonal low baseflow suggested by the comment is consistent with the information in the Order regarding the Consolidated Subcase No. 75-13316 Wild & Scenic Rivers Act Claims.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		108	"For the Yellow Pine pit dewatering, peak pumping rates associated with the sensitivity analysis ranged up to approximately 2,000 gpm compared to the model predicted rate of approximately 650 gpm. For Hangar Flats pit and West End pit dewatering, the sensitivity analysis peak pumping rate ranged up to approximately 2,400 gpm compared to a predicted value of approximately 1,500 gpm, " - It should be stated that the 10x sim for layer 3, 4, 5 was poorly calibrated and this is an overestimate. Additional details are in the attached comment letter.	WTR	This section has been revised to incorporate limited test data collected from the Hangar Flats and Yellow Pine pit areas.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		109	"Therefore, surface water flow rates would be within 0.5 cfs of those predicted by the model, representing the difference between predicted surface flow rate reductions and removing the rate of forecasted withdrawal from the intake above the EFSFSR tunnel, which would no longer be needed." - This should have a reference and its accuracy validated. BC did not conduct this analysis.	WTR	The difference in surface water flow is based on the sensitivity range of mine dewatering rates. If mine dewatering rates are lower than projected by SHSM and water supplied from surface water, the magnitude of that surface water supply would be as described.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		110	"Predictive sensitivity to various possible degrees of hydraulic transmissivity of the fault zones, only one of which has been explicitly represented in the model; " - This could be more clearly stated as: "Predictive sensitivity to various possible degrees of hydraulic transmissivity of the fault zones, of which the major fault zone has been explicitly represented;...".	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		111	"Putative inability to directly observe the effects of long-term hydraulic stresses on the bedrock aquifer as attempted deep bedrock pumping tests have not been completed due to the inability to sustain groundwater production from a pumping well." - This statement does not consider the current aquifer	WTR	This section has been revised to incorporate test data collected from the Hangar Flats and Yellow Pine pit areas.

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Perpetua Resources Idaho, Inc.)			testing program and will need to be struck from the final EIS. Moreover, the inability to observe effects is the result of the pumping test. And that result is more correctly characterized as no effect observed from pumping stress (drawdown) induced at the pumping well indicates extremely low or no hydraulic connection in deep bedrock.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		112	Here and globally where applicable, descriptions of the No Action Alternative should acknowledge ASAOC activities. Please revise.	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		113	"Impacts to surface stream flow rates from the SGP would be irretrievable commitments of these resources." - This statement seems contradictory to the rest of the preceding paragraph which calls out no permanent impacts. Please revise.	WTR	Irretrievable impacts are not necessarily permanent, they are Project effects that are lost for a period of time but are restored at some point in the reasonably near future.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		114	"These would be irreversible commitments of these resources." - Please clarify how the rerouting of a stream is an irreversible commitment of a resource.	WTR	The re-routing on the stream permanently modifies the location of the surface water flow.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		115	"...the groundwater levels in the backfills are expected to reach approximate baseline elevations as influenced by the revised groundwater flow in the backfills. These would be irreversible commitments of the groundwater system in these locations." - Please clarify how this is characterized as an irreversible commitment.	WTR	The volume of groundwater inundating the pit backfill is greater than the volume of groundwater within native material (i.e., consolidated bedrock) within the pit shell. This effect has been reclassified as irretrievable rather than irreversible, because groundwater levels are expected to recover over time.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		116	"The West End pit lake would be situated primarily in bedrock and therefore would not receive substantial groundwater inflows." - Being situated primarily in bedrock could also be said of the Yellow Pine pit. A more substantial description would be helpful here.	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		117	"Implementation of the SGP would result in long-term impacts to surface water quantity at the SGP through groundwater withdrawal and stream diversions." - Here and elsewhere in this Section, please provide clarifying information as to how stream diversions are an impact to water quantity.	WTR	"Long-term" is defined in Section 4.1. While there are quantitative predictions for effects on surface water quantity that vary by location, they all fall into the long-term category as defined.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		118	"Saturated thickness of alluvial deposits and their groundwater transmissive properties would remain similar to baseline conditions except in the three open pit areas where the alluvial deposits were removed during the mining period." Unclear if its stating otherwise, but backfills would be thicker and higher-K than the alluvium, since they replace both alluvium and bedrock. Please clarify.	WTR	Text added to note that pit backfill would be high permeability.
Alan Haslam (Vice President, Permitting,		119	Table 2-3 includes no discussion of backfill covers or the TSF cover as a proponent design feature. Please add.	WTR	Edit has been made.

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Perpetua Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		120	"The Meadow Creek Fault Zone acts as an aquitard to bedrock flow based on observations of surface water expressions above the fault zone gouge outcrops and artesian conditions observed in drillholes in its vicinity where it passes between the Yellow Pine pit and West End areas. " - The MCFZ is identified in as the major structure of the area here, however, a source of uncertainty in Section 4.8 is stated as "Predictive sensitivity to various possible degrees of hydraulic transmissivity of the fault zones, only one of which has been explicitly represented in the model". This tone of this statement should be carried over to Section 4.8 page 4-177.	WTR	No revision made. Text is appropriate as stated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		121	"Table 6-5 provides the maximum instantaneous flow predicted to occur for various return periods from a 1.5-year event up to a 500-year event ". Table 6-5 provides flows only up to a 100-year event, not 500 years as indicated here.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		122	"Water Right 77-14190 is subordinate to future non-domestic, commercial, municipal, and industrial uses and future non-domestic, commercial, municipal, and industrial development up to 8.2 cfs. " - This repeats non-DCMI twice. The statement should read, "Water Right 77-14190 is subordinate to future non- domestic, commercial, municipal, and industrial uses and future non-domestic, commercial, municipal, and industrial development up to 8.2 cfs".	WTR	No revision made. Text is consistent with the description of subordination for Water Right 77-14190.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		123	"They also are subordinated to specified quantities of future beneficial use rights. Additional detailed information regarding these two water rights can be found in Water Right Reports (referenced by water right number) available on the IDWR website... " - This water right should be treated in more detail and highlight the allowable water right development under the WR and the subordination clause. This is a pretty critical understanding for water right application at the SGP.	WTR	No revision made. The EIS does not attempt to impart any interpretation of water rights applications submitted to IDWR.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		124	"Model calibration was accomplished using a process that included simulation of pre-mining steady state condition s..." - This is incorrect - reword to remove steady state and include other calibration parameters.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		125	For parameters in Table 3.9-1 that are indicated as EPA Secondary Drinking Water Standards (Al, Fe, Fl, Mn, SO3, TDS) please note/indicate that these standards are not enforceable or directly applicable for environmental waters.	WTR	Revision not accepted. The identification of the EPA Secondary Drinking Water Standard supplies the context for these criteria.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		126	"table-reported standard values utilize the 12 ng/L (0.000012 mg/L) representing the lowest concentration adopted as a standard " - Please clarify if the 12 ng/L value is for MeHg or just Hg.	WTR	Text added to reflect that the 12 ng/L standard applies for Hg.
Alan Haslam (Vice President, Permitting,		127	"Antimony occurs as the mineral stibnite (Sb2As3) " - Please correct: Stibnite is Sb2S3. It is a sulfide and has no arsenic in its formula.	WTR	Revision made.

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Perpetua Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		128	"The primary intrusive and metasedimentary rock types at the mine site include alaskite, granodiorite (i.e., quartz monzonite), diorite, rhyolite, calc-silicate, carbonates (e.g., dolomite and limestone)... " - Limestone is not a metamorphic rock, please revise to marble (metamorphosed limestone).	WTR	Revision made. "(e.g., dolomite and limestone)" removed from the text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		129	"Results from the multi-element testing show that arsenic, mercury, sulfur, and antimony are enriched... " - Please clarify by defining "enriched" (enriched vs. average crustal abundance). Without context, this sentence implies a high concentration of Hg when there really isn't.	WTR	Revision made. "compared to crustal abundance" added to text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		130	TSF Embankment column, Height row - "state" should be "stage"	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		131	"...Net Potential Ratio (NPR) " - should be "Neutralizing", not "Net"	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		132	"Effluent concentrations of aluminum, antimony, arsenic, and mercury frequently exceeded their respective most stringent water quality criteria ... " - It should be clarified that this is the TEST effluent, not a direct prediction of contact water quality	WTR	"Effluent concentrations" replaced with "Test effluent concentrations."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		133	"Decant solution chemistry for five samples of synthetic tailings materials... " - Please replace "synthetic" with "pilot" or "metallurgical pilot program" These tailings were from a full-flowsheet pilot test, not synthesized after the fact / or to match predictions and solely for environmental testing as is often done in water treatment piloting.	WTR	"synthetic" replaced with "metallurgical pilot program".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		134	"A few constituents are mobile under these neutral to alkaline pH conditions, including aluminum, antimony, arsenic, manganese, and mercury, which were frequently leached at concentrations above the strictest potentially applicable surface water quality standard." - Please clarify this is from samples, and is NOT a direct prediction of leachate at field scale. Hg for example is predicted to be below WQS.	WTR	This section describes the humidity cell test results. The field scale leaching predictions are described in Section 4.9.2.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		135	In table 3.9-8, please clarify for the reader that the reported values are the test leachate values and not a direct prediction of Project mine-impacted water quality.	WTR	This section describes the humidity cell test results. The field scale leaching predictions are described in Section 4.9.2.2.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		136	"HCT analytical results were utilized in developing modeling source terms for the water chemistry predictions. In the development of source terms, the initial flushes from the HCTs were not utilized (SRK 2018) because the first flush chemistries would be indicative of material leaching during the mine operating period, when leachate would be collected as contact water for water treatment or would be expected to dissipate in the near-term due to dilution and/or solubility controls." - Additional clarification of this point that supports the use of steady state conditions for development of source terms would provide a more complete justification of source term development. Suggested addition is "Steady state chemistry is typically considered more representative for use in geochemical predictions (Maest and Kuipers, 2005; Price 1997). The initial flushing in humidity cells mobilizes oxidation products that formed prior to initiation of the test (i.e., they represent an accumulation of load derived at steady-state rates)". Please reference the comment letter for additional detail.	WTR	No further clarification necessary.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		137	"The water quality of nearby seeps associated with the Bradley tailings, SODA, and Keyway Dam also was elevated in metals, an indication that historical mining features are impacting the alluvial and bedrock aquifers." - Please support this assertion with evidence or remove. Nothing described in this sentence should have any effect on bedrock as these are mine waste features sitting on top of alluvium in the valley bottom where gradients are generally vertically upward and down-valley, not into bedrock.	WTR	The mention of bedrock aquifers has been removed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		138	"Natural springs and seeps also occur where bedrock faults and fractures intersect the ground surface". - Please provide a source for this statement or remove. It would be more general and more accurate to say "Natural springs and seeps occur at other locations where the local water table intersects the ground surface..."	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		139	"Similarly, in the East Fork SFSR drainage, arsenic and antimony concentrations in seeps and springs are elevated below the Yellow Pine pit and Northwest Bradley waste rock dump, suggesting that these historical mine facilities are responsible for elevated concentrations of arsenic and antimony in discharging groundwater" - Please provide a more recent citation (than URS 2000b) to qualify this statement. Identifying the mentioned springs below YPP would be helpful as well.	WTR	Citation to HDR 2017f added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		140	"The low sulfate and TDS concentrations also could point to a lack of mineralized deposits and historical mining-related impacts in the Fiddle Creek drainage, and different lithologies in the catchment area, specifically calcareous rock formations" - Please clarify the mentioned calcareous rock formations in the Fiddle drainage.	WTR	"specifically calcareous rock formations" removed from sentence.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		141	Please clarify the purpose of this table. It seems to imply a bias on the part of one of the sampling entities. But since the % differences are absolute values, the reader has to look more closely to see which entity reported higher values. Please validate calculations as well. It is also worth noting that the USGS specifically samples at highest flow events, so their Hg numbers are expected to be elevated relative to PRII, which normally samples in mid-May per their quarterly sampling schedule.	WTR	The table is intended to summarize the available USGS and Perpetua surface water data. The % difference columns have been removed from the table and a footnote added to reflect sample collection times.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		142	"...attributable to the dissolution of soluble salts and the flushing of water concentrated by evaporation." - Evapoconcentration is not likely the cause as the water in question is held in pore space below the root zone (and there is little vegetation on many of the piles in any event)...It is more likely the long residence time of GW in the waste piles all summer/fall/winter, leading to higher concentration, followed by it being displaced by incoming melt in spring.	WTR	"and the flushing of water concentrated by evaporation" has been removed from the text.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		143	"The range of observed MeHg values varied between a minimum of <0.1 ng/L (all sites) to a maximum of 0.64 ng/L (Sugar Creek). Mean MeHg values (calculated using the method detection limit for non-detect results) were at or just above the 0.1 ng/L detection limit." - Including mean MeHg values ("average in table 3.9-12) is not likely helpful to the reader, and it isn't needed to understand the results. Moreover, it does not seem reasonable to assign the MDL to all non-detect samples when doing this calculation (see EPA Unified Guidance). This section could simply specify the number of samples that were non-detect and remove the averages from Table 3.9-12.	WTR	Revision not accepted. Indicating the average condition for the sample locations is appropriate for describing the data set.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		144	"Despite these relatively high concentrations, the mine site seeps do not appear to significantly influence surface water MeHg levels (e.g., loading), either due to the low seep flow rates compared to surface water flows". - Incomplete sentence. Please clarify.	WTR	"either" removed from the sentence.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		145	"Based on data from the 2016 Integrated Report ..." - Elsewhere the 2020 report is cited. Please check this reference.	WTR	Reference updated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		146	"These analytical method detection limits are greater than the strictest potentially applied water quality standard and it is uncertain whether the pit lake water meets that standard." - It could be inferred, if the stream above and below meets the standard, the lake does as well given the short residence time and fully-mixed conditions.	WTR	The current narrative is appropriate for the available data. No inference is required for this description.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		147	"Data presented in this table show that average concentrations of pH, aluminum, arsenic, iron, manganese, and antimony exceed the groundwater quality standards." - Identification of secondary GW quality standards is relegated to a footnote in Table 3.9-18. Please clarify what secondary standards are here when introducing this table, and their lack of relevance to ambient water.	WTR	The application of standards is discernible from the footnote.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		148	"whereas criteria for iron, aluminum, and manganese are based on secondary standards established to protect aesthetic and cosmetic qualities of drinking water" - It would be helpful to the reader to move this content to the introduction of Table 3.9-18. The current introduction lists apparent violations of standards that aren't really standards at all, and is thus misleading.	WTR	The identification and description of secondary standards is consistent with their regulatory application.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		149	"Surface water quality parameters (e.g., pH, temperature, major ions, TDS, metals, sediment content, and organic carbon" - Please clarify the significance of organic carbon as an indicator; a precursor to MeHg perhaps but it doesn't seem likely to be itself an indicator, or much influenced by the project (small amount in sanitary wastewater).	WTR	The relevance of organic carbon is described later in SDEIS Section 4.9.2.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		150	"...water quality predictions from modeling studies completed by Perpetua and their consultants for the SGP ..." - Please note and clarify for the reader that modeling was conducted and updated specifically for the 2021 MMP.	WTR	Revision made. "for the SGP" replaced with "for the 2021 MMP"

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		151	<p><i>"The hydrologic modeling is summarized in the companion SGP Water Quantity Specialist Report (Forest Service 2022e) and additional modeling details can be located in the modeling reports provided by Perpetua (Brown and Caldwell 2021a, 2021e, 2021i, SRK 2021a)." - In the reference list, SRK 2021a is listed as the Geochemical Characterization Report. This paragraph should cite the ModPRO2 SWWC Modeling Report (which should be added to the reference list. The SWWC report was included in the SDEIS supporting documents on the USFS website).</i></p> <p>General comment – the SRK reports are often referenced incorrectly throughout this section of the SDEIS:</p> <ul style="list-style-type: none"> Any references to the SWWC modeling should cite the Stibnite Gold Project ModPRO2 SWWC Modeling Report, October 2021 (not in the reference list, but IS in the SDEIS supporting documents) Any references to the SWWC model sensitivity analysis should cite the ModPRO2 SWWC Model Sensitivity Analysis Report, November 2021 (currently listed as SRK, 2021b in the reference list) Any references to the geochemical characterization should cite the Comprehensive Baseline Geochemical Characterization Report, November 2021 (currently listed as SRK, 2021a in the reference list). 	WTR	References to the SWWC model changed from "(SRK 2021a)" or "(SRK 2021)" to "(SRK 2021b)".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		152	<p><i>"...testing of synthesized and legacy tailings samples." - As in Section 3.9, these are pilot plant tailings and not accurately characterized as "synthesized". That term is likely to lead to bias and the incorrect impression that the tailings samples were somehow not representative. Please revise.</i></p>	WTR	"synthetized" replaces with "metallurgical pilot program".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		153	<p><i>"The test cell HC-14 from the Phase I testing program was selected to represent PAG development rock and wall rock because this cell had the highest total sulfur and highest sulfate leaching rate, which corresponds to maximum sulfide oxidation and acid rock drainage potential." - It would be helpful to clarify for the reader here that none of the HCTs developed acidic conditions.</i></p> <p>Suggest adding context to the effect of: "Even though the material is technically classed as PAG based on an NPR<1.5, in reality this material is unlikely to be acid generating. None of the humidity cells (7 out of 25 of which were classed as PAG based on the static test results) generated acidic leachates despite continued testing of up to 184 weeks (significantly beyond the standard timeframe of testing). This is supported by: (i) the historical mining wastes, which have not generated acid despite being exposed at surface for several decades; and (ii) the circum-neutral to moderately alkaline groundwater and surface waters in the project area."</p>	WTR	Revision made with text added per comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		154	<p><i>"A site-wide water balance model was performed by Brown & Caldwell..." - This is incorrect; the SWWB model was prepared by Perpetua though it relied on BC's SHSM and MWB. Please revise and correct reference list.</i></p>	WTR	The final version submitted for the Site Wide Water Balance model was delivered as a Brown & Caldwell document.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		155	<p><i>4.9.1.4 Groundwater Chemistry Model - The title of this section (Groundwater Chemistry Model) is misleading. The geochemical modeling performed by SRK encompasses predictions of seepage and contact water chemistry from proposed mine facilities (e.g., TSF, TSF Buttress, Hangar Flats and Yellow Pine backfill) as well as the pit lake water quality predictions for the West End pit. The section would be more appropriately titled 'Mine Facility Water Chemistry Models'. Source terms from these facility models were used as inputs to the SWWC model to evaluate impacts to surface water. An evaluation of impacts to groundwater are limited to the TSF and TSF Buttress facility models. Please revise.</i></p>	WTR	Revision not accepted. The context for the groundwater geochemical modeling is described in the section.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		156	"...inundated backfill in the Yellow Pine pit, Hangar Flats pit, and Midnight pit..." - This is incorrect. The Midnight Pit backfill is unsaturated. Please revise.	WTR	The adjective "inundated" has been removed from the text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		157	"...the TSF Buttress, pit lake s..." - Please correct "pit lakes" to be singular. The reference to plural pit lakes is found throughout the document and this change needs to be made globally.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		158	"Ammonia concentrations in surface waters were not explicitly modeled..." - Suggest striking this passage. There are other parameters that were not modeled and more explanation is needed to explain what was modeled, what wasn't and why. This level of detail is beyond a summary level of information.	WTR	Revision not accepted. The discussion of ammonia is provided per comments received on the 2020 DEIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		159	"This removal is part of the planned Phase I scope for the ASAOC signed in 2021 with implementation anticipated in 2022 and 2024". - ASAOC activities are planned in 2023 as well. please correct.	WTR	"in 2022 and 2024" has been revised to "between 2022 and 2024".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		160	"Soil sampling and analysis indicate that legacy mining wastes..." - To clarify, please add "and naturally occurring mineralization"	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		161	"The elevated antimony and arsenic concentrations in groundwater are unlikely to improve in the future under the No Action Alternative." - This is not consistent with the statement above that "there would also be a potential improvement in groundwater analyte concentrations" associated with the ASAOC activities. It would helpful to the reader to include a statement in here that says the ASAOC activities will result in some improvement in surface water and groundwater conditions, but that it is limited and not to the same degree as implementing the mine plan.	WTR	The sentence has been removed from the text to provide consistency with the prior statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		162	"As such, there would be no change to the existing condition of surface water quality related to off-site facilities." - Here or elsewhere, the No Action description should also state that vegetation restoration and plantings would not occur under No Action. The plantings proposed for the SGP include streams that will not be directly impacted by mining activities. Without the restoration plantings, the shade along these reaches would not increase as quickly.	WTR	Following the streamflow paragraph, text was added to state "Proposed stream restoration and revegetation activities would not occur and their effects on reduced sedimentation and stream temperature would not occur."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		163	"Solute generated from mined materials are expected to be partially to substantively controlled by water management practices that are part of the SGP" - It is also worth mentioning that there are numerous engineering controls also being proposed (i.e., geosynthetic liners) that prevent solutes from being generated or entering the environment; a significant design feature added to the MMP. Please revise.	WTR	The use of geosynthetic liners is a component of the water management. The text has been revised to read "proposed water management practices and facility designs".

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		164	"In addition to solute mobilization, the temperatures of surface waters would be affected by the proposed project as it modifies the flow and shading characteristics of the mine area which affect stream temperatures." - please clarify that this is not a permanent condition by adding: '...during mine operations. Once pit watering stopped, groundwater levels and stream flows would increase and return to No Action levels. Shading characteristics would return to No Action conditions and improve over time as a result of the restoration plantings, vegetation monitoring, and adaptive management.'	WTR	The duration and nature of temperature effects is described in detail later in Section 4.9.2.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		165	"...consolidation water from the TSF (construction through closure which includes process water); " - Please correct, there is no consolidation water in construction as there is no processing and no tailings.	WTR	Revision made to reflect operations through closure.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		166	The header "Contact Water Pond Chemistry" should also mention contact water use, which is described within the subsection. Please revise.	WTR	Revision not accepted. Contact water use is described in SDEIS Section 4.8.2.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		167	For SODA pond, iron should not be listed as being above the strictest potentially applicable WQS. Please revise.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		168	Inflow sources for Plant ponds should also include plant site runoff. Please revise.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		169	For Plant ponds, selenium should not be listed as being above the strictest potentially applicable WQS. Please revise.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		170	The final paragraph of p 4-189 describes trends that are not consistent with the dewatering chemistry provided in Appendix D of the SWWC report. Also, this level of detail is not consistent with a summary. Please revise.	WTR	Text revised per the SWWC report table in Appendix D6.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		171	"Predicted water chemistries for the stockpiles exhibited circum-neutral pH values with antimony concentrations (0.008 mg/L to 0.016 mg/L) and arsenic concentrations (0.069 mg/L to 0.25 mg/L), both above the strictest potentially applied water quality standards " - It is incorrect to say these values relate to predicted water chemistry for the stockpiles. These values relate to the ore stockpile HCT source terms and have not been scaled to field conditions. Please correct/clarify.	WTR	Revision made. "Predicted water chemistries for the stockpiles" revised to "HCT samples representative of stockpile material".

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		172	" <i>The residence time in the aquifer...</i> " - Rather than referring to the residence time in the aquifer, it would be more appropriate to state the assumptions that were made in the model. Suggest replacing the sentence with the following "According to the hydrologic model (BC, 2021), groundwater underflow in the uppermost 32.8 feet (10 meters) of the alluvial aquifer beneath the TSF Buttress and Embankment averages approximately 620 gpm (1,300,000 m ³ /year). The flux of groundwater in the assumed 10-meter zone of interaction beneath the facility was incorporated into the model by accounting for the volumes of groundwater that move through the groundwater system beneath the facility on an annual basis."	WTR	Revision not accepted. The summary statement is appropriate with the details available in the citation provided.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		173	"...concentrations of antimony, arsenic, copper, manganese, mercury, and thallium above the strictest potentially applied water quality standards." - As written, it sounds like these constituents are consistently above the standards, which is not the case. Please revise.	WTR	Revision not accepted. The summary statement is appropriate with the details provided in the referenced table.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		174	" <i>Upon placement of the geosynthetic cover, ...</i> " - In this passage it should be stated that the groundwater quality predicted below the TSF Buttress is improved compared to the current conditions. Removing the Hecla Heap and SODA is anticipated to improve groundwater significantly in this area. It would be good to clarify that groundwater arsenic and antimony concentrations are predicted to be orders of magnitude lower than the current conditions as a result of mining. This is not captured in what is written. Could be restated as follows. "Upon placement of the geosynthetic cover on the TSF Buttress, infiltration is significantly reduced and arsenic and antimony concentrations in groundwater decrease but remain elevated above groundwater standards due to the recharge of residual water within the TSF Embankment and Buttress. However, the predicted arsenic and antimony concentrations in groundwater during the post-closure period are significantly lower than the existing conditions due to the removal of legacy facilities (Hecla Heap and SODA) during mining. Based on average concentrations from MWH-A04, arsenic and antimony in groundwater are 1.8 and 0.06 mg/L respectively under existing conditions. Arsenic and antimony concentrations are predicted to be an order of magnitude lower for the post-closure period due to the removal of the legacy facilities but still elevated above background groundwater quality as defined by MWH-A01."	WTR	Revision not accepted. The current description appropriately describes the predicted groundwater chemistry.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		175	Maximum value for manganese is less than SW quality criteria and should not be shaded. Please revise.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		176	Not all of the shading in this table is correct. The values need to be re-checked against the standards and shaded appropriately. Please revise.	WTR	Revisions made to the shading for Mn and Tl with text revised accordingly (SDEIS page 4-192, paragraph 2).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		177	" <i>Post-mining the application of a low permeability geosynthetic cover to the TSF Buttress and Embankment means any toe/pop-out seepage would report to groundwater</i> " - This could be seized upon as representing a potential groundwater impact, particularly given the high concentrations of arsenic and antimony in toe/pop-out seepage. In reality the volumes of toe/popout seepage are very low. This could be clarified in a footnote.	WTR	Revision not accepted. The volume of pop-out and toe seepage are presented in Figure 4.9-3.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		178	" <i>This minor seepage would interact with groundwater in the uppermost 32.8 feet (10 meters) of the alluvial aquifer</i> " - Please clarify that this mixing zone thickness is a modeling assumption, not an established fact.	WTR	Revision made. "would interact" replaced with "is predicted to interact".

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		179	Table caption or supporting text should specify that values are for tailings solids and not pore-water chemistry.	WTR	Table 4.9-5 title revised to "Details of Tailings Solids Composite Samples".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		180	" <i>Representative process water chemistry data were obtained from HCT tailings decant solution...</i> " - Incorrect as stated as decant water is not from an HCT but rather it is from pilot testing; remove 'HCT tailings' to correct this description.	WTR	Revision made. "HCT" removed from the description of tailings decant solution.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		181	" <i>When tailings are sufficiently consolidated to allow equipment to access the TSF surface around Mine Year 23,...</i> " - The cover placement starts around year 19 and finished in or by 23. Please clarify that covering instantaneously in year 23 is a conservative model assumption, not the actual cover emplacement plan.	WTR	Revision made. The sentence has been revised to read "When tailings are sufficiently consolidated to allow equipment to access the TSF to complete soil cover placement by around Mine Year 23,..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		182	" <i>Through this period (approximately 40 years), TSF surface water would be routed to the water treatment plant before discharge to Meadow Creek.</i> " - The period described is 25 years (Year 15-40), not 40 years. Also, this statement is incorrect. From years 23 to 40 the consolidation water is collected underneath the cover. The "surface" water is clean as there is a geosynthetic and up to several feet of soil/rock/growth media between the tailings and the ground surface. The surface water reports to Meadow Creek during this time period. The following revision of the paragraph is proposed: "When tailings are sufficiently consolidated and mine equipment can safely access the TSF surface, a geosynthetic cover would be placed over the tailings to reduce meteoric water contact with tailings material and infiltration into the TSF. Cover placement will begin around Year 19 and will be complete by Year 23. During and following cover placement, tailings would continue to consolidate and produce water. The collected consolidation water would be directed to the water treatment plant for 40 years into post-operations. Surface water from the TSF after cover placement reports directly to Meadow Creek during this time."	WTR	Revision made. "approximately 40 years" has been revised to "approximately Mine Year 40".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		183	" <i>To summarize, these mine-affected waters include:... post-closure TSF facility solutions.</i> " - Please remove from this list. "Post closure TSF facility solutions" would not be used in ore processing, which will have long since ceased.	WTR	The statement has been clarified to indicate that the list includes waters subject to water treatment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		184	" <i>The Site-Wide Water Balance model (Brown and Caldwell 2021a) ...</i> " - Global / all chapters - Perpetua was the author of the SWWB model for the 2021 MMP. Please correct for the FEIS.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		185	" <i>A 120-year precipitation record was utilized to develop percentile estimates for meteoric inputs to the water balance (5th through 95th percentile ranges)...</i> " - While some precipitation percentiles are	WTR	The parenthetical "(5th through 95th percentile ranges)" has been removed to clarify the statement.

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Resources Idaho, Inc.)			reported, the SWWB results generally look at percentiles of the OUTPUTS not those inputs. Please revise.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		186	"Any short-term volumes in excess of the water treatment capacity (i.e., following a large storm event) would result in water storage within the TSF and/or contact water ponds." - Please clarify this statement: any excess stormwater would not be directly transferred to the TSF, but will effectively remain there by foregoing reclaim and preferentially consuming other water in ore processing. The net effect is the same as to water balance.	WTR	Revision not accepted. There is no representation that excess water would be transferred to the TSF.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		187	"During warmer months, retention times for contact water in ponds would be up to 34 days resulting in warmer water treatment plant feeds with the potential to increase Meadow Creek temperatures downstream of the treatment plant outfall by up to 2.5oC." - Please clarify here that in this scenario, we would have the option of directly treating and discharging cooler dewatering water, and using the stored contact water in ore processing. Also confirm the value 2.5oC; this appears to be quite high vs. past modeling.	WTR	The text reflects the temperature information provided by the Water Management Plan.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		188	"Under an IPDES permit, the water treatment plant effluent would be directed to Meadow Creek at a location upstream of the Hangar Flats pit when flow augmentation is required and otherwise to the East Fork SFSR for the remainder of operations (i.e., when Hangar Flats groundwater pumping results in decreased Meadow Creek baseflow)." - bolded passage is misplaced; move to earlier in sentence after "required".	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		189	"The first-stage iron coprecipitation would be modified to include gypsum precipitation to reduce sulfate concentrations. The second-stage iron coprecipitation would then be converted to ettringite prearecipation which would reduce sulfate and TDS concentrations to the target levels for treatment plan effluent. Cyanide would be treated using a two-stage alkaline oxidation process that converts cyanide to carbon dioxide, nitrogen gas, and water. " - The description provided in here is based on an earlier draft version of the WMP, not the Final December 2021 version (The December 2021 version is referenced in the SDEIS and posted as a supporting document by USFS). Please replace it with the description from the December 2021 version (page 8- 33 of the WMP), "The treatment process begins with chemical oxidation followed by iron coprecipitation to remove a significant fraction of dissolved metals. Organic sulfide precipitation of mercury is provided. Softening will be performed via lime and soda ash to remove calcium and magnesium. Adjustment of pH will be provided in advance of ultrafiltration to remove carryover solids from the solids contact clarifier and prevent particulate fouling of the RO membranes. RO membrane treatment will separate the dissolved solids into a concentrated brine while the permeate water will be pH adjusted and re-mineralized prior to discharge to Meadow Creek via an IPDES-permitted outfall. The concentrated brine will be sent to an evaporative crystallizer that converts the dissolved solids into a crystalline solid, which will then be dewatered. Distillate from the evaporative crystallizer will be pH adjusted prior to discharge to Meadow Creek." Note that the treatment process described in the final version of the WMP will result in a higher water quality discharge to Meadow Creek compared to the draft version of the WMP.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		190	"...and thereafter dewatered and disposed of in a location constructed in the TSF above the cover r." - Please correct: final cover of the TSF would be deferred in areas of residual solid disposition.	WTR	The Project description calls for water treatment residuals to be placed in a repository above the cover when the TSF closure is completed and then reclaimed following completion of water treatment activities.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		191	"At the start of closure, water treatment plant effluent would be discharged to the East Fork SFSR until the cover of the TSF is completed (approximately nine years to allow for tailings consolidation, cover installation, and stream channel restoration). Once the TSF cover is completed, the treatment plant and	WTR	Revision made. The revised text reads "The operations phase water treatment plan would treat mine-impacted water and discharge to the East Fork SFSR through reclamation of operational components through Mine Year 18. Prior to Mine Year 15, the reclamation and closure phase

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Perpetua Resources Idaho, Inc.)			<p><i>discharge would be relocated to Meadow Creek, nearer the TSF, for the duration of its operation (to approximately Mine Year 40). "</i></p> <p>The text presented here does not align with the plan described in the final version of the WMP (BC, Dec. 2021, see previous comment). There will actually be two separate water treatment plants (WTPs); the operations phase WTP will continue to treat mine-impacted water collected from the truck shop and plant site ponds until mine year 18. The reclamation and closure WTP will be constructed prior to mine year 15 and will be located on top of the TSF Buttress on private property where it will operate until approximately mine year 40 (reference section 8.7, 8.7.1, 8.8, and Table 8-17 of the WMP [BC, Dec. 2021]). Please revise text to clarify that there will be two separate treatment plants for operations and closure; the operations WTP will not treat process water and will not be relocated.</p>		water treatment plant would be constructed on top of the TSF buttress where it would treat mine-impacted water through the completion of water treatment requirements estimated to be in Mine Year 40."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		192	<p><i>"These temporary systems would utilize trailer- mounted or skid-mounted equipment packages containing membrane treatment and/or iron coprecipitation systems that can be set up with limited lead time. Figure 4.9-10 illustrates the construction period water treatment flowsheet. "</i></p> <p>-As stated, the temporary systems would be equipment packages containing membrane treatment and/or iron coprecipitation systems, but the referenced Figure 4.9-10 is the treatment flow sheet for only the membrane alternative. Please revise the last sentence of the quote above to state, "Figure 4.9-10 and Figure 4.9-11 illustrate the construction period water treatment flowsheet." Please also update the captions for Figures 4.9-10 and 4.9-11 to state either could be potential flowsheets for the construction period.</p>	WTR	Revision made. Reference made to both Figures 4.9-10 and 4.9-11.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		193	This flow sheet is from a draft version of the WMP and does not reflect the information provided in the final version of the WMP, dated December 2021 (see previous comments), which included RO with an evaporative crystallizer. Please update the figure to match that shown in Figure 8-5 on page 8-34 of the Final version of the WMP.	WTR	Revision made. Figure updated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		194	<i>"...and from the Yellow Pine and Hangar Flats pits in the Yellow Pine backfill."</i> - Statement is incorrect; Yellow Pine backfill is comprised primarily of material from West End. Please revise.	WTR	Revision made. West End pit added to the list of sources for Yellow Pine pit backfill.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		195	<i>"Midnight pit backfill would be mounded at closure to promote runoff and the highwall and backfill material would be unsaturated. "</i> - This is the correct statement; previous statement referring to inundated backfill at Midnight Pit is incorrect. Please revise.	WTR	Revision made per comment regarding Midnight pit material inundation.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		196	<i>"Representative leachate chemistry for the non-PAG and PAG pit wall rock, talus and backfill material were obtained from humidity cell data associated with the backfill material..."</i> - Bolded words should be corrected to "development rock and ore material" as the wall rock and talus represent a combination of both development rock and ore-grade material.	WTR	Revision not accepted. The test results were associated with the lithologies expected to be present in the backfill material.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		197	<i>"Further details of the modeling are available in Brown and Caldwell 2021e and SRK 2021a "</i> - The SRK Characterization report is incorrectly referenced here. See previous comment about SRK references to revise.	WTR	SRK references corrected.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		198	<p>"The tracking analyses indicated that these destinations were typically surface stream segments in Meadow Creek, the East Fork SFSR, or Sugar Creek." - Discussion here should include explanation of why receiving stream segments percentages shown on figure 4.9-20 do not sum to 100%.</p> <p>Suggest the following additional language. "In each sub-basin the majority of the particles report to a stream; however in every case there are some particles that remain in the groundwater at the end of the 100 year simulation. The degree of this effect varies between the stream basins because the geometry of each basin is different with respect to groundwater flow gradients and speed, which in turn causes some particles to move more slowly and necessarily take longer to reach a discharge point to surface water. "</p>	WTR	Revision not made. The additional description of the figure is not required.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		199	<p>"Approximately two percent of the groundwater particles originating from the Yellow Pine pit backfill are predicted to reach those groundwater areas which could observe an associated increase in groundwater antimony and arsenic concentrations. " - The application of the particle tracking results is not used correctly here. Even though 2% of the particles were estimated to originate from the backfill, this does not automatically relate to groundwater concentrations, nor does it speak to the potential for the pore water to degrade groundwater. The potential to degrade groundwater depends upon the existing groundwater chemistry and how different it is from the pore water leaving the backfilled pit. In the case where the existing groundwater is already impacted and concentrations are higher than the pore water, there could actually be an improvement in existing groundwater conditions. This potential to improve previously impacted groundwater downgradient of the YPP needs to be acknowledged.</p> <p>Furthermore, the conclusion that some areas would see major negative effects, is premised on the assumption that these areas are not already impacted by legacy mining materials and in-situ mineralized rock. The cited wells (i.e., MWH-A17 and SRK-GM-04S) are only drilled to about 100' and are screened at elevations of 6100' and 6040' respectively; approximately the same elevation as the existing pit lake (6040') and elevation of future backfill. These screen elevations may not be sufficiently deep to adequately assess existing water quality of the receiving alluvial or bedrock aquifer where it could be impacted by pit backfill materials or pit wall contact. It is expected that water quality in the bedrock aquifer and alluvial aquifer downgradient of the YPP ore body and at depths below shallow wells, is already impacted by spatially extensive mineralization and alteration in the area as well as legacy facilities. Please revise the statements where the results of particle tracking analysis are used.</p>	WTR	The SDEIS statement indicates the potential for arsenic and antimony to transport from the pit area to receiving groundwater. As stated, this transport could raise groundwater antimony and arsenic concentrations compared to their current conditions.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		200	<p>"The effects of the infiltration of leachate from the TSF, TSF Buttress, stockpiles and Midnight pit backfill, groundwater interaction with the Yellow Pine and Hangar Flats pit backfills, and West End pit lake on groundwater chemistry would be minor to major depending on the existing condition of receiving groundwater, permanent, and localized. " - Facilities that receive caps, particularly the buttress, would have temporary/short-term impacts not permanent. The remaining permanent impact if any, would be minor. Please clarify/correct.</p>	WTR	The aggregate effect of mine facilities on groundwater chemistry would be permanent.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		201	<p>"The Forest Service would require that where haul roads pass within 25 feet (slope distance) of surface water, dust abatement would only be applied to a 10-foot swath down the centerline of the road." - Please strike this sentence. This is infeasible and ineffective for haul roads which are roughly 100' wide and is likely a carryover from the exploration Golden Meadows EA which applied to roads that are only 12 to 30' wide or so.</p>	WTR	This statement has been revised to read "... dust abatement would only be applied in the center portion of the roadway".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		202	Please clarify what the values in the tables represent (averages, mins/max) and what the red coloring indicates.	WTR	Explanations of the data on the table have been added to the legend.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		203	"Immediately downstream of the Yellow Pine pit on the East Fork SFSSR at node YP- SR-4 (above the confluence with Sugar Creek), predicted surface water chemistry is similar to existing conditions with some variability in predicted antimony, arsenic, and mercury concentrations during the operating and initial closure period " - There is a significant reduction in arsenic and antimony concentrations during the operation and post closure period at YP-SR-4 with respect to existing conditions. The text as written indicates that the predicted concentrations for this time period are similar to existing conditions, which is not correct. Please quantify these values rather than use subjective descriptors: A 40% reduction in closure, and more than that in operations, is not adequately described by "similar" or "with some variability" to existing conditions; it is unquestionably lower with respect to the key COCs arsenic and antimony; please describe as such.	WTR	The variability in the concentrations during the operating period, namely the maximum concentrations predicted early in the operating period, preclude a conclusion that the concentrations are reduced for the entirety of that period.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		204	"During operations, mercury concentrations are greater than the most stringent applicable water quality standard because the surface water in upper West End Creek is above the standard under existing conditions" - Clarify that this water is routed around legacy features where presently that mercury gets dropped out, and in operations will just flow past.	WTR	Revision not made. The explanation for the higher mercury concentrations is appropriate.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		205	"Similarly, predicted arsenic concentrations decrease relative to existing conditions during the operating period then recover to a concentration comparable to existing conditions in the post-closure period. " - Table 4.9-21 shows reductions in As and Sb concentrations on the order of 30-40% relative to existing conditions. Effects should be described as moderate (beneficial) impacts, not as comparable concentrations.	WTR	The variability in the concentrations during the operating period, namely the maximum concentrations predicted early in the operating period, preclude a conclusion that the concentrations are reduced for the entirety of that period.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		206	"This suggests that a naturally-occurring mechanism reduces mercury concentrations in the creek between the sample locations upstream and downstream of the pit area. " - This could be clarified - mercury is reduced as the stream flows through the upper West End waste rock dump and it deposits in the pore space of the dump. While the physics of the porous media flow and the resulting retention of particulate mercury is "naturally occurring" the dump is not.	WTR	Revision made. The term "naturally-occurring mechanism" has been replaced by "mechanisms that retain particulate mercury".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		207	"Diversion of West End Creek around the pit area during operations has the potential to affect the naturally-occurring reduction in mercury concentrations, allowing higher upstream concentrations to appear in the downstream segment" - The reference to "naturally occurring mercury reduction" should be removed. Suggested rewording of the paragraph is, "Diversion of West End Creek around the pit area during operations has the potential to affect the mercury concentrations by eliminating a current source of attenuation that occurs as water moves through the legacy development rock facilities in the area. Therefore, the SWWC model assumes that the higher upstream mercury concentrations would occur in the downstream segment when the West End Creek diversion is constructed. Despite this conservative model assumption, mercury concentrations are predicted to remain below the surface water standards."	WTR	Revision made per comment regarding reduction in mercury concentrations.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		208	"Effects of the project on surface water concentrations (in Sugar Creek) are expected to be negligible relative to applicable standards and calculated human health criteria, permanent, and localized. " - It should be acknowledged that there is a moderate positive effect on surface water concentrations relative to existing conditions as a result of mining. Please revise.	WTR	The variability in the concentrations during the operating period, namely the maximum concentrations predicted early in the operating period, preclude a conclusion that the concentrations are reduced for the entirety of that period.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		209	"Air emissions from the project have the potential to contribute metals to the ground surface via wet and dry deposition that have the potential to affect surface water chemistry. Most of these contributions would be in the form of particulate matter, but a portion of the local aerial deposition of mercury may also occur in elemental form. Total mercury emissions from the project are predicted to be approximately 13.6 pounds of mercury per year." - This description is inaccurate and misleading to the	WTR	The text has been revised to include a discussion of the deposition modeling per the Air Quality analysis (i.e., 0.056 g/km2/year versus the REMSAD model results for baseline deposition).

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Resources Idaho, Inc.)			reader. The presented emissions would not be aerially deposited, as the heading suggests. The modeled deposition rate of Hg due to the project is well under 1 g/km ² per year, a value that is far less than 1% of background mercury deposition as quantified in the REMSAD model.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		210	These paragraphs should reflect and discuss the air quality analysis report, which quantifies Hg emissions and also models Hg deposition based on project emissions and relative to background deposition rates. These values are in the SDEIS document and the reader to should be directed to them. Background deposition rates for Hg from the REMSAD model in the project vicinity are 12.7 to 13.9 g/km ² per year; modeled deposition from project emissions is, at most, 0.056 g/km ² per year...far less than 1% of background. This can not be equated to a "minor to moderate" effect on particulate mercury loads in streams due to project activities due to aerial deposition. It is less than negligible. Please revise to include project- specific information and analysis.	WTR	The text has been revised to include discussion of the deposition modeling per the Air Quality analysis (i.e., 0.056 g/km ² /year versus the REMSAD model results for baseline deposition).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		211	"Predictive modeling indicates that mine facilities and water treatment would contribute dissolved..." - Please rewrite to clarify. Water treatment would not degrade water quality, based on IPDES antidegradation regulations.	WTR	"... and water treatment" has been removed from the text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		212	"An incremental increase in organic carbon content due to wastewater effluent (as described above) would yield an incremental increase..." - please replace 'would' with 'could'.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		213	"For Meadow Creek, the East Fork SFSR, and Sugar Creek, predicted total mercury concentrations varied up to 5 ng/L compared to existing conditions which ranged between 2.5 ng/L and 159 ng/L." - Please clarify whether "existing conditions" refers to SGP baseline data, model predictions, or Holloway et al data.	WTR	A citation to Holloway has been added for the existing conditions values.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		214	"Ifupstream total mercury concentrations in West End Creek persist to downstream areas of the creek due to its diversion around the West End pit area, application of the methylation ratio would indicate a potential increase of methylmercury concentrations up to 0.9 ng/L in that portion of West End Creek. " - The use of a ratio developed for Sugar Creek cannot necessarily be applied to West End Creek as the two streams have differing morphology with West End Creek being steeper gradient and more incised, reducing wetland area and associated methylation potential. West End Creek is about 25% gradient. Sugar Creek, Meadow Creek, and EFSFSR range from <1 to 7%, and usually <5%. From surface water monitoring data collected as part of the Surface Water Quality Baseline Study (HDR, 2017) and collated by Brown and Caldwell, mercury concentrations show a positive correlation to the proportion of Total Suspended Solids (TSS). The positive correlation between total mercury and TSS indicates the majority of mercury is present in particulates coarser than 0.45 µm and therefore less likely to methylate or be bioavailable. These results suggest mercury methylation is unlikely to be significant in the Stibnite district owing to the majority of mercury being associated with the particulate or 'total' fraction. Based on the site data collected as part of the Surface Water Quality Baseline Study (HDR, 2017) and collated by Brown and Caldwell, the mercury budget available to methylate is small, being less than 1% in any sample and less than 0.1% in most samples. Therefore, the 2% methylation ratio is highly conservative based on the available data. Please revise the ratio or acknowledge that it is very conservative.	WTR	An acknowledgment to the conservatism of the estimate has been added to the text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		215	Paragraph 2 - P 260 discusses sediment generation and management practices; It seems applicable here to also include discussion on interim measures to reduce sediment production in the East Fork of	WTR	The statement "However, measures that reduce sediment production in the East Fork of Meadow Creek are an early component of the Project. These measures would mitigate the

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Resources Idaho, Inc.)			Meadow Creek early in the project through the Blowout Creek Restoration, and ultimate reclamation of that drainage. This is a significant facet of the project that improves water quality. Please revise.		largest sediment source present under existing conditions." has been added following the first sentence of the Sediment section.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		216	"Perpetua would limit the potential for sedimentation impacts by following conditions in the Dewatering Practices section of their current Multi-Sector General Permit, or the Multi-Sector General Permit..." - Substantial portions of the mine site and several off-site facilities are expected to have IPDES coverage under the MSGP during construction and operations, as was discussed in the Water Management Plan. This coverage, which may include haul roads, access roads, maintenance and logistics facilities, and other parts of the SGP not included in the industrial Individual IPDES permit, is outlined in the SGP Water Management Plan (BC 2022) and will be administered by IDEQ. For the FEIS, additional information about MSGP coverage should be added for clarity.	WTR	This section is focused on Yellow Pine pit lake dewatering. Controls for other facilities under the Multi-Sector General Permit have been added to the previous paragraph.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		217	This figures indicates that high pH equates to lower methylation. Whereas the project site has elevated pH, please address/discuss the implication of this in the text.	WTR	Predicted pH conditions associated with the site change very little compared to existing conditions.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		218	"To protect surface water, snow removal standards or performance would include depositing snow and ice away from stream channels; maintaining appropriate snow floor depth to protect the roadway;" - Please remove this sentence. This is a remnant from the exploration EA. It is not a requirement and it is a safety hazard; the road would be plowed to the surface as per the first part of this paragraph.	WTR	The requirement has been applied as described in Chapter 2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		219	"Mining and vegetation removal..." - Please add '...and subsequent restoration plantings.' as they are also considered in modeling.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		220	"Permitted discharge of treated water or non-contact water to surface water." - please delete 'permitted'; non-contact water is not "permitted" in the sense of needing a discharge permit, and the word is not important to the meaning of the sentence.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		221	Section 5.1 of the Fisheries Specialist Report indicates that this 6.6C increase applies across the analysis area of the EFSFSR upstream of Sugar Creek. This is misleading. Most of the temperature increases are less than 1C and through much of the EFSFSR they actually go down (noted by "-" in this table). Please revise discussion.	WTR	The table of predicted temperature increases shows the location of the maximum increase to be Meadow Creek above the EFMC confluence and that other stream reaches are affected to a lesser extent.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		222	"...residence time of surface flow in the low-gradient sinuous restored stream channel would allow warming of temperatures above existing conditions ..." - Lack of shade is also an important factor; suggest adding to discussion.	WTR	Revision made to acknowledge lack of shade.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		223	"...and industrial supply wells lowers water levels and groundwater discharge to surface water during operations." - Please clarify it is not throughout operation. The HF pit is only below valley bottom for about 18 months, then it is backfilled and groundwater recovered by year 8. Please revise.	WTR	Revision made to acknowledge groundwater recovery during the operational period.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		224	"In addition, underdrain flow from the TSF is intercepted during operations ". - This statement is incorrect; TSF underdrain water is assumed to be discharged to Meadow Creek for the base case of the water modeling. In the base case, it was assumed that it would meet IPDES permit limits to be directly discharged into Meadow Creek without treatment. It would be use in processing or treated before discharge if it turns out to be impacted by the TSF - but again that is not the base assumption. Please revise.	WTR	Revision made. The sentence regarding underdrain flow has been removed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		225	"On the Meadow Creek segment atop the reclaimed TSF, temperature reductions would occur more slowly remaining warmer than existing conditions after 100 years. " - This is not accurate. As shown in Table 4.9-24, we get back to existing conditions somewhere between 50 and 100 years. Please revise.	WTR	SDEIS Figure 4.9-28 shows that the predicted EOY112 temperatures remain above the existing conditions for the TSF area.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		226	"In the Yellow Pine pit area and downstream, ..." - To clarify this statement, please add to beginning: 'During operations, in the YPP area...'	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		227	"Achievement of these predicted temperatures would depend on the effective and durable installation of the Stibnite Lake feature." - This is an unnecessary statement that could be speculated about any constructed feature. With respect to sedimentation, an ancillary benefit of the Blowout Creek repair is that Stibnite Lake will remain a lake far longer than the present YPP lake would under No Action (and note Rio ASE calculated fill time / issued to USFS previously). Please remove.	WTR	Revision not accepted. The statement regarding effectiveness and durability is responsive to input from other comments regarding the expected long-term performance of the Stibnite Lake feature and acts to introduce the Blowout Creek repair topic.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		228	P. 274, paragraph 4 includes discussion of sediment control measures and restoration effects for Blowout Creek that should also be included in (or moved to) the sedimentation discussion in "Sediment". Here, the allusion is that its primary purpose is to improve the durability of Stibnite Lake, which is not the case. It's primary purpose is to reduce sedimentation and improve water quality in the EFSFSR. Please revise.	WTR	A description of the effects of Blowout Creek repair has been added to the Sediment sub-section of the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		229	P. 4-275 paragraph 3 is inconsistent with the preceding paragraphs. If it is intended to be a summary, it should not simply focus on the temperature increases because singular number are difficult to interpret out of context. Please validate the cited values or simply refer the reader to the tables. 3C in EFSFSR "below YPP area" is misleading; the author should clarify that once Sugar Creek enters the system, the simulated maximum increase is 1C. 10C in Meadow Creek is relative to the piped condition; the paragraph introduction states "compared to existing conditions"; the increase above baseline in Meadow Creek is 6.6C. Please evaluate and revise.	WTR	The text has been revised to indicate the effects of Sugar Creek on temperatures downstream of the Yellow Pine pit area. Increased average temperatures in the TSF area compared to existing conditions are approximately 6.6°C but there are segments where the temperature increase is up to 10°C. This has been clarified in the revised text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		230	"Compared to existing conditions, project operations are predicted to increase temperatures in West End Creek by up to 9oC and the East Fork SFSR below the Yellow Pine pit area by up to 3oC. Upon closure activities, Meadow Creek temperatures are predicted to increase by up to 10oC as the stream channel is restored atop the TSF while formation of the West End pit lake raises temperatures in West End Creek by approximately 4oC. With the exception of the West End Creek segment below the pit area, predicted temperatures return to existing conditions over a period of approximately 100 years as stream	WTR	SDEIS Figure 4.9-28 shows that the predicted EOY112 temperatures remain above the existing conditions for the TSF area.

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			<p><i>restoration and riparian plantings along with the moderating effect of the Stibnite Lake feature take effect (see also Section 4.9.3) "</i></p> <p>- The author should clarify that the West End Pit Lake is not predicted to have a surface outflow, and the simulated increase in West End Creek does not significantly impact temperatures in Sugar Creek because the flows in West End are very low.</p> <p>-The last sentence is incorrect: it does not take 100 years for temperatures to return to existing conditions everywhere else on site. The only location of significant lasting temperature increase is on the TSF, and even there, temperatures return to baseline sometime between 50 and 100 years. Most of the EFSFSR temperatures actually decrease relative to existing conditions as shown in Table 4.9-24 visualized with the dashes in the maximum temperature increase for the project column. Table 4.9-24 list 36 rows of area-season-metric combinations. 18 rows either have a dash or have temperature increases that are less than or equal to 0.2C of baseline. 24 rows have a dash or temperatures increases less than or equal to 0.5C from baseline.</p>		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		231	" <i>The potential for surface water quality impacts from accidental fuel or chemical spills along the mine access roads would be comparable between the alternatives</i> ". - Please correct this unsupported statement. JC has nearly 4X the road length within 100' of streams. Thus, the potential for SW quality impacts from fuel or chemical spills cannot reasonably be described as comparable; the BL Route has demonstrably lower risk.	WTR	This sentence has been removed from the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		232	" <i>The technical adequacy review identified the following sources of model uncertainty and potentially non-conservative model assumptions:</i> " - If non- conservative model assumptions are being listed, the conservative ones, of which there are many, should also be so listed to give the reader a full picture of how modeling was conducted. It is also notable that "non-conservative" with respect to one thing (say, water supply from contact water runoff) is "conservative" with respect to something else (leachate volume reporting to GW).	WTR	Non-conservative assumptions are disclosed per NEPA requirements.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		233	" <i>...actual long-term conditions for the proposed mine facilities could vary the rate of sulfide oxidation along with the leachate pH and/or leached analyte concentrations.</i> " - Please note for the reader here that actual long-term conditions (i.e. site data) show that acid generation has not occurred from historical mine waste despite exposure at surface for several decades. Circum- neutral to moderately alkaline baseline surface water and groundwater chemistry (and pit lake chemistry) also supports the assumption there has been no/limited acid generation from historical mine wastes.	WTR	The actual site conditions associated with acidic drainage are noted previously in SDEIS Section 4.9.2.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		234	" <i>First-flush releases from the development rock material could cause short-term increases in downstream concentrations above and beyond what is currently predicted by the model</i> ". - Please note here (or correct this statement to note) that it is very likely the first flush chemistry will occur during operations and will be managed as contact water, therefore this will have minimal effect on in-stream concentrations.	WTR	The circumstances regarding first flush chemistry are described in SDEIS Section 3.9.4.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		235	" <i>Air temperature correction factors used to scale laboratory reaction rates to field conditions by the model could underestimate actual reaction rates and chemical releases from mined materials, and hence, surface water quality impacts.</i> " - The term 'correction factors' is misleading here. It should be clarified that <i>measured</i> (not arbitrary) air temperature data are used to scale laboratory data to field conditions.	WTR	"Correction factors" has been revised to "scaling factor".
Alan Haslam (Vice President, Permitting, Perpetua		236	" <i>The surface water quality model predictions do not include mass loading inputs from permitted IPDES outfalls that would be required for the SGP.</i> " The statement that the surface water quality model predictions do not include mass loading inputs from permitted IPDES outfalls is incorrect. Treated effluent from the water treatment plant has been incorporated into the models and this bullet can be	WTR	The EIS analysis uses the predicted analyte concentrations associated with water treatment but does not include any mass loading requirements from the IPDES permits.

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Resources Idaho, Inc.)			removed from this section. Reference to a water treatment sensitivity scenario should also be removed from this section.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		237	"Additionally, mercury inputs from atmospheric deposition caused by the SGP have not been considered in the model." - As noted in the air quality section of this SDEIS, atmospheric deposition of Hg caused by project emissions represents a fraction of 1% of the background Hg deposition noted in the REMSAD model. This should not be cited as an uncertainty in the SW quality model when there are data available within this report that clearly indicate that this would have a negligible impact on SW quality.	WTR	The text has been revised to include discussion of the deposition modeling per the Air Quality analysis (i.e., 0.056 g/km ² /year versus the REMSAD model results for baseline deposition).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		238	"Model-predicted concentrations generated by the SWWC Model are for the dissolved fraction only and may underpredict concentration levels for constituents such as mercury that have been shown to occur in particulate form". The particulate form of the constituents that will be in surface water runoff will be managed during operations. A geosynthetic cover would be placed on the facilities at closure and overlain by an inert soil/rock layer and growth media and revegetated. These controls will limit the potential for particulates to contribute to constituent load in the surface water system. Please revise.	WTR	Controls on particulate matter in surface water could be substantially effective, but any particulate matter entering the stream could affect total fraction analyte concentrations.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		239	"The lined Stibnite Lake feature would receive inflow from the cover material in contrast to the existing groundwater inflow" - Add the word 'minimal' here before 'existing' as statement refers to inflow from bedrock.	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		240	"The current temperature model does not incorporate any potential cooling effects from subsurface inflow into the Stibnite Lake feature," - This should be identified as a conservative modeling assumption. Any groundwater influence is going to be beneficial not detrimental to temperature.	WTR	The text has been revised to indicate that this is a conservative assumption.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		241	"Qualitatively however, insufficiently effective closure activities and/or adverse changes in broader climate conditions could result in higher than predicted stream temperatures" - Please note that in this case, the mitigation measures described in Section 4.9.3 would apply, and that "higher than predicted" stream temperatures would prevail in unaffected streams not just the SGP restoration projects. Please revise.	WTR	The mitigation measure in the SDEIS Section 4.9.3 speaks directly to this uncertainty in future temperature conditions.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		242	"At less than full design efficiency" - This sentence is likely unclear to the reader. Suggest this intro clause should be replaced with "Even when shade is assumed to be only 40 percent of that designed..."	WTR	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		243	"Without this temperature reduction, stream temperatures downstream of the Yellow Pine pit area could also be greater than existing conditions". - This is a misleading statement especially in light of the 40% shade sensitivity analysis shown later in this Chapter. Also, in EOY27 when temperatures on the TSF are simulated to be the warmest, the temperatures downstream of YPP are within 0.4C. The context of the increase should be included in these types of statements through out this Chapter and the Fisheries Report. Please revise.	WTR	Revision not accepted. The statement appropriately describes the predicted water temperatures downstream of the Yellow Pine pit area.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		244	"Under the No Action Alternative, there would be no open pit mining or removal of legacy waste material at the mine site." - This disregards ASAOC activities. Please correct.	WTR	The text has been revised to acknowledge the ASAOC.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		245	"However, surface water quality changes caused by the 2021 MMP would effectively be irretrievable..." - This is a misleading statement; most of the changes are positive, and towards restoring beneficial uses, particularly in Meadow Creek. Please revise.	WTR	This text pertains not just to predicted geochemical effects on surface water chemistry but also to the effects of incidents and spills. These effects would be irretrievable until abated as described in SDEIS Section 4.9.4.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		246	"Under the No Action Alternative, there would be no open pit mining or removal of legacy waste material at the mine site." - This disregards ASAOC activities. Please correct.	WTR	The text has been revised to acknowledge the ASAOC.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		247	"Under the Johnson Creek Route Alternative, long-term losses of groundwater and surface water productivity would be the same as the 2021 MMP except that transportation-related impacts to surface waters in the Johnson Creek drainage could be greater in nature and/or extent." - This is correct; please note that it contradicts a faulty assumption made in Section 4.9.2.3 (see comment above). Please revise the earlier section.	WTR	No further response required. General in nature or position statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		248	There appear to be calculation errors in this table, e.g. Yellow Pine percentages sum to 85%. Please validate.	WTR	The table has been revised per the contents of Table 3-2 from the Comprehensive Baseline Geochemical Characterization Report (SRK 2021a).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		249	"Greater variability is evident between the dissolved and total mercury sample averages. The variability in mercury results may be attributable to the generally low concentration values, differing amounts of particulate matter in the total mercury samples, laboratory protocol differences between the two studies, or different runoff conditions..." - It is likely worth noting that the USGS specifically samples at highest flow events, so their Hg numbers are elevated relative to PRII, which normally samples in mid-May. Please include that in discussion.	WTR	The table is intended to summarize the available USGS and Perpetua surface water data. The % difference columns have been removed from the table and a footnote added to reflect sample collection times.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)		250	"...much of the sediment entering the East Fork SFSR was derived from Sugar Creek, Meadow Creek, and East Fork Meadow Creek (i.e., Blowout Creek)". - Reclamation of EF MC is not discussed in sediment effects analysis, but is noted here as a significant source. Suggest clarifying this for the reader in the effects analysis.	WTR	A description of the effects of Blowout Creek repair has been added to the Sediment sub-section of the report.

General Vegetation Communities, Botanical Resources, and Non-native Plants

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Elizabeth Barnes	6652	4	p. 2-144 Why are no alternatives provided to the destruction of 23 mature cone-bearing whitebark pine? Can they not be worked around? What is the anticipated effect of noise pollution and land clearing on Clark's nutcracker, and what are implications for the impending listing of whitebark pine?	VEG	Mitigation measures to address the potential loss of whitebark pine have been added to the Final EIS in Section 4.10.3. Potential impacts to wildlife, including habitat removal and human presence and noise, are discussed in Section 4.13.2 Impacts to the whitebark pine are discussed in Section 4.10.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	91	“ <i>The 2021 MMP would impact 3,991.0 acres of modeled potential habitat for sensitive and forest watch plant species.</i> ” Please check and clarify how these numbers of acres are larger or nearly so than the total acres of vegetation cleared in the rows below. You cannot provide a total number of acres of modeled potential habitat since it would double count areas that are considered potential habitat for multiple species.	VEG	Text has been revised per the comment. Total acreage deleted. A range of acreages for the various sensitive and forest watch plant species has been added to the text based on Table 4.10-4. The same changes have been made under the Johnson Creek Route Alternative as well.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	92	“ <i>The 2021 MMP-related vegetation clearing would impact 3,563.7 acres, including primarily undisturbed areas for the Burntlog Route where an increase in the potential for non- native plant establishment and spread would be more deleterious.</i> ” These numbers are larger than the total acres of disturbance in Chapter 2 (Tables 2.4-1 and 2.5- 2). Check these numbers and update accordingly or clarify how and why these numbers are bigger.	VEG	No text revisions made. As described in the Vegetation Specialist Report and Table 4.10-5, this total acreage includes the maximum possible extent of tall tree clearing related to the power line as well.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	649	“ <i>Exploration activities for potential future mining development in the vegetation analysis area have likely impacted vegetation via removal and soil compaction at drill pad sites and temporary roads and will likely continue to do so as these activities continue.</i> ” Compaction is reversed upon reclamation by a variety of techniques. Please revise.	VEG	Text has been revised per the comment.” until reclamation occurs” has been added to the statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	650	“ <i>These RFFAs would result in loss of habitat, but all projects (private or federal actions) would have to meet the requirements of Section 7 of the ESA, which include consultation with federal agencies on listed plant species, completion of appropriate analysis documents, and compliance with agency-mandated reasonable and prudent measures to protect listed species.</i> ” ESA does not deal with general vegetation resources. This should be moved to 5.13 Wildlife and Wildlife Habitat including Threatened, Endangered, Proposed, and Sensitive Species.	VEG	No text revisions made. This statement pertains specifically to the whitebark pine, which is discussed in Sections 3.10, 4.10, and 5.10.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	651	“ <i>This project is located primarily along the East Fork SFSR and Meadow Creek at the mine site and would result in disturbance to vegetation</i> ” - Please provide a more accurate description here of vegetation impacts; these actions will also facilitate wetland restoration and reforestation where there were previously barren or poorly revegetated waste piles.	VEG	Text has been added per the comment.” Riparian and upland herbaceous vegetation” has been added to the end of the paragraph in row 1 of Table 5.10-2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	652	Stallion Gold – Horse Heaven Project' - Please provide the rationale for including this project as an RFFA or remove. It does not meet the definition of RFFA per 36 CFR 220.3.	VEG	No text revisions made. This project is an RFFA due to the amount of surface disturbance associated with the project and potential for disturbance to vegetation.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	653	“ <i>Therefore, implementation of the No Action Alternative would present a minimal cumulative contribution to impacts to vegetation resources.</i> ” ASAOC is a part of the No Action Alternative. Please include. And as noted in comment above, ASAOC activities facilitate wetland restoration and reforestation where there were previously barren or poorly revegetated waste piles.	VEG	Text has been added per the comment.” Additionally, Perpetua would continue to comply with the reclamation and monitoring commitments included in the Stibnite Mine Site ASAOC Project, which focuses on restoring portions of Meadow Creek and the East Fork SFSR after removing mill tailings and mine waste.” has been added.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	654	<p>“ <i>The 2021 MMP would result in the largest contribution to mining- related cumulative impacts to vegetation communities with the Johnson Creek Route Alternative impacting approximately 251 acres less.</i> ”</p> <p>Please replace” the largest” with” a larger”</p> <p>Please define the impacts to the vegetation as these are not expressly stated.</p>	VEG	Text has been revised per the comment.” Largest” has been revised to” larger” .
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	655	<p>“ <i>Other past and present actions (Table 5.10-1) and RFFAs (Table 5.10- 2) have and would likely impact vegetation communities, occurrences of special status plants including whitebark pine, habitats for special status plants, and distribution of non-native plants throughout the analysis area.</i> ” Please provide the necessary information to show or indicate that these impacts would overlap spatially, particularly the RFFAs.</p>	VEG	No text revisions have been made. Due to the relatively large geographic range of the whitebark pine and other special status plant species in this area of Idaho, it is reasonable to assume that nearby past, present, and RFFAs have or would result in cumulative impacts in combination with the Project.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	656	<p>“ <i>For whitebark pine, the potential for cumulative impacts would be lowest under the Johnson Creek Route Alternative and highest under the 2021 MMP based on disturbance acreage and estimated number of trees removed.</i> ” Please move this statement to Section 5.13 Wildlife and Wildlife Habitat including Threatened, Endangered, Proposed, and Sensitive Species</p>	VEG	No text revisions made. Whitebark pine, even after its listing as a federally threatened species, is included in the Vegetation sections of the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	253	<p>“ <i>Approximately 347 acres (2 percent) of the analysis area occur in the Salmon-Challis National Forest (administered by the PNF); however, PVG data were not available for this area.</i> ” PVG data is available. Please incorporate PVG data from USFS in WBP modeled habitat.</p>	VEG	No text revisions made. PVG data was not provided by the Forest Service for portions of the Project located on the Salmon-Challis National Forest.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	254	<p>Please round the percentages to one decimal value as the summarized modeled habitat is not field verified and providing more decimal places of precision could be misleading.</p>	VEG	Text has been revised to only include percentages to one decimal value.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	255	<p>“ <i>Source: AECOM 2020e</i>” The table footnote references the AECOM 2020e model, however earlier text indicates this model was updated by Stantec 2022. Please update the reference or clarify why the table references the previous report.</p>	VEG	Text has been revised per the comment. The Stantec (2022) modeling effort citation has replaced the” AECOM 2020e” reference, where appropriate.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	256	<p>Please clarify how many total occurrences and subpopulations of Bent-flowered Milkvetch overlap the SGP analysis area and disturbance footprint</p>	VEG	Text has been added per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	257	<p>“ <i>Five subpopulations of a single occurrence (the Cinnabar Peak occurrence) of this species were documented during surveys in 2012, 2013 (HDR 2017g), and 2016 (Mancuso 2016, IFWIS 2017).</i> ” Please update data referenced from IFWIS 2017 to more recent data sources. These data are available from the USFS. The USFS is a partner with IFWIS and receives these data two times a year (January and July).</p>	VEG	No text revisions made. The Forest Service has indicated that a cutoff date for data for this EIS is 2017.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	258	“ <i>The other subpopulations of this occurrence and the other occurrences of this species are located outside the analysis area for the SGP.</i> ” Please clarify how many” other” subpopulations.	VEG	Text has been added per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	259	“ <i>Issue: The SGP would impact forested PVGs within Forest Service- administered land and could impact the ability of these areas to reach desired conditions.</i> ” Table 1.10-1 lists all these issues as” may impact” instead of” would impact” . Please use consistent language as” may” and” would” mean different things.	VEG	No text revisions made.” Would” is appropriate here as this is the term used throughout the analysis portion of the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	260	For the FEIS, please change any reference to WBP as a” candidate” or” proposed threatened” species to” threatened” species to reflect the changes in status the WBP has gone through over the course of the Perpetua NEPA process.	VEG	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	261	“ • <i>Number of acres of whitebark pine occupied habitat impacted by the SGP.</i> ” Please clarify if this indicator and calculation is within the SGP disturbance area or the 300-foot buffered analysis area.	VEG	No text revisions made. It is explained further in Section 4.10.2 that potential impacts to the whitebark pine is based on direct effects (SGP footprint and overlap of occupied habitat acreage). Indirect effects (300-foot buffered analysis area) are included in the analysis but no acreages are associated with indirect effects.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	262	“ • <i>Estimated number of mature whitebark pine trees to be cut during SGP construction.</i> ” Please provide methods, reference, and context for how these estimated WBP numbers were calculated. The methods were designed by the USFS and not discrete counts; providing numbers is misleading and needs explanation. Please also clarify mature WBP trees vs cone producing trees from the survey methodology. This should be qualified as an estimate of cone producing trees observed during 2019 field season, which is not the same as an estimate of the number of mature trees cut during construction. Please add context to this indicator such that the number of whitebark pine impacted can be evaluated as a percentage of a greater whole.	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	263	“ • <i>Presence of known occurrences of sensitive or forest watch plant species or occupied habitat within 300 feet of the SGP disturbance area.</i> ” Please provide acres of occupied habitat within the SGP disturbance, similar to the other indicators.	VEG	Text has been added per the comment.” and/or acreage of occupied habitat.....” has been added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	264	“ <i>4.10.2 Direct and Indirect Effects</i> “ For this entire section, please provide support for the summary effects calls and clarify how the intensity, duration, and context were derived. It is unclear how the numbers of individual plants were calculated. Please clarify and provide a methods summary, reference, and context of how these numbers were calculated. Please include a percentage of the greater whole for context.	VEG	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua	19325	265	Please clarify how these numbers were calculated and what datasets were used.	VEG	Text has been revised per the comment.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	266	<p>“Based on the results of the species-specific field surveys conducted for the SGP in 2019 (Tetra Tech 2020b), the 2021 MMP would impact approximately 259.4 acres of occupied whitebark pine habitat and would remove an estimated 1,236 individual trees, 23 of which would be mature, cone-bearing individuals. This would result primarily in localized, long-term and permanent, moderate impacts to the whitebark pine. Detailed calculations of impacts to whitebark pine occupied habitat and individual trees are reported in the SGP Vegetation Specialist Report Appendix F (Forest Service 2022g).” When reading this statement, it is unclear how these numbers were calculated. While this statement points to the SGP Vegetation Specialist Report Appendix F (Forest Service 2022g), that report does not provide clear methods for how these numbers were derived.</p> <p>Please clarify and provide a methods summary, reference, and context of how these estimated WBP numbers were calculated. These discrete reported numbers were derived from very broad estimates and categories from field surveys and not an actual count of individuals.</p>	VEG	Appendix F of the Vegetation Specialist Report contains details of the calculations in the footnotes for Table F-1 and Table F-2. Additionally, text has been added per the comment regarding the” estimate” of whitebark pine resources during the field survey in 2019 conducted by TetraTech.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	267	<p>“Construction of the 2021 MMP would impact several known occurrences of sensitive and forest watch plant species as described in the following subsections.” Please clarify under each species if there is any known occupied habitat/occurrences that are within the SGP footprint. Consider use of the number of acres of occupied habitat within the SGP disturbance as the indicator.</p>	VEG	No text revisions made. Descriptions of potential impacts to specific sensitive species, including known populations and modeled habitat, is presented in Section 4.10.2.2 and Table 4.10-4.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	268	<p>“The most likely impact of the SGP on this subpopulation would be dust associated with construction of the West End Creek diversion, which could travel upslope and impact this subpopulation or its pollinators.” Please take into consideration dust control measures, the small project size of a diversion project, and the proximity of the diversion (300ft or more) to the noted sub-population.</p>	VEG	No text revisions made. Due to the proximity of the known subpopulation and the sensitivity of this species to disturbance, despite design features and protection measures implemented during the Project, the statement regarding potential impacts is accurate.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	269	<p>“Impacts of dust on the Cinnabar Peak subpopulation could range from mild metabolic inhibition or inhibition of pollination to mortality of individuals; dust also could inhibit pollination success.” Please provide a reference for this statement.</p>	VEG	Text has been added per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	270	<p>“The combination of these potential impacts would result primarily in localized, long-term and permanent, moderate impacts to the bent-flowered milkvetch.” Please explain how these effects are permanent. Please explain how the effects are moderate instead of minor. The next statement says indirect impacts and only one individual, so please explain how can these be an easily measurable change and readily noticeable.</p>	VEG	Text has been revised per the comment. Additional detail regarding the potential impacts to the species based on the available occurrence data has been added to this section.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	271	<p>“(one out of a total of approximately 653 individuals within 10 populations identified on the PNF)” Please clarify and provide a methods summary, reference, and context of how these numbers were calculated. Also include a percentage of the greater whole for context.</p>	VEG	Text has been revised per the comment. Additional detail regarding the potential impacts to the species based on the available occurrence data has been added to this section.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	272	<p>“The combination of these potential impacts would result primarily in localized, long-term and permanent, moderate impacts to the least moonwort.” Please correct this statement as it is in error under the MMP alternative because the JC Road would only be utilized for up to 3 years during the</p>	VEG	Text has been revised per the comment.

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Resources Idaho, Inc.)			construction period. Therefore, by definition (table 4.1-1) these impacts would be classified as short-term.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	273	“ The combination of these potential impacts would result primarily in localized, long-term and permanent, moderate impacts to the least moonwort.” This statement is used for every species, but it needs more supporting statements. Please explain this statement. Please explain how these effects are permanent. Please explain how the effects are moderate instead of minor. The next statement says indirect impacts and only two individuals, so please explain how can these be an easily measurable change and readily noticeable.	VEG	Text has been revised per the comment. Additional detail regarding the potential impacts to the species based on the available occurrence data has been added to this section.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	274	“ (two out of a total of approximately 1,731 individuals in 14 populations on the PNF) ” Please clarify and provide a methods summary, reference, and context of how these numbers were calculated. Also include a percentage of the greater whole for context.	VEG	No text revisions made. This statement is accurate based on the known locations of the species and potential impacts based on the 2021 MMP.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	275	“ Increased dust deposition could result in impacts ranging from metabolic inhibition to mortality of individuals. ” Please provide a reference	VEG	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	276	“ Therefore, the 2021 MMP may indirectly impact Blandow’s helodium individuals (one) ” Please clarify and provide a methods summary, reference, and context of how these numbers were calculated. Also include a percentage of the greater whole for context.	VEG	No text revisions made. This is the only occurrence of the species on the PNF and BNF and the analysis is accurate on potential impacts based on the 2021 MMP.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	277	“ Table 4.10-4 Acres of Direct Impacts to Modeled Special Status Plant Potential Habitat under the 2021 MMP” For clarity, we suggest changing the title of this table to” Acres of Modeled Special Status Plant Potential Habitat within the 2021 MMP Disturbance Footprint” .	VEG	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	278	“ Table 4.10-5 Total Acres of Disturbance to Vegetation Communities due to SGP Components under the 2021 MMP” For clarity, we suggest changing the title of this table to” Total Acres of Vegetation Communities within the 2021 MMP Disturbance Footprint”	VEG	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	279	Please clarify how these numbers were calculated and what datasets were used.	VEG	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	280	Overall total acres in table is 3,563.7 . Please check the numbers in this table and clarify how and why this total acreage of disturbance is more than the total acreage of disturbance reported in Chapter 2 (Table 2.4-1; 3,265.9).	VEG	No text revisions made. This acreage includes acres associated with the potential maximum extent of tall tree clearing associated with the power line.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	281	“ <i>Table 4.10-6 Acres of Disturbance to Previously Undisturbed Forested PVGs under the Johnson Creek Route Alternative</i> ” For clarity, we suggest changing the title of this table to” Acres of Previously Undisturbed Forested PVGs within the Johnson Creek Route Alternative Disturbance Footprint ”	VEG	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	282	“ <i>Table 4.10-7 Acres of Disturbance to Areas Identified as not Successional to Forested PVGs under the Johnson Creek Route Alternative</i> ” For clarity, we suggest changing the title of this table to” Acres of Areas Identified as not Successional to Forested PVGs within the Johnson Creek Route Alternative Disturbance Footprint ”	VEG	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	283	“ <i>Table 4.10-8 Acres of Disturbance to Vegetated Acres Outside Forest Service-Managed Lands under the Johnson Creek Route Alternative</i> ” For clarity, we suggest changing the title of this table to” Acres of Vegetation outside of BNF and PNF - Managed Lands within the Johnson Creek Route Alternative Disturbance Footprint. ” SCNF lands are included in these calculations.	VEG	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	284	“ <i>The impacts to the Bent-flowered Milkvetch and Sacajawea’s Bitterroot under the Johnson Creek Route Alternative are the same as described for the 2021 MMP.</i> ” Please add a clarifying summary statement about the one species discussed below: least moonwort.	VEG	Text has been added per the comment. “Impacts to the least moonwort are discussed below.” has been added following the statement regarding bent-flowered milkvetch and Sacajawea's bitterroot.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	285	“ <i>The Johnson Creek Route Alternative could impact subpopulations of the occurrence of least moonwort in the same manner as described under the 2021 MMP.</i> ” Please provide a short summary or description of what those impacts are.	VEG	No text revisions made. Impacts are discussed under the 2021 MMP and the reader is referred to that section of the analysis.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	286	“ <i>However, due to the localized nature of impacts within roadside swales under the Johnson Creek Route Alternative, impacts to this species may be greater than under the 2021 MMP.</i> ” Please clarify and support this statement.	VEG	Text has been added per the comment.” This is primarily due to this species often occurring in ditches and roadside swales in areas near historic disturbance.” has been added to this section.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	287	“ <i>Table 4.10-10 Total acres of Disturbance to Vegetation Communities due to SGP Components under the Johnson Creek Route Alternative</i> ” Please check the numbers in this table and clarify how and why this total acreage of disturbance (3,399.3) is more than the total acreage of disturbance reported in Chapter 2 (Table 2.5-2; 3,095.2).	VEG	No text revisions made. As described in the Vegetation Specialist Report, this total acreage includes the maximum possible extent of tall tree clearing as well associated with the power line.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	288	“ <i>At this time, no mitigation measures have been identified for Vegetation.</i> ” This statement is inconsistent with Table 2.4-12 (and Table 2-2 of the Vegetation Specialist Report) which includes measures that are applicable to vegetation per the” Resources Affected” column. Please amend this sentence to reflect these measures.	VEG	Text has been added regarding mitigation measures required by the Forest Service, primarily for whitebark pine.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	289	“ <i>Alternative are renewable only over long-time spans, including mature vegetation, special status plants, seedbanks, and topsoil. Loss of these resources would be considered irreversible.</i> ” Please delete” Loss of these resources would be considered irreversible.” Renewable over long-time spans is by definition not irreversible.	VEG	No text revisions made. The term” irretrievable” is appropriate here as the loss of vegetation/soils resources would make those resources not available or present during the Project until reclamation is complete and likely much later.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	290	“ <i>This includes the loss of soil resources; even with reclamation (Tetra Tech 2021a), the temporal loss of the resource is irretrievable.</i> ” Please double check this reference as it does not characterize loss of soil resources as irretrievable.	VEG	No text revisions made. The term” irretrievable” is appropriate here as the loss of soil resources would make those soils not available during the Project until reclamation is complete. The Tetra Tech 2021 reference is referring to the reclamation plan, not the irretrievable statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	291	“ <i>Construction and operation of the mine could also affect long-term vegetation productivity by increasing sedimentation from erosion and increasing the amount of pollutants and fine-grained sediments delivered to the area via surface water runoff.</i> ” Please delete this statement. This statement does not account for the restoration of Blowout Creek early in the project and does not take into consideration all of the sediment control environmental design features built into the MMP.	VEG	Text has been deleted per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	292	“ <i>Detailed calculations of impacts to whitebark pine occupied habitat and individual trees are reported in Appendix F</i> ” Please clarify and provide a methods summary, reference, and context of how these estimated WBP numbers were calculated. These discrete reported numbers are derived from very broad estimates and categories from field surveys and not an actual count of individuals.	VEG	Appendix F of the Vegetation Specialist Report contains details of the calculations in the footnotes for Table F-1 and Table F-2. Additionally, text has been added per the comment regarding the” estimate” of whitebark pine resources during the field survey in 2019 conducted by TetraTech.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	293	“ <i>The 2021 MMP would impact 3,991.0 acres of modeled potential habitat for sensitive and forest watch plant species. The Johnson Creek Route Alternative would impact 3,203.6 acres of modeled potential habitat for sensitive and forest watch plant species.</i> ” and” <i>The Johnson Creek Route Alternative would impact 3,203.6 acres of modeled potential habitat for sensitive and forest watch plant species.</i> ” Please check and clarify how these numbers of acres are larger or nearly so than the total acres of vegetation cleared in the rows below. Providing a total number of acres of modeled potential habitat results in double counting areas that are considered potential habitat for multiple species. Please correct.	VEG	Text has been revised to only include a range of acreages for the various sensitive and forest watch plants species and not a total acreage. This should clear up any confusion on” double counting” potential impact areas.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	11	Comments on SDEIS Sections 3.10, 4.10 and the Vegetation Specialist Report include requests for missing or updated references and clarification on descriptions of the effects analysis. Also, review of other resource analyses and the Vegetation resource in particular (Section 4.10.5.2) note that:” Construction and operation of the mine could also affect long-term vegetation productivity by increasing sedimentation from erosion and increasing the amount of pollutants and fine-grained sediments delivered to the area via surface water runoff.” Here and elsewhere in the SDEIS (e.g., Fisheries and Water Quality), statements such as these on potential impacts from increased sedimentation do not appear to account for (and do not describe or adequately describe) the restoration of Blowout Creek early in the Project, nor do they take into consideration all of the sediment control environmental design features built into the 2021 MMP. Reclamation of Blowout Creek in particular should be considered in impacts analysis in both the short- and long-term for applicable resources as it addresses what has been identified as the single largest sediment generator in the upper East Fork of the South Fork of the Salmon River drainage.	VEG	No text revisions made. Section 4.9 discusses sedimentation in detail in relation to reclamation along Blowout Creek.
Jesse Lutz	19386	15	Availability of information - For reasons of inadequate availability of information to the public, I am requesting that this proposal should be at least reevaluated again from the start or even better - denied. Examples are as follows - concerning Air Quality * recently updated to public viewing in November and	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as

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			<p>December - quite some time after public commenting was already open, White Bark Pine Survey information dated in 2020 *recently updated to public viewing Pinyon application on December 30th - NOTE the most recent designation as a threatened species on National Forest Lands by US Fish and Wildlife service (https://www.fws.gov/pressrelease/2022-12/whitebark-pine-receives-esa-protection-threatened-species) which would require further biological assessments and research to determine the final level of impacts that proposed operations would introduce during the lifespan of the project (up to 40 years including 'reclamation', 'restoration', and 'further monitoring activities') Please remember, and take seriously, the associated impacts that will be left behind on our tribal and public lands that we all steward as citizens of this country) Please find these quotes helpful in your reflections and reevaluations on the impacts of the proposed action to permit this Gold Mine - again for these reasons this proposal should be reevaluated from the start or be denied in its current form.</p> <p>“ Whitebark pine is the center of an important web of life and provides valuable ecosystem services in western high-elevation forests.” said Diana Tomback, Whitebark Pine Ecosystem Foundation policy and outreach coordinator and professor of integrative biology at the University of Colorado Denver.” But it is facing an unprecedented convergence of lethal threats. We have the tools and capability to make populations more resilient to these threats. Given the scale of this effort, we are approaching restoration both collaboratively and strategically. One promising work in progress is the National Whitebark Pine Restoration Plan, a roadmap for restoration being developed collaboratively between the Whitebark Pine Ecosystem Foundation and American Forests, in consultation with the US Forest Service, the National Park Service, Bureau of Land Management, and several northwestern tribes.”</p> <p>“ The Confederated Salish and Kootenai Tribes' of Montana commend and honor the USFWS decision listing Whitebark pine as a threatened species, said the Confederated Salish and Kootenai Tribes Forestry Department.</p> <p>“ Native Americans continue to be stewards of the land and understand the need for balanced ecosystems. CS&KT does this by utilizing our traditional ecological knowledge taught from story and songs and applying it to western science techniques. Whitebark pine is not only a keystone species for this balance, but it is also part of our first foods and culture. CS&KT supports the listing Whitebark pine to help ensure the protection and restoration of the land and of our culture.”</p> <p>Keystone species are labeled as keystones for the reason - that if they did not exist or are impacted beyond healthy ecological and biological levels that are unstable then other species follow.</p> <p>Can you please elaborate on how the USFS intends to reevaluate managing this designation considering the negative impacts? Net loss; which is shown in this proposal would degrade the current habitat conditions which exist in the proposed project area. This is connected to the air quality impacts on natural species that require consistently clean air. I would like to ask this - What impacts to White Bark pine and other tree types will be seen in 10-year increments for up to 100 years after mining operations cease?</p>		well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Jesse Lutz	19386	17	Have there been any studies to show the expanse of acid rain impacts from particulate pollutants released during operations - if not can you please provide this to the public? This information would assist the public in seeing long-term impacts from the proposed mining operation to the varying tree types found throughout the area of concern.	VEG	No text revisions made. The Project is not expected to result in increased acid rain during operations.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	175	Additionally, neither the SDEIS nor SGP Vegetation Specialist Report discusses the impacts of avalanche control on whitebark pine. Avalanche control work has the potential to artificially trigger avalanches that would not otherwise have occurred and therefore destroy or damage whitebark pine. It is not clear that whitebark pine surveys conducted by Perpetua included individuals living within avalanche starting zones, tracks, or runouts. The SDEIS should ensure that all species members impacted by SGP activities are accounted for in these surveys. Artificially triggering avalanches, while beneficial for decreasing risk that vehicles will be struck, may also incidentally take whitebark pine individuals. This impact should also be addressed.	VEG	No text revisions made. Avalanche control would only occur in areas that are already prone to avalanches and where avalanches occur naturally. Therefore, it is unlikely these areas support whitebark pine populations.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	177	<p>M. Utilities, rights-of-way, roads, and routes</p> <p>The construction and long-term operation associated with transmission line upgrades causes serious impacts, including direct damage to wildlands, wildlife habitat and cultural resources, interference with scenic vistas, habitat fragmentation, the introduction of invasive and noxious weeds through ground disturbing activities, and others. Much of the landscape in Idaho, even near streams, has been visually impacted by human features such as roads, structures, transmission lines, and other infrastructure. The SGP would require Idaho Power to build four new electrical substations (Scott Valley, Thunderbolt Tap, Johnson Creek, and Stibnite), remove the existing Scott Valley Substation, and provide upgrades to the Cascade Switching Station (SDEIS, p. 2-23). Direct and indirect impacts to the SGP-related transmission lines, related access roads, utilities and their infrastructures are represented as equitable between the 2021 MMP alternative and the Johnson Creek alternative, with 1012 acres of disturbed lands under the former and 1011 acres under the later alternative (SDEIS, Table ES-2).</p> <p>Additional electrical changes include rerouting power to the village of Yellow Pine from the Warm Lake substation to the Johnson Creek substation, upgrading nearly 64 miles of existing transmission lines with higher towers, transformers and line, and constructing an additional 8.5 miles of new transmission line from the Johnson Creek substation to the mine site. Further, Perpetua Resources proposes to upgrade microwave relay towers and install radio repeaters and cell phone towers at existing and new communication sites on public and private lands. Transmission line right-of-way (ROW) widths would range from 50 to 100 feet, requiring significant additional initial vegetation removal, with continual vegetation removal as part of long-term maintenance of these clearings. Both the 2021 MMP alternative and the Johnson Creek Route alternative will result in 422 acres of impacts within the identified ROWs in previously undisturbed areas (SDEIS, Table ES-3, p. ES-22).</p> <p>Approximately one-third of the transmission line ROW is found within forested areas, and the Forest Service estimates that, "SGP-related vegetation clearing could initially result in (Detrimental Disturbance) as high as 16 percent of the ROW," and would likely impact somewhere between 8 and 15 percent (SDEIS, p. 4-83-84). These impacts, consisting primarily of vegetation clearing, but also including soil disturbance for access roads, line upgrades, and construction of new line pole foundations, will take place on an estimated 500 acres. The duration of these impacts are considered, "moderate, localized and long-term," (SDEIS, p. 4-84), with disturbance beginning the first year of construction and continuing at least through Year 15. Furthermore, clearing activities would continue indefinitely on upgraded line corridors by Idaho Power Company after mining activities cease. The loss of these vegetation communities and impacts associated with access roads for construction and subsequent maintenance represent irreplaceable and irretrievable impacts to natural resources found on public lands, and therefore neither the 2021 MMP, nor the Johnson Creek Route alternative are appropriate selections for the SGP.</p>	VEG	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	178	<p>On December 14, 2022, the US Fish and Wildlife Service announced its decision to list whitebark pine as a threatened species under the Endangered Species Act. This rule is to become effective starting January 17, 2023. The Forest Service will have to consult on expanding and constructing Rights-of-Way. Our specific comments pertaining to whitebark pine are found in Section R, Botanical Resources.</p>	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	190	<p>4. Invasive grasses and noxious weeds</p> <p>According to the Special Designations Specialists Report (SDSR) there will be 740 acres of vegetation removed within six IRAs to construct transmission lines, access roads, SGP facilities, and to construct the proposed Burntlog Route. This represents a significant opportunity for non-native plant species, particularly invasive plants and noxious weeds, to establish and create or expand unwanted vegetation populations. The SDSR supports this statement on page 78 where it states that, "Areas within IRAs where non-native plant species become established would alter vegetation composition and change the natural ecological processes." Mitigation includes BMPs for invasive plants and noxious weeds, with monitoring for 3 years following the reseeding and planting of disturbed areas. However, we do not believe this is sufficient considering the decades worth of continued maintenance and use these ROWs</p>	VEG	No text revisions made. The Forest Service has reviewed the existing BMPs and design features, as well as the RCP, and determined that the current list is adequate.

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			<p>and facility locations would require to establish and maintain protections against wildfire and access. In fact, the SDSR reinforces our concerns where it states that, "Maintaining the new transmission line, SGP facilities, and Burntlog Route during the 15 years of mine operation would increase the opportunities for non-native plant species distribution," (Special Designations Specialists Report, p. 78). We recommend that the Forest Service reexamine existing BMPs and Design Features and extend monitoring for noxious and invasive plant species throughout the life of the project in all areas of disturbed soils and vegetation, including closure and reclamation.</p> <p>One of the most significant threats to any ecosystem remains the introduction of invasive grasses and noxious weeds associated with ground disturbing activities. We encourage the Forest Service/Perpetua to use integrated weed treatment methods. To the extent practical, herbicides should only be used as a last resort and avoided in sensitive areas such as riparian areas or areas with rare plant populations. Lands treated for noxious weeds should be restored to native plant species when possible. Preserving and restoring intact soil layers represents the best way to avoid invasive plant and noxious weed introduction. Therefore, we recommend disturbing as little soil as possible. This becomes especially poignant when the Forest Service takes into consideration the fact that very little topsoil, or growth media, is available within the project area and it is unlikely that enough can be preserved and stored to sufficiently facilitate the establishment of riparian areas during the reclamation period (SDEIS, Executive Summary, pp. 11-12).</p> <p>We are concerned that soil disturbance can lead to the establishment of rush skeleton weed, spotted knapweed, dalmatian toadflax, and other noxious weeds. Newly constructed or modified rights-of-way associated with anthropogenic infrastructure also contribute to the spread of non-native plants. The disturbance needed to upgrade existing transmission lines, construct new transmission line segments, to upgrade existing roads and to build new road segments like the proposed Burntlog Route provides an ideal vector for noxious weed expansion. The Forest Service/Perpetua needs to take far greater care to ensure that weed spread is minimized, particularly to special designations such as IRAs, the Chilcoot Peak Research Natural Area and the FCRNRW.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	191	<p>5. Transmission lines and wildfires</p> <p>Numerous fires have started from transmission lines and the Forest Service needs to disclose those potential risks and ways to avoid, minimize, and mitigate these risks. Methods to minimize the risk of fires often involve establishing a wider ROW corridor, removing vegetation from a wider area, and conducting more frequent vegetation clearing. These fuel reduction measures will exacerbate the habitat fragmentation from ROW establishment and expansion. The Forest Service needs to evaluate the effects of both the transmission lines and maintenance activities and develop mitigation strategies.</p> <p>Transmission lines can also be burned over in wildfires, leading to power failures. Because of the long distance of this transmission line, there will be numerous ways for power to be interrupted. In addition to wildfires, other mechanisms include vehicle crashes, avalanches, landslides, and wind storms</p>	VEG	No text revisions made. Section 4.21.2.2 (Socioeconomics) discusses the potential increase in human-caused fire associated with the Project. Additionally, Perpetua proposes tree clearing along the transmission line ROW as a way to reduce the potential for trees to fall on the transmission line and thus creating a fire hazard.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	276	<p>R. Botanical Resources</p> <p>1. Sensitive and Forest Watch Plant Species</p> <p>While the SDEIS provides a largely accurate description of the botanical resources in the analysis area, some of the surveys are out of date and do not represent an accurate baseline survey. In addition, the SDEIS falls short in describing both the direct and indirect impacts to these botanical resources and does not take the requisite "hard look" at impacts to these species. The SDEIS quantifies how many acres will be disturbed, but it does not go into sufficient detail on what the impact of these disturbances will be for each sensitive species or its ecology. For most sensitive plants, any disturbance is a negative impact. There are a large number of habitat disturbing, degrading, and destroying activities proposed as part of this project, including road construction, drainage construction, ROW expansion, additional exploration activities, dust generation, and extensive earth moving within the mine footprint. Roads and other habitat</p>	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.

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			<p>clearing activities can cause a direct loss of individual plants. Roads and ditches can alter groundwater and surface water flows and affect surrounding vegetation communities accordingly.</p> <p>Roads also lead to increased wind speed and drying effects from vegetation removal and are also associated with an increased risk of human-caused wildfires. Roads can also increase dust which may reduce photosynthesis rates for remaining vegetation. Roadside spills of hazardous chemicals can affect soils and vegetation. In addition, there may be increased contaminants of concern in dust from mine traffic which may in turn affect soils, plants, animals and human health. Increased salt levels in the soil from magnesium chloride application that can negatively affect vegetation.</p> <p>In addition to direct habitat loss from project activities, roads and traffic can serve as vectors for the introduction of non-native plant species that may outcompete native species. The SDEIS makes a nod toward this with the following statement:</p> <p>However, even with strict adherence to noxious weed and non-native plant species control measures, some colonization, and spread of noxious weeds and non-native species in and adjacent to the Stibnite Gold Project area is possible.</p> <p>This above statement is a major understatement. It is beyond” possible.” It is extremely likely that exotic plants will dominate the disturbed sites.</p> <p>Areas with roads and transmission lines are known vectors for noxious weed infestations that can threaten native plants. The Forest Service needs to conduct a detailed analysis in the Supplemental SDEIS of specific exotic species that may become established in the project area and describe the potential direct and indirect effects to native species. Based on the habitat types and history of disturbance in a similar roadbed area, the Forest Service could predict the species of exotic plant that might dominate and how that might impact the overall ecology of these ecosystems. Yet, the Forest Service has not surveyed or mapped these infested areas in the detail proscribed in the Forest Plan: Objective BTOB08 During fine- and site/project-scale-analyses, identify and map areas of non-native plant invasions within rare plant habitat.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	277	<p>In addition to impacts related directly to the Stibnite Gold Project, additional exploration activities in the project area will also have impacts. From the SDEIS: These approved activities include construction of several temporary roads (approximately 0.32 mile of temporary roads) to access drill sites (total of 28 drill sites), drill pad construction (total of 182 drill pads) and drilling on both NFS and private lands at and in the vicinity of the SGP. SDEIS p. 4-33.</p> <p>These temporary roads do not appear to be accounted for in the acres of disturbance.</p> <p>These exploration roads are part of the cumulative effect to this project and should be included in the Supplemental SDEIS. Backfilling sites with disturbed soils and recontouring are likely to result in these areas turning into weed patches. The Forest Service should create plans and funding sources to replant disturbed areas with native plants and have contingency plans and funds until native vegetation has recovered. The Forest Service should also establish a long term monitoring program for the twenty years following mine closure along with funding to replant areas as needed.</p>	VEG	No text revisions made. The exploration activities are already included in the acreage for the Project, primarily at the mine site. Additionally, all disturbed areas would be treated to prevent the establishment of noxious weeds and reclaimed according to requirements by the Forest Service. Bonding would be established to ensure proper reclamation as a result of the Project takes place.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	278	<p>The project’s impacts on botanical resources are anticipated to be regional in scale, as opposed to localized due in large part to the large amount of disturbance and increased potential for non-native plant expansion of both alternatives. Each alternative would impact botanical resources, with the 2021 MMP impacting a larger amount of occupied and potential habitat:</p> <p>The 2021 MMP would impact known occurrences of bent-flowered milkvetch, least moonwort, Sacajawea’s bitterroot, Blandow’s helodium, sweetgrass, and Rannoch-rush, while the Johnson Creek Route Alternative would impact known occurrences of bent-flowered milkvetch, least moonwort, and Sacajawea’s bitterroot. Additionally, the 2021 MMP would impact a greater amount of modeled potential habitat (3,991 acres) for sensitive and forest watch plant species than the Johnson Creek Route Alternative (3,204 acres). (ES-16).</p>	VEG	No text revisions made. Details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.

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			<p>A species-specific impact analysis does not seem to exist. The Forest Service merely provides a table comparing the number of acres disturbed. Table 4.10-9” Acres of Modeled Potential Habitat for Special Status Plants Directly Impacted under All Action Alternatives” provides a good comparison to the extent of disturbance between alternatives but there is no analysis of what those impacts are to the vegetation types or to the individual sensitive plant species.</p> <p>The Forest Service did not appear to have prioritized efforts to avoid, minimize and mitigate for impacts to botanical resources and mostly minimized the importance of any rare plant subpopulations that could be impacted or extirpated:</p> <p>There are no known plant-based subsistence resources located exclusively within the Operations Area Boundary that are not available on the remaining portions of the PNF. (SDEIS 4-673).</p> <p>However, this dismissive approach contradicts several Forest Plan goals, guidelines, objectives and standards as detailed below. Both Sacajawea’s bitterroot and least moonwort are Forest Service sensitive species, which are supposed to be managed so that there is no population trend that could lead to a listing decision:” may impact individuals, but would not likely contribute to a trend toward federal listing or loss of viability of populations or species.” SDEIS 4-301. Forest Watch species are species of concern that need to be monitored and include bent-flowered milkvetch, Blandow’s helodium, sweetgrass and Rannoch-rush. All six species occur within or adjacent to the area of analysis.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	279	<p>a. Sacajawea’s bitterroot (Sensitive Species)</p> <p>Sacajawea’s bitterroot (Lewisia sacajaweanana or” LESA”) is” the highest priority rare plant species managed by the Boise National Forest.” CU084004. In 2011, the Forest Service designated Sacajawea’s bitterroot as a” Priority Forest Watch Species.” The Forest Service has since reclassified this plant as a sensitive species. There are only 30 known occurrences of subpopulations with most populations numbering less than 2,000 individual plants. The Boise National Forest hosts approximately eighty percent of the entire population.</p> <p>There is an isolated occurrence of Sacajawea’s bitterroot in the project analysis area along Warm Lake Road: One occurrence of Sacajawea’s bitterroot, a Forest Service sensitive species on both the PNF and BNF, occurs approximately 300 feet above Warm Lake Road (CR 10-579) and the existing transmission line corridor near the intersection of Warm Lake Road with Curtis Creek Road (IFWIS 2017) in the BNF. This occurrence is on a hillside above a portion of Warm Lake Road, and the polygon for this occurrence overlaps a transmission line access road that would be used during transmission line reconstruction and SGP operation. Spur road construction and use of this dirt road during transmission line reconstruction and SGP operation would create dust that could negatively impact this occurrence of Sacajawea’s bitterroot. Impacts of dust on this species could range from mild metabolic inhibition to mortality of individuals.</p> <p>The combination of these potential impacts would result primarily in localized, long-term and permanent, moderate impacts to the Sacajawea’s bitterroot. Therefore, the 2021 MMP may indirectly impact Sacajawea’s bitterroot individuals (one out of approximately 157,023 individuals in 27 populations on the PNF) and habitat but would not likely contribute to a trend towards ESA listing or loss of viability of the species within the planning area (i.e., BNF-administered lands).(SDEIS p. 4-293-294).</p> <p>The SDEIS refers to direct impacts on one individual out of an estimated 157,023 individuals in 27 populations. The cited number appears to be an overestimation of the population. The SDEIS mentions one individual plant when the Forest Service may have meant one population. There are also cultural implications: While offsite presence of plants means the impact to overall access to a specific type of plant would be negligible to minor, this would still constitute a localized, long-term, and moderate to major impact to tribal treaty rights specific to those resources in their specific locations including those associated with potential historic properties, sacred sites or places, TCPs, and CLs. (SDEIS 4-680).</p>	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.

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			<p>The largest Sacajawea’s bitterroot population is found in the Boise National Forest within the project area of the CuMo Mine Exploration Project, approximately 50 miles to the south of the Warm Lake population. When permitting mine exploration for the CuMo Project, the Boise National Forest took some additional steps to protect the plant population by designating a Plant Conservation Areas around occupied habitat. The Forest Service also determined that protecting pollinator habitat within and adjacent to occupied habitat was” essential to the long-term persistence of the species” and included a 300-meter buffer intended to include pollinator habitat. CU084021. 12.</p> <p>The Boise National Forest acknowledged that road and drill pad construction, road maintenance and other ground disturbing activities can” further destroy and degrade habitat and plants by crushing or uprooting plants, depositing slash or debris on plants, spreading exotic weeds, changing hydrology and exposure, causing mortality from soil disturbance and compaction, and depositing dust on plants and pollinator habitat.” CU084020.</p> <p>As part of the CuMo Mine Environmental Assessment, the Boise National Forest determined that most of Sacajawea’s bitterroot habitat at the CuMo Project site was” highly susceptible” to invasion by noxious weeds. CU084014. Furthermore, the Boise National Forest determined that the species is highly vulnerable to climate change as” any future rise in snowline could impact the viability of this population” (CU084013). This population's small relative size and lack of genetic diversity limited its ability to adapt and respond to disturbance. CU084010–11. The Boise National Forest determined that the limited genetic diversity” further underscore the need to protect potential and occupied LESA habitat to the greatest degree possible.” CU084011. 14. Such small populations are at risk of extirpation from stochastic events including human disturbance.</p> <p>The Boise National Forest attempted mitigation efforts to avoid and reduce impacts to the greatest extent practicable. (CU045833, 0457880.) For example, where new infrastructure such as road or drill pads was proposed near plants, there would be an effort to relocate these structures and also schedule activities to avoid the main period of growth and reproduction for the plant.</p> <p>There are a number of places where the SDEIS deviates from the Boise and Payette Forest Plans with regard to these botanical resources.</p> <p>For example, no recent surveys have been conducted for this population of Sacajawea’s bitterroot: This occurrence was last observed in 1999 and has an unknown number of individuals (IFWIS 2017). This occurrence was not documented by surveyors in 2014 although this species was targeted during surveys that year (HDR 2017g).(SDEIS 3-229)</p> <p>This lack of analysis is inconsistent with Boise National Forest Plan Objectives BTOB01 and BTOB02: Objective BTOB01: Continue to map locations of suitable occupied habitat for Region 4 Sensitive plant species, Forest Watch plants, and globally rare plant communities. Incorporate information into a GIS database and coordinate with the Idaho Conservation Data Center.</p> <p>Objective BTOB02: During fine-scale analyses in areas containing sensitive species habitat, identify and prioritize opportunities for restoring degraded Sensitive species habitat.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	280	<p>There are likely to be adverse permanent effects to this population of Sacajawea’s bitterroot from the transmission line upgrades, spur road construction, dust generation, and noxious weed spraying along the ROW. This discretionary degradation of habitat is inconsistent with the Forest Plan Standards and Goals: Standard BTST01 Management actions that occur within occupied sensitive plant species habitat must incorporate measures to ensure habitat is maintained where it is within desired conditions, or restored where degraded.</p> <p>Goal BTGO03 Maintain or restore globally rare plants identified as the Natural Heritage Program G1, G2, and G3 and/or S1 and S2 species, and provide for their continued compositional and functional integrity for those species for which we have habitat (see Appendix C).</p>	VEG	No text revisions made. Details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.

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			The Forest Service needs to consider an alternate alignment of the transmission line in this location as well as location of the spur roads to make sure that Sacajawea's bitterroot and its habitat is made more secure.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	282	<p>While noxious weed spraying should be considered along roads and rights of way, noxious weed spraying efforts should be modified in the transmission line corridor near the population of Sacajawea's bitterroot, per Forest Plan standards and guidelines: Standard BTST04 For projects or activities that include application of insecticides, herbicides, fungicides, or rodenticides, degrading effects on sensitive plant species will be mitigated.</p> <p>Guideline BTGU02 During site/project-scale analysis and review, a Forest botanist should review insecticide or herbicide spray plans and prescribed burning plans to determine whether degrading effects to Sensitive and Forest Watch plants and their pollinators should be mitigated. We recommend that the Forest Service resurvey Sacajawea's bitterroot during the appropriate time of the next field season, reestablish the baseline, and adopt additional design features to avoid, minimize and mitigate impacts to this species.</p>	VEG	No text revisions made. Details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	283	<p>b. Bent-flowered milkvetch (Forest Watch Species)</p> <p>Although bent-flowered milkvetch is ranked as globally secure, it is extremely uncommon in Idaho where it receives a ranking of S1: 1 = Critically imperiled — Typically having five or fewer occurrences, or 1,000 or fewer individuals.</p> <p>The largest population in the entire state of Idaho is located approximately 300-1,500 feet west of the West End Creek diversion: Five subpopulations of a single occurrence (the Cinnabar Peak occurrence) of this species were documented during surveys in 2012, 2013 (HDR 2017g), and 2016 (Mancuso 2016, IFWIS 2017). The nearest subpopulation of the Cinnabar Peak occurrence extends from about 300 feet to one-quarter mile upslope from and to the east of the West End Creek diversion. This subpopulation, which consists of an estimated total of 7,000 to 10,000 plants, is about 25 acres in size and is located in a relatively undisturbed area. (SDEIS 3-228).</p> <p>In addition, 122 acres of potential habitat has been modeled near the Operations Area Boundary, transmission line and Meadow Creek Lookout Road. It is unclear if these areas have been surveyed. This subpopulation is the largest contiguous area of occupied habitat for this species in Idaho and is considered to be critical to the long-term viability of this species, as it could serve as seed sources for future conservation efforts.</p> <p>Although the bent-flowered milkvetch has been found in historically disturbed sites, a recent report on the species notes the importance of undisturbed areas: Although present in disturbed locations, the long-term persistence of bent-flowered milkvetch near Cinnabar Peak may depend on plants located in areas of intact, minimally disturbed-undisturbed habitat that can serve as seed source reserves. Depending on the location and scale of future ground disturbances associated with the Stibnite Gold Project in the area, seeds from these reserves may be critical for post-disturbance re-establishment of bent-flower milkvetch into formerly occupied areas. (Field Survey for Bent-Flowered Milkvetch in the Stibnite Gold Project Area, Valley County, ID Michael Mancuso 2016).</p> <p>The SDEIS highlights the impacts of dust generation on bent-flowered milkvetch which are located downwind of project activities: The 2021 MMP could impact the Cinnabar Peak subpopulation due to its proximity to the West End Creek diversion. The most likely impact of the SGP on this subpopulation would be dust associated with construction of the West End Creek diversion, which could travel upslope and impact this subpopulation or its pollinators. Impacts of dust on the Cinnabar Peak subpopulation could range from mild metabolic inhibition or inhibition of pollination to mortality of individuals; dust also could inhibit pollination success. These impacts may result in reduced ability of this subpopulation to serve as a seed source for future conservation efforts for this species. The area of potential exploratory drilling overlaps with subpopulations of this species. Exploratory drilling within this area has the potential to impact this species directly through removal or crushing and/or via dust deposition or impacts to pollinators. The combination of these potential impacts would result primarily in localized,</p>	VEG	No text revisions made. Details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.

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			long-term and permanent, moderate impacts to the bent-flowered milkvetch. Therefore, the 2021 MMP may indirectly impact bent-flowered milkvetch individuals (one out of a total of approximately 653 individuals within 10 populations identified on the PNF) and habitat but would not likely contribute to a loss of viability of the species within the planning area (i.e., PNF-administered lands).(SDEIS 4-292).		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	284	Again the SDEIS appears to state that mining activities may affect one individual plant instead of disclosing that the entire subpopulation in that location may be extirpated. The assessment of impacts from dust on bent-flowered milkvetch appears to be focused on how layers of dust can negatively affect photosynthesis. The SDEIS overlooks the fact that this dust will likely contain toxic levels of arsenic that could have direct impacts on the physiology of the plants, its pollinators, and seed dispersers.	VEG	No text revisions made. Dust and the potential for arsenic are discussed in Section 4.3.2.2 and potential impacts to plants as a result of increased dust is discussed in Section 4.10.2.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	285	The SDEIS states that there may be localized, long-term and permanent, moderate impacts to this species, but the term localized is undefined. The distribution of the Cinnabar Peak population is patchy so the localized effects may not impact plants in certain areas but could impact a large number of plants in other areas. The Forest Service should clarify the term "localized" and discuss the actual effect in more detail.	VEG	Text has been added per the comment in Section 4.10.2. The term "localized" is defined at the beginning of Chapter 4 in Table 4.1-1.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	286	Under the Payette Forest Plan, bent-flowered milkvetch is a designated Forest Watch species, which calls for conducting additional baseline surveys, maintaining existing habitat, and prioritizing opportunities for mitigating effects and not accepting extirpation: Objective BTOB01: Continue to map locations of suitable occupied habitat for Region 4 Sensitive plant species, Forest Watch plants, and globally rare plant communities. Incorporate information into a GIS database and coordinate with the Idaho Conservation Data Center. Goal BTGO03 Maintain or restore globally rare plants identified as the Natural Heritage Program G1, G2, and G3 and/or S1 and S2 species, and provide for their continued compositional and functional integrity for those species for which we have habitat (see Appendix C). Objective MIOB08 During fine-scale analyses in areas where mine facilities are identified as a potential concern or problem contributing to degradation of water quality, aquatic species or occupied sensitive or Watch plant habitat, evaluate and document where the contributing mine facilities are and prioritize opportunities to mitigate effects. Following these measures does not necessarily interfere with mining activities but does require additional surveys, the adoption of additional safeguards regarding dust monitoring and management, and the development of species-specific design features to protect this subpopulation and its pollinators from additional disturbance. such as the creation of a Plant Conservation Area.	VEG	No text revisions made. Details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	287	c. Least moonwort (Payette National Forest and Region 4 Sensitive Species and Forest Watch Species) Least moonwort is a Payette National Forest and Region 4 sensitive species. Two subpopulations were observed near Johnson Creek Road in 2004. The most recent survey for them was conducted in 2005 and failed to detect any. No subsequent surveys have been done for least moonwort related to the Stibnite Gold Project or other projects in the intervening 17 years, in contradiction of the following Forest Plan objectives, standards and goals: Objective BTOB01: Continue to map locations of suitable occupied habitat for Region 4 Sensitive plant species, Forest Watch plants, and globally rare plant communities. Incorporate information into a GIS database and coordinate with the Idaho Conservation Data Center. Objective BTOB02: During fine-scale analyses in areas containing sensitive species habitat, identify and prioritize opportunities for restoring degraded Sensitive species habitat. Standard BTST01 Management actions that occur within occupied sensitive plant species habitat must incorporate measures to ensure habitat is maintained where it is within desired conditions, or restored where degraded. Goal BTGO03 Maintain or restore globally rare plants identified as the Natural Heritage Program G1, G2, and G3 and/or S1 and S2 species, and provide for their continued compositional and functional integrity for those species for which we have habitat (see Appendix C).	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.

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			The Forest Service needs to conduct new surveys for this species to establish a proper baseline and to inform the NEPA process.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	288	d. Blandow's helodium (Boise and Payette Forest Watch Species) Construction of the Burntlog Route could impact the hydrology of the wetland that supports a nearby occurrence of Blandow's helodium, a Forest Watch species. Dust from construction and transportation activities could also negatively affect or extirpate this population. It is unclear if there are other occurrences of this species on the Boise National Forest and within the planning area. The SDEIS appears willing to accept the loss of this population instead of providing for continued compositional and functional integrity for this S2 species, as per the Forest Plan: Goal BTGO03 Maintain or restore globally rare plants identified as the Natural Heritage Program G1, G2, and G3 and/or S1 and S2 species, and provide for their continued compositional and functional integrity for those species for which we have habitat (see Appendix C).	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	290	e. Sweetgrass, Boise National Forest Forest Watch Species Burntlog Route construction also threatens two subpopulations of sweetgrass, a Forest Watch species, near Trapper Creek by altering the hydrology of the wetland that supports this species. It is unclear if there are other occurrences of this species on the Boise National Forest and within the planning area. The SDEIS appears willing to accept the loss of this population instead of providing for continued compositional and functional integrity for this S1 species, as per the Forest Plan: Goal BTGO03 Maintain or restore globally rare plants identified as the Natural Heritage Program G1, G2, and G3 and/or S1 and S2 species, and provide for their continued compositional and functional integrity for those species for which we have habitat (see Appendix C). As mentioned above, we recommend that the Forest Service integrate additional design features to minimize disruption of the hydrology of wetlands along the Burntlog Route if it is constructed. This may include using additional and/or larger culverts and adjusting the location of the route.	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	291	f. Rannoch-rush (Forest Watch Species) This occurrence is located within 300 feet of an existing section of the Burnt Log Road. The main issues here are impacts of dust from road widening and transportation. Again, the SDEIS appears willing to accept the loss of this population instead of providing for continued compositional and functional integrity for this S2 species, as per the Forest Plan: Goal BTGO03 Maintain or restore globally rare plants identified as the Natural Heritage Program G1, G2, and G3 and/or S1 and S2 species, and provide for their continued compositional and functional integrity for those species for which we have habitat (see Appendix C).	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	294	There are a number of unaddressed threats for other subpopulations of Forest Watch and Sensitive species in other locations on the Boise and Payette National Forests. These threats include nearby noxious weeds or unauthorized recreational trails among others. The Forest Service and Perpetua Resources could undertake additional surveys so that the Forest Plan requirements are being met and take additional measures to address these threats. As a result, there could be a net increase in the number of individuals and the resilience of these other subpopulations.	VEG	No text revisions made. The Forest Service has indicated that a cutoff date for data for this EIS is 2017. However, additional preconstruction surveys for sensitive and watch plant species would be conducted in suitable habitat prior to ground-disturbing activities.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	295	2. Whitebark pine, Listed as Threatened under the ESA Whitebark pine is a critical subalpine species found in the analysis area along the proposed transmission line between Johnson Creek road and the mine site, and along the proposed Burntlog Road. Whitebark pine is also found along additional roads in the general project area, including the Riordan Lake and Meadow Creek Lookout roads, the old Thunder Mountain road, and Warm Lake Road. On December 14, 2022, the US Fish and Wildlife Service announced its decision to list whitebark pine as a threatened species under the Endangered Species Act. This rule is to become effective starting January 17, 2023. Threatened species are likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The primary threat to this species is disease from	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.

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			<p>white pine blister rust, with other threats including mountain pine beetle, altered wildfire patterns and climate change. USFWS determined that these threats are not related to habitat loss, and that habitat is not a limiting factor for the species, and therefore did not designate any critical habitat for the species. The USFWS can authorize forest management and other activities that benefit and conserve the species and certain activities, such as forest management and maintenance of existing rights-of-ways is allowed under the 4(d) rule.</p> <p>Due to the listing, there are now additional restrictions regarding the removal of whitebark pine:” The protections for whitebark pine also make it illegal to remove, possess, or damage the tree on federal lands.” Federal actions that may impact whitebark pine must now go through section 7 consultation: The conference process helps determine the likely effect of the proposed action and any alternatives to avoid jeopardy to a proposed species or destruction or adverse modification of proposed critical habitat.</p> <p>If the USFWS determines that project will result in incidental take, the USFWS must issue an incidental take permit with specific terms and conditions that are non-discretionary. The Forest Service must comply with the reasonable and prudent measures and agree to implement the terms and conditions in the USFWS’s incidental take statement to avoid potential liability.</p> <p>If the USFWS biological opinion finds that a jeopardy or adverse modification to habitat will occur, the Forest Service may adopt one of the reasonable and prudent alternatives for eliminating the jeopardy or adverse modification of habitat, offer a reasonable and prudent alternative not yet considered, or take additional other actions.</p> <p>The Federal Register specifically mentioned the Stibnite Gold Project with regard to the listing decision: Comment 25: The Nez Perce Tribe expressed concern that there is currently inconsistency in the regulatory measures and management for whitebark pine both across and within Federal land management agencies. The Tribe expressed concern about the continued persistence of whitebark pine without” standardized and adequate protection and conservation measures.” They specifically expressed concern about how the Stibnite Gold Mine Project in Idaho could affect whitebark pine if the species lacks Federal protection because that project has the potential to remove up to 1,027 whitebark pine trees and impact up to 258 ac (104 ha) of occupied habitat.</p> <p>https://www.federalregister.gov/d/2022-27087/p-156</p> <p>The USFWS provided the following response:</p> <p>As a result of these provisions in the Act, if a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must initiate consultation with the Service. Thus, because we are listing whitebark pine as a threatened species under the Act, before Federal agencies can authorize development projects on Federal land, action agencies will need to consider whether these projects may affect whitebark pine (in addition to any other listed species in the action area). If the activities may affect any listed species, the Federal agency must initiate consultation with the Service. Therefore, section 7 consultation processes will ensure that development and extractive activities on Federal lands do not jeopardize the continued existence of whitebark pine, or any other listed species. We have not yet received a biological assessment for the Stibnite Gold Mine project, a proposed mining operation on Federal public land (namely USFS land) and private land in Idaho, and thus section 7 consultation has not yet occurred for the project; when it does occur, this consultation process will consider effects to whitebark pine, and any other listed species, as described above.</p> <p>https://www.federalregister.gov/d/2022-27087/p-157</p> <p>Consultation regarding the maintenance of existing transmission lines is covered under the 4(d) rule and may be relatively straightforward, but we maintain that new transmission lines or expansion of transmission lines as proposed in the Stibnite Gold Project, will require additional consultation: We recognize that relevant Federal agencies have already completed section 7 consultations to analyze the effects of construction and maintenance of utility lines in Federal rights-of-way on currently listed species. However, if these existing consultations do not consider the effects of these actions on whitebark pine, Federal agencies will need to reinitiate consultation on these ongoing vegetation-</p>		

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			<p>management activities if they may affect whitebark pine. Federal agencies are obligated to ensure that the activities that they authorize, such as maintenance of a utility line, do not jeopardize listed species, so they must reinitiate consultation if these existing consultations do not adequately examine whether these activities could jeopardize whitebark pine. However, as we discuss in our responses to Comment 18 and Comment 50, above, these vegetation-management activities are excepted in the 4(d) rule because they do not present a threat to whitebark pine at the species level and may reduce the risk of high-severity fire, which would benefit the species. Thus, given that we find these types of activities would not present a species-level threat and may be beneficial, reinitiated consultation on the basis that these activities may affect the newly listed whitebark pine would likely be straightforward.</p> <p>https://www.federalregister.gov/d/2022-27087/p-234</p> <p>The Forest Service has preliminarily determined that neither the Johnson Creek Route Alternative nor the Burntlog Route Alternative would impact whitebark pine individuals but would not jeopardize the continued existence of this species. However, consultation will still be required: However, while the 4(d) rule excepts forest-management activities because they do not present a species-level threat, section 7 concurrence or consultation will still be required if a forest-management activity with a Federal nexus may affect whitebark pine, even if this activity would only affect individual trees or populations. (Emphasis added).</p> <p>https://www.federalregister.gov/d/2022-27087/p-237</p> <p>We added vegetation management of existing utility rights-of-way as an example of forest-management activities covered under the 4(d) rule in Provisions of the Final 4(d) Rule, below. Importantly, construction of new utility lines on Federal lands is not an excepted activity under the 4(d) rule (i.e., it is not forest management); if that construction could result in prohibited removal or damage of whitebark pine, Federal agencies and associated utility companies would need to pursue appropriate permitting and consultation processes. (Emphasis added.)</p> <p>https://www.federalregister.gov/d/2022-27087/p-232</p> <p>According to the SDEIS, the analysis area contains approximately 2,069 acres occupied by whitebark pine. Even though the Forest Service has preliminarily determined that neither alternative would jeopardize the species, the SDEIS notes that activities related to the Stibnite Gold Project would negatively affect both whitebark pine habitat and individuals: The SGP would remove whitebark pine individuals, and habitat conversion associated with the SGP would impact seed production, dispersal, and establishment of this species. SDEIS 2-144.</p> <p>The Vegetation Communities, Botanical Resources, and Non-Native Plants Specialist Report highlights the potential impacts to known locations of whitebark pine” .</p> <p>7.2.1.6 Issue: Impacts to Known Locations of Whitebark Pine</p> <p>Construction would require removal of known whitebark pine individuals. Direct impacts to whitebark pine individuals would occur during the construction and operation phases. Removal of whitebark pine individuals, particularly mature, cone-bearing individuals, would reduce the population size of this species in the Forests and potentially have long-term consequences for this species in the analysis area. Loss of whitebark pine individuals would result in reductions in seed production and dispersal, which would result in reduced establishment of this species in and adjacent to the analysis area.</p> <p>Transport of whitebark pine individuals that are cut down for SGP construction outside the SGP area also has the potential to spread bark beetle species (e.g., mountain pine beetle [Dendroctonus ponderosae]), which are a main cause of tree mortality in the coniferous forests of the western U.S. in recent years (Hinke et al. 2016). White pine blister rust disease, which is caused by the introduced pathogen Cronartium ribicola, is a conifer pathogen (Keane et al. 2017) that has the potential to spread if infected trees are transported outside the SGP area. This pathogen and bark beetles are a threat to</p>		

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			<p>whitebark pine in the PNF and BNF, and their potential spread as a result of SGP actions could detrimentally impact whitebark pine and other conifers within and outside the analysis area.</p> <p>The botanical surveys are intended to cover both direct impacts and indirect impacts up to 300 feet to factor in effects to pollinators and from dust. However, we are concerned that even this broader analysis misses several potential impacts from dust suppressant, soil contamination, recreationalists, and climate change, among other impacts.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	296	<p>a. The SDEIS failed to analyze the potential impacts of soil contamination on whitebark pine.</p> <p>In addition to interfering with photosynthesis, dust contaminated with heavy metals can affect soils and harm plant physiology. We are concerned that the SDEIS fails to consider impacts to whitebark pine and other botanical resources within and adjacent to the Operations Area Boundary from air quality/pollution and mercury or other heavy metal contamination stemming from onsite ore processing.</p> <p>We are also concerned about the physical and chemical effects of fugitive dust to botanical resources along the transportation route. IDEQ itself states on page 22 of the final SOB that "it may prove challenging to consistently and continuously achieve the targeted level of fugitive dust control for emissions from traffic on unpaved roadways, with over 55 miles of haul truck routes within the mining operations boundary, a fleet of 32 haul trucks weighing between 37 and 357 tons, and a targeted dust control efficiency of 93.3% accomplished by application of both dust suppressant and water controls." The Forest Service needs to take a closer look at these potential impacts.</p>	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	297	<p>b. The SDEIS failed to analyze the impacts of dust suppressants on whitebark pine.</p> <p>As noted above, dust control measures are critically important but they have to be applied carefully to avoid unintended effects. Magnesium chloride is a now commonly used liquid chemical mix applied to unpaved roads as a dust suppressant and to both paved and unpaved roads as a deicing agent. Numerous studies demonstrate that the use of magnesium chloride on road surfaces results in adverse conditions affecting the health of roadside vegetation, including aspen, Engelmann spruce, and lodgepole and ponderosa pine. Each of these studies found that exposure to commercial deicers and dust suppressing agents using magnesium chloride as a base adversely affects these four tree's life cycles, reducing or inhibiting foliage growth, depressing leaf photosynthesis rates, and increasing sapling mortality.</p> <p>The adverse impacts associated with the use of magnesium chloride are not restricted to vegetation immediately adjacent to the roadside. Researchers have documented foliage loss and mortality and high sodium concentrations up to 93 meters downslope of the application area. While none of the cited studies document whitebark pine impacts, it is worth noting that few, if any, studies on the effects of magnesium chloride incorporate alpine or subalpine environs. Considering the adverse effects magnesium chloride has on Engelmann spruce, as well as lodgepole and ponderosa pine, it is not unreasonable to project potential impacts to whitebark pine and other species if magnesium chloride solutions are used for dust suppression or as a de-icing agent. The Forest Service needs to determine if magnesium chloride will play a role in dust abatement and winter road maintenance, and if so, fully analyze and disclose the potential impacts to whitebark pine in the analysis area. We recommend that the Forest Service provide the results of this analysis in a supplemental SDEIS.</p>	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	298	<p>c. The SDEIS fails to consider long-term impacts of climate change.</p> <p>Known effects of climate change include rising temperatures, decreased snowpack, and increased rain-associated precipitation. These factors could affect the resilience of whitebark pine over the next two decades, and the SDEIS fails to consider the potential impacts to the long-term success of whitebark pine should the analysis area population suffer additional losses. As recounted elsewhere in these comments, we recommend the Forest Service analyze the findings of climate change cumulative impacts in a supplemental SDEIS.</p> <p>d. The SDEIS fails to consider the effects of motorized public recreational use of the Burntlog Route on whitebark pine.</p>	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.

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			<p>Motorized access through whitebark pine habitat will be greatly expanded if public use of the Burntlog Route is allowed. While recreational activity is not a threat to whitebark pine populations, additional recreational activities in this subalpine area could affect individual whitebark pine and increase the cumulative effects of the predicted impacts. Members of the public who do not follow the Motor Vehicle Use Map can drive vehicles off designated routes and run over whitebark pine seedlings. Campers may also cut down whitebark pine for firewood or to enlarge campsites and parking areas at dispersed camping areas. The SDEIS also notes the possibility of motorized wilderness incursions into the FCRNRW, which would further increase the potential impacts on whitebark pine. In addition, the majority of fires in Idaho are human-caused. While certain fires can be beneficial to whitebark pine by reducing surface fuel loads and competition, uncharacteristic wildfires can be detrimental, as highlighted in the SSA:</p> <p>Although some experts have suggested that whitebark pine is phenotypically adapted to survive low-intensity fire, Stevens et al. (2020, p.948) found that whitebark pine had relatively thin bark compared to other conifer species and, based on a systematic ranking of numerous traits associated with fire resistance in western conifers, whitebark pine was found to have one of the lowest fire resistance scores of the 29 conifers examined in the study. Others have also observed that whitebark pine trees can be sensitive to bole (main stem of the tree) scorching, resulting in cambium injury or death, even from low-intensity fire (Hood et al. 2008, p. 66). Keane et al. (2020, p. 7) noted several recent reports of prescribed fire and low-intensity fire killing whitebark pine trees, despite pre-fire site preparation activities implemented to reduce or modify surface and ladder fuels and protect the residual whitebark pine trees. Keane and Parsons (2010, p. 63) studied the effects of seven different fuel treatment combinations on whitebark pine at five treatment sites in Montana and Idaho and found that whitebark pine mortality from low-intensity fire was comparable to subalpine fir under all treatment combinations. As a result, empirical evidence shows that low-intensity fire in whitebark pine can result in higher-severity fire effects.</p> <p>And</p> <p>Despite adaptations that allow whitebark pine to recolonize areas that experience high-severity fire effects, the ability of whitebark pine to regenerate and reestablish following high-severity fire has been disrupted by white pine blister rust in many areas. This novel stressor makes the species more vulnerable to the impacts of fire (see Chapter 4: Analysis of Current Conditions). Blister rust has killed many mature whitebark pine trees, effectively reducing or eliminating whitebark pine seed sources. The presence of blister rust also reduces whitebark pine seedling survival, which significantly reduces the species' ability to regenerate in fire-created openings that are typically ideal for seedling establishment.</p> <p>Wildfires are also expected to become more severe due to climate change and mountain pine beetle activity. Human-caused wildfires in areas made accessible to the general public by the Burntlog Route are reasonably foreseeable. These impacts would be from activities completely unrelated to mining activities and would be largely preventable if the Forest Service decides to not allow public motorized access along the Burntlog Route or selects the Johnson Creek alternative.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	299	<p>e. Indicators used to assess impacts to whitebark pine are incomplete.</p> <p>The SDEIS uses two indicators to estimate impacts on whitebark pine. The first indicator is the SDEIS used to estimate impacts on whitebark pine is the acres of habitat affected:</p> <p>The 2021 MMP would remove an estimated 259.4 acres of occupied whitebark pine habitat (12.5% of occupied habitat in the analysis area).</p> <p>The Johnson Creek Route Alternative would remove an estimated 108.4 acres of occupied whitebark pine habitat (5.2% of occupied habitat in the analysis area). SDEIS 2-144.</p> <p>The second indicator of impacts to whitebark pine is the estimated number of mature whitebark pine trees to be cut during construction activities. The SDEIS also includes an estimate on the number of</p>	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.

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			<p>individual trees which will be cut, which is critically important for distinguishing between alternatives and should be ranked as a third indicator:</p> <p>An estimated 1,236 individual trees, 23 of which would be cone-bearing trees, would be removed under the 2021 MMP. SDEIS 2-144.</p> <p>An estimated 767 individual trees, 23 of which would be mature, cone-bearing trees, would be removed under the Johnson Creek Route Alternative. SDEIS 2-144</p> <p>Consideration of mature trees is important and appropriate as it may take 40-80 years for a whitebark pine to reach reproductive age:</p> <p>Mature tree life stage: Some whitebark pine individuals are capable of producing limited amounts of seed cones at 20– 30 years of age, although large cone crops usually are not produced until 60–80 years (Krugman and Jenkinson 1974, as cited in McCaughey and Tomback 2001, p. 109), with average earliest first cone production at 40 years (Tomback and Pansing 2018, p. 7). Therefore, the generation time of whitebark pine is approximately 40 to 60 years (Tomback and Pansing 2018, p. 7; COSEWIC 2010, p. v). Mature whitebark pine trees require two summers of suitable temperatures and precipitation for fertilized cones to mature (Rapp et al. 2013, p. 2).</p> <p>The impacts to the total number of whitebark pine should be included as an equally important third indicator. There are many more younger whitebark pine trees that may be removed by mining activities. While they may not have reached reproductive age yet, these smaller and younger trees are more resistant to mountain pine beetles than mature trees and are important to retain as well.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	300	<p>f. Baseline surveys on whitebark pine are insufficient.</p> <p>We have concerns about the methodologies used to complete some baseline surveys. Regarding the acreage of occupied habitat, Forest Service is appropriately basing this information on modeled suitable habitat and field surveys for whitebark pine. Field surveys were conducted on 89% of the areas that are modeled as suitable habitat and that are associated with the disturbance footprint of the mine and associated roads, transmission line corridors and OSV routes. Surveys found whitebark pine occupying 42% of the surveyed area:</p> <p>Surveys in 2012, 2013, 2014, and 2019 documented whitebark pine at the proposed mine site and along Burntlog Road and several existing roads, including Riordan Lake Road and Meadow Creek Lookout Road, and along the existing Old Thunder Mountain Road, and within the proposed power line corridor, especially between Johnson Creek Road and the mine site (HDR 2013, 2014, 2017; Tetra Tech 2019). Stibnite Gold Project, Vegetation Communities, Botanical Resources, and Non-Native Plants Specialist Report, D-10.</p> <p>We are concerned that surveys for whitebark pine did not go into sufficient detail to establish the needed baseline information or to provide the public with sufficient information to make meaningful comments. The Forest Service does not have an accurate count of the live and cone-producing trees in a polygon. Instead, the numbers the SDEIS used for mature trees and total trees removed are estimated based on a formula with various inputs. This formula takes the acres directly impacted by proposed mining activities, divides them by the total acres in the polygon and multiplies this by the approximate live trees in the polygon. The problem with this approach is that for some polygons, there was an incredibly wide range of trees, ranging from 150-500 or 500-1000 or 1000+. The Forest Service just selected a "midpoint" number in that range and plugged it into the formula which may be prone to over or underestimations of whitebark pine.</p> <p>As shown in Table F-1, the Forest Service estimated the number of whitebark pine trees in occupied habitat polygons #15, 71, 84 and 85 ranged anywhere between 150 to 500 individuals and came up with a midpoint amount that was entered into the formula. The Forest Service then estimated that 67, 11, 35 and 33 trees would be removed respectively from each polygon. However, if the input ranges from 150-500 individuals, this could lead to a 300% or greater discrepancy in the results. No sorts of error bars or</p>	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.

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			<p>degree of certainty accompanies the estimate of trees to be removed, which makes it difficult for the public and decision makers to understand the potential impacts.</p> <p>While some passages in the SDEIS clarify that the number of individual whitebark pine trees that could be affected are estimates, other passages do not:</p> <p>The 2021 MMP would remove an estimated 259 acres of occupied whitebark pine habitat (12.5% of occupied habitat in the analysis area), totaling 1,236 trees (23 would be mature, cone-bearing). SDEIS ES-16. Emphasis added.</p> <p>The level of specificity used implies that this is an exact count with a high degree of accuracy instead of the output of a formula that may be off by several hundred percent in some polygons.</p> <p>Another example is occupied habitat polygon #105 which appears to be in the proposed footprint of the West End pit. The Forest Service estimated that this polygon has anywhere between 500-1000 trees, out of which the Forest Service used the formula based on a midpoint to estimate that there were 17 mature whitebark pine trees that would be removed. The margin for error for this important calculation is undisclosed and unacceptable.</p> <p>With this margin of error, it is difficult to make an informed decision about the impacts of Stibnite Gold Project, real differences regarding the Burntlog Route and the Johnson Creek Route Alternatives and how to develop design features to avoid, minimize and mitigate impacts. This is a significant problem regarding a listed species. We note that the lack of a sufficient baseline study for Sacajawea's bitterroot for the CuMo Mine Exploration Project was sufficient for the court to remand the decision.</p> <p>While the formula used may be appropriate for coarse surveys for relative abundance of whitebark pine and in areas with numerous seedlings and saplings, the Forest Service should follow up with additional field surveys for accurate counts of mature trees where they occur. This should not be an undue burden as the area directly affected by mine operations in polygon #105 is less than 5 acres and is warranted as whitebark pine is a listed species.</p> <p>While we appreciate the Forest Service posting the whitebark pine survey on the web page, it was not posted until Dec. 29, 2022. The survey report contained graphics showing the estimated range of the number of whitebark pine in the different polygons as well as the area of disturbance of the mine. However, the area of disturbance depicted is based on the 2019 Mine Plan, which differs from the 2021 MMP. As such, it is very difficult for the public to ascertain if a whitebark pine polygon really is going to be consumed in a mine pit or not. For example, polygons 105, 106 and 112 contain mature whitebark pine which would appear to be consumed by the West End pit (see Map 1 in the Whitebark Pine Survey). However, the West End pit boundary in the 2021 MMP appears to have a different location and shape (see Figure 2.4-2 in the SDEIS). The Whitebark Pine Survey needs to be updated so the actual proposed layer of disturbance appears along with the verified mature trees in the polygons and then made available for public comment in a Supplemental SDEIS.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	301	<p>g. Avalanche control on whitebark pine not properly assessed.</p> <p>As mentioned previously, avalanche control work has the potential to artificially trigger avalanches that would not otherwise have occurred and therefore destroy or damage whitebark pine. It is not clear that whitebark pine surveys conducted by Perpetua included individuals living within avalanche starting zones, tracks, or runouts. The SDEIS should ensure that all species members impacted by SGP activities are accounted for in these surveys. Artificially triggering avalanches, while beneficial for decreasing risk that vehicles will be struck, may also incidentally take whitebark pine individuals. This impact should also be addressed.</p>	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Bonnie Gestring (Northwest Program Director,	17634	302	<p>h. The 2021 MMP/Burntlog Route appears to have significantly greater impacts on whitebark pine than the Johnson Creek alternative.</p> <p>Based on the incomplete information provided so far, the Burntlog Route appears to be the worst alternative for whitebark pine for both direct and cumulative effects:</p>	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.

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Earthworks) and seven others			<p>The preferred alternative would remove approximately 12.5% of occupied whitebark pine habitat in the project's analysis area covering 259.4 acres and remove a (greatly) estimated 1,236 trees, 24 of which would be cone-bearing trees. The Johnson Creek alternative would remove whitebark pine from 5.2% of occupied habitat in the same area covering 108.4 acres and remove a (greatly) estimated 767 trees, 23 of which would be cone-bearing trees.</p> <p>For whitebark pine, the potential for cumulative impacts would be lowest under the Johnson Creek Route Alternative and highest under the 2021 MMP based on disturbance acreage and estimated number of trees removed. The Stibnite Gold Project, Vegetation Communities, Botanical Resources, and Non-Native Plants Specialist Report, p. 82.</p> <p>These impacts would be irretrievable:</p> <p>7.6.2.2 Irretrievable Whitebark pine individuals removed for construction of the SGP would be irretrievable. Vegetation impacts also would be greater under the 2021 MMP in the area of the Meadow Creek Lookout Road (Forest Road 51290) from the Burntlog Route at the upper portion of Blowout Creek drainage to Monumental Summit, which would be improved for public access to connect with Thunder Mountain Road under this alternative.</p> <p>The Burntlog Route could also spread pathogens to the greater density of whitebark pine along this corridor and to the Chilcoot Peak RNA, where whitebark pine are one of the distinguishing features of the RNA.</p> <p>Timber harvested at the SGP could be transported on Burntlog Route. Timber from the SGP could have conifer pathogens such as pathogenic bark beetle species (e.g., mountain pine beetle [<i>Dendroctonus ponderosae</i>]), and white pine blister rust, which is caused by the introduced pathogen <i>Cronartium ribicola</i> (Hinke et al. 2016; Keane et al. 2017)...Conifer pathogens could be distributed during the transport of timber on the Burntlog Route... Whitebark pine/subalpine fir habitat type is one of the distinguishing features of the Chilcoot Peak RNA, and conifer pathogens could cause mortality of whitebark pine and other conifers. If this occurs, changes in the composition and structure of existing vegetation communities and ecological succession would result in a localized, minor to major, long-term loss of the Chilcoot Peak RNA research value and ecological condition. Stibnite Gold Special Designations Specialist Report p. 89.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	303	<p>i. The Environmental Design Features for whitebark pine proposed thus far are inadequate:</p> <p>The Environmental Design Features include a requirement for flagging trees in advance of construction: Prior to construction disturbance, all known populations and/or individuals of whitebark pine within 300 feet of the SGP area would be flagged by the qualified environmental professional (QEP). Any anticipated impacts would be reported to the Forest Service.</p> <p>Instead of having the proponent identify all known populations of whitebark pine and reporting anticipated impacts to the Forest Service prior to construction, the Forest Service needs to conduct proper baseline surveys and disclose the anticipated effects as part of the NEPA process in a Supplemental SDEIS.</p> <p>The whitebark pine survey shows several locations where a slight realignment of the road or transmission corridor would appear to avoid impacting a large number of whitebark pine trees. For example, polygon number 97 in map 11 shows the new proposed mine road branching off to the northeast from the Meadow Creek lookout road and down to the mine site. This intersection contains 1,000+ whitebark pine, which highlights the problems of the Burntlog Route. Just a few hundred feet north of this intersection, there are no identified whitebark pine within the surveyed polygon. At one point, Midas Gold/Perpetua had considered an alternate route going due north of this intersection which is marked as suitable but unsurveyed habitat. If the Burntlog Route is selected, one way to reduce impacts on whitebark pine is to move the intersection slightly to the north to use the first part of the original proposed route.</p>	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.

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			<p>Similarly, polygon number 18 in map 3 shows that whitebark pine occurs in the northern half of the proposed transmission line corridor and not in the southern half. A slight adjustment to the south of this corridor could reduce impacts.</p> <p>While most of the whitebark pines were in the seedling and sapling stages, the Whitebark Pine Survey made note of particular polygons where live mature trees were seen. We recommend prioritizing the mature trees in these polygons for retention and adjusting the footprint of disturbance accordingly:</p> <p>Many large snags were observed, but fewer live mature trees were seen. Some notable exceptions are polygon 87 (Appendix A, Map 13) near Meadow Creek Lookout, polygon 84 (Appendix A, Map 14, Figure 3-5) along Meadow Ridge, and in polygon 106 (Appendix A, Map 1) in the upper north facing reaches of West End Creek. These ridgetop locations have mature live trees, and large old snags...Additional polygons where mature whitebark pines were noted included polygon 34 (Appendix A, Map 25), polygon 54 (Appendix A, Map 18), polygon 66 Appendix A, Maps 18-19), polygon 96 (Appendix A, Map 10), polygon 98 (Appendix A, Map 10), polygon 105 (Appendix A, Map 1), polygon 107 (Appendix A, Map 1).</p> <p>It appears that both alternatives propose removing an estimated 23-24 mature, cone-bearing whitebark pine trees because this location would be consumed by the West End pit. This polygon contains a relatively large amount of mature trees with less than 5% blister rust of pine beetle markings. The mine footprint would completely eliminate the western third of this 3.63 acre polygon. We recommend investigating whether an engineering adjustment of the West End pit could be made that avoids or reduces the impacts on this stand of whitebark pine. One would hope that the engineering design for this pit contains an extra margin of safety and perhaps this does not require extending the pit wall as far to the east. Another option might be to see if a small peninsula could be retained that supports these mature trees and can be offset by a modified bench beneath it.</p>		
Samuel Penney (Chairman)	19396	113	<p>The SDEIS discloses that the analysis area for vegetation covers over 17,000 acres across three national forests and private land. The analysis includes impacts to vegetation, including 11 forested potential vegetation types (“PVG”) (dominated by Persistent Lodgepole Pine (<i>Pinus contorta</i>; qalámqalam) and Warm, Dry Subalpine Fir (<i>Abies lasiocarpa</i>; patóysiwey) PVGs, followed by water, rock, and barren non-forest which cover 18% of the analysis area), botanical resources (i.e., special status plant species), and non-native plants (i.e., invasive and noxious plant species).</p> <p>Existing disturbance is approximately 1,126 acres on NFS lands. Approximately 3,046 acres of land in the analysis area occurs on lands not administered by the Forest. Chapter 3.10 should cross-reference to sections which describe vegetation in the affected environment for Heritage Resources (Chapter 3.17) and Tribal Rights and Interests (Chapter 3.24). Many of the plant resources used by the Tribe are briefly described in the SDEIS,216 but it would help if these plant resources were discussed in reference to vegetation classifications (i.e., existing vegetation communities in the PVGs, non-forested types, and LANDFIRE mapping) found within the Project area.</p>	VEG	Text has been added per the comment. Additional information has been added to Section 3.17 and Section 3.24 of the Final EIS regarding these plant species and Section 3.10 and 4.10 is cross-referenced within Section 3.17 and 3.24.
Samuel Penney (Chairman)	19396	114	<p>Surface soils in the analysis area contain metals, specifically antimony, arsenic, mercury, and silver, from legacy mine operations. Arsenic levels at the Project area are particularly high and have the greatest potential to cause phytotoxicity in plants. The SDEIS needs to disclose information regarding existing conditions of these metals in the vegetation growing at the site. The SDEIS states that “[s]oils near the SGP that exceed the screening-level phytotoxicity criteria do continue to sustain native vegetation.” However, the SDEIS fails to detail the type, extent, and quality of this “native vegetation” and whether there are toxic levels of metals detected in this vegetation. This information needs to be included in the SDEIS (i.e., as part of the affected environment for vegetation).</p>	VEG	No text revisions made in the vegetation section of the EIS as this information is already located in the soils section. Information regarding metals in the soils in the Project area are discussed in detail in Section 3.5.
Samuel Penney (Chairman)	19396	115	<p>Special Status Plant Species</p> <p>The SDEIS covers one ESA-threatened species (whitebark pine (<i>Pinus albicaulis</i>; lálxsaway)), two Forest Sensitive species (least moonwort (or little grapefern219) (<i>Botrychium simplex</i>) and Sacajawea’s bitterroot (<i>Lewisia sacajaweanana</i>)), four Forest Watch species (bent-flower milkvetch (<i>Astragalus vexilliflexus</i> var. <i>vexilliflexus</i>), Blandow’s helodium moss (<i>Helodium blandowii</i>), sweetgrass</p>	VEG	Text has been added per the comment. Additional information has been added to Table 3.10-5.

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			(<i>Hierochloa odorata</i>), and Rannoch-rush (<i>Scheuchzeria palustris</i>)), and non-native plants known to occur within or immediately adjacent to the Project area. The SDEIS also identifies modeled potential habitat for 29 Sensitive and/or Forest Watch species that occur across approximately 19,492 acres. The Tribe takes great interest in the status and recovery of these species, as many have important direct and indirect cultural significance. The SDEIS needs to add associated habitat types for the special status species, including whether the species is a wetland, riparian, or upland plant. This information could be added in Table 3.10-5. According to the most current National Wetland Plant List, seven of the 29 plant species are obligate to wetlands. The SDEIS should also consider impacts to plant species listed in an updated draft of the Idaho State Wildlife Action Plan (“SWAP”) which includes 42 plant species identified as either species of greatest conservation need (“SGCN”) or species of greatest information need (“SGIN”).		
Samuel Penney (Chairman)	19396	116	<p>Whitebark pine is listed as a threatened species under the ESA of 1973, as amended. The current and predicted range of whitebark pine occurs across the Tribe’s aboriginal homeland, much of which is now National Forest Service land (including lands and waters of Boise and Payette National Forests). Conservation and restoration of this species is of great importance to the Tribe.</p> <p>According to Mathys et al., whitebark pine is stressed at the margins of its current range with very few locations for potential expansion. Limber pine (<i>Pinus flexilis</i>), another five-needle pine, is also documented in the Project area. High-elevation five-needle white pines are important functional and structural components of high elevation landscapes. These long-lived pines stabilize soils, reduce soil erosion, shade snowpack, regulate snowmelt and downstream runoff, and provide a high-energy food source for important wildlife species, including grizzly bears (<i>Ursus arctos horribilis</i>; xáxaac), black bears (<i>U. americanus</i>; yá·ka’), and many bird and small mammal species at high elevation. Five-needle pine forests are declining across most of their range in western North America due to the combined impacts of insects, pathogens, altered fire regimes, and shifting moisture regimes associated with climate change. The loss of these species would have serious, adverse consequences for community biodiversity and stability in high-elevation ecosystems.</p> <p>Whitebark pine occurs throughout the Project area and across both Forests, while the limber pine stand may be the only documented population of this species on the Payette Forest Clark’s nutcracker (<i>Nucifraga columbiana</i>; ?ispú·kux) and red squirrel (<i>Tamiasciurus hudsonicus</i>; cílmi) are extremely important to limber and whitebark pine conservation because they collect and disperse whitebark pine seeds. The mutualistic relationship between Clark’s nutcracker and these pines is highly evolved and important for the survival and well-being of these species.</p>	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Samuel Penney (Chairman)	19396	117	Whitebark pine surveys were conducted in 2012, 2013, 2014, and 2019. The most recent survey in 2019 was associated with the Forests’ DEIS Alternative 2 disturbance footprint. The analysis needs to be updated to reflect the footprint of alternatives analyzed in the SDEIS. Surveys documented over 6,000 acres of potential habitat within the Project area and over 2,000 acres of occupied whitebark pine habitat within the 300-foot buffer and overlaps actions proposed for utilities, access roads, and the mine site. Under ESA protections it is unlawful to commit, to attempt to commit, to cause to be committed, or to solicit another to commit the following acts for whitebark: removal from federal lands, malicious damage, or destruction on federal lands, engaging in interstate or foreign commerce, and import or export into, out of, or through the U.S. The Forest must fulfill relevant Section 7 consultation requirements for whitebark pine. Connected actions on private lands should also be considered in analyses of the Project, even though the Forests may not have jurisdiction over the activities occurring on private lands.	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Samuel Penney (Chairman)	19396	118	<p>Least moonwort (or little grapefern) is a native, perennial, facultative hydrophyte fern. It is listed on the National Wetland Plant List as a facultative perennial fern (occurs in wetlands and nonwetlands).</p> <p>According to the SDEIS, two subpopulations of a single occurrence occur in swales adjacent to Johnson Creek Road. To realize the full impacts to these subpopulations, the Forest needs to revisit these sites and potential habitat (838 acres), assess impacts, and disclose them in the SDEIS. These sites have not been surveyed since 2005. <i>Sacajawea</i>’s bitterroot is a native perennial with succulent rosette leaves,</p>	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.

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			white flowers, and a tuberous root. Endemic to central Idaho, a single occurrence of <i>Sacajawea's</i> bitterroot occurs approximately 300 feet above the Warm Lake Road and the existing transmission line corridor near the intersection of Warm Lake Road and Curtis Creek Road. The occurrence was last observed in 1999 and not documented in 2014 surveys (which occurred in late June). This species has a very short growing season and aboveground parts disappear quickly after flowering (May/June). To realize the full impacts to this occurrence of <i>Sacajawea's</i> bitterroot, the Forest needs to revisit the site and potential habitat (2,351 acres) during its growing season, assess impacts, and disclose them in the SDEIS.		
Samuel Penney (Chairman)	19396	119	Both Forest Plans include Guideline BTGU01 which states" [f]or site/project-scale analysis, suitable habitat should be determined for Sensitive species within or near the project area. Conduct surveys for those species with suitable habitat to determine presence. Document the rationale for not conducting surveys for other species in the project record." The Forest needs to update surveys and location information for least moonwort and <i>Sacajawea's</i> bitterroot, and for the other Sensitive plant species that have potential habitat in the Project area but have not been included in past special status surveys for the Project. These include candystick (<i>Allotropa virgata</i>) (390 acres of potential habitat), scalloped moonwort (<i>Botrychium crenulatum</i>) (74 acres of potential habitat), slender moonwort (<i>Botrychium lineare</i>) (838 acres), beautiful bryum (<i>Bryum calobryoides</i>) (28 acres), Cascade reedgrass (<i>Calamagrostis tweedyi</i>) (3,884 acres), Idaho douglasia (<i>Douglasia idahoensis</i>) (176 acres), bank monkeyflower (<i>Mimulus clivicola</i>) (404 acres), Tolmie's saxifrage (<i>Saxifraga tolmiei</i> var. <i>ledifolia</i>) (691 acres), and short-style tofieldia (<i>Triantha occidentalis</i> ssp. <i>brevistyla</i>) (532 acres).	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Samuel Penney (Chairman)	19396	120	There are four Forest Watch species documented in the Project area (bent-flower milkvetch, Blandow's helodium moss, sweetgrass, and Rannoch-rush). Bent-flower milkvetch is a perennial legume with white to purple flowers and grows low to the ground on exposed, subalpine ridgelines in subalpine fir and whitebark pine habitats. It is critically imperiled in Idaho. The nearest subpopulation occurs upslope and east of the West End Creek diversion and is the largest contiguous area of habitat and important to long-term viability of this species.	VEG	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	121	Blandow's helodium moss (also named <i>Elodium blandowii</i>) forms in mats and hummocks in wet areas of the forest (e.g., fens, wetlands, and near streams). One occurrence is located near Trapper Creek within 300 feet of Burntlog Route, but there are 705 acres of mapped potential habitat. Imperiled in Idaho, northern sweetgrass (also named <i>Heirochloe hirta</i>) is found in wetlands near Trapper Creek and mapped with having 996 acres of potential habitat.	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Samuel Penney (Chairman)	19396	122	Sweetgrass growing in the Landmark area was also documented by the Idaho Native Plant Society during a botanical survey in 2022.	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Samuel Penney (Chairman)	19396	123	Rannoch rush is a perennial, herbaceous, and vulnerable plant that grows in wetlands. It is listed on the National Wetland Plant List as an obligate hydrophyte (almost always occurs in wetlands) and is documented in the Mud Lake area within 300 feet of Burntlog Road (modeled potential habitat is 850 acres).	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Samuel Penney (Chairman)	19396	124	With the exception of bent-flower milkvetch, none of these species were included in past special status surveys. Blandow's helodium moss, sweetgrass, and rannoch-rush have not been surveyed by the Forest since 2004. The Forest needs to update surveys and location information for these Forest Watch species that have occurrences and potential habitat in the Project area, including occurrences across 13 Inventoried Roadless Areas.	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to

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					identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Samuel Penney (Chairman)	19396	125	<p>Non-Native Plants</p> <p>The SDEIS does an inadequate job of disclosing the distribution and extent of noxious weeds and non-native plant species occurring in the Project area. Two pages dedicated to noxious and nonnative plants is insufficient. Table 3.10-6 lists noxious weeds and non-native plant species in Valley County and the analysis area and includes two species identified as "Noxious-Early Detection and Rapid Response" (yellow hawkweed (<i>Hieracium caespitosum</i>) and Syrian beancaper (<i>Zygophyllum fabago</i>)), however the SDEIS states that " [n]o known species of Early Detection and Rapid Response are known in the subregion." Please provide clarification of occurrence for these species in the SDEIS.</p>	VEG	No text revisions made. Noxious weeds are discussed in Section 3.10 and 4.10 and measures described in Chapter 2 of the EIS to reduce the establishment and spread of noxious weeds would be implemented throughout the life of the Project. Additional details are also provided in the reclamation plan.
Samuel Penney (Chairman)	19396	126	<p>According to the SDEIS, spotted knapweed (<i>Centaurea stoebe</i> ssp. <i>micranthos</i>) and rush skeletonweed (<i>Chondrilla juncea</i>) are the most extensive species in the analysis area. But the SDEIS fails to include life histories, management, spatial context, and mechanism of establishment and growth. The Vegetation Specialist Report includes maps of these species, but they lack extent (i.e., percentage distribution), and their locations are difficult to see on the maps. The maps in Appendix C of the Vegetation Specialist Report leave out most of the species listed in the SDEIS and should also include common names of these plants in the legend. The SDEIS needs to include percent occurrence by mine features - utilities, mine site, off-site facilities, and access roads.</p> <p>Without spatial context and degree of their extent (% of each in the Project area), it is difficult to understand the affected environment and environmental consequences of the proposed action. The SDEIS also narrowly focuses on noxious weeds designated by the Idaho State Department of Agriculture and does not mention other non-native plants present within the Project area, except for bull thistle (<i>Cirsium vulgare</i>). Does this mean no other non-native plants exist in the Project area? What about the presence of non-native annual grasses? The Forest needs to disclose all nonnative plants that occur in the affected environment. The existence of other non-native plant species may jeopardize reclamation efforts and fail to meet Forest Plan management direction, as well as violate other federal regulations (i.e., SMCRA).</p>	VEG	No text revisions made. Noxious weeds are discussed in Section 3.10 and 4.10 and measures described in Chapter 2 of the EIS to reduce the establishment and spread of noxious weeds would be implemented throughout the life of the Project. Additional details are also provided in the reclamation plan.
Samuel Penney (Chairman)	19396	127	The SDEIS needs to disclose any records or information about the non-native plant species' occurrences over time (i.e., what species have increased over time in the Project area; what species are likely to spread into the foreseeable future). The RCP states that Perpetua implemented a Weed Management Plan in 2015 and that studies conducted at the Project area have identified Canada thistle (<i>Cirsium arvense</i>), rush skeletonweed, spotted knapweed (<i>Centaurea</i> ssp.; three latin names are cited in the Vegetation Specialist Report), and yellow toadflax (<i>Linaria vulgaris</i>). These are worrisome plant species. The SDEIS needs to include more information about each of these species, as well as others listed in the SDEIS. For example, oxeye daisy (<i>Leuceanthemum vulgare</i>) is a species of concern because it is an aggressive invasive species that can spread quickly into undisturbed meadows and riparian areas, displace native vegetation, and produce many seeds that remain viable in the soil for several years. What management actions including monitoring has the Forest or Perpetua done to control establishment and growth of these species? Are any present on the reclaimed areas, and if yes, then how will the Forest control their spread when Perpetua disturbs these areas again under the proposed actions? The Weed Plan will be updated prior to construction and needs to be part of the FEIS so the Tribe can review it.	VEG	No text revisions made. Noxious weeds are discussed in Section 3.10 and 4.10 and measures described in Chapter 2 of the EIS to reduce the establishment and spread of noxious weeds would be implemented throughout the life of the Project. Additional details are also provided in the reclamation plan.
Samuel Penney (Chairman)	19396	129	There are three Forest Watch species mentioned in the vegetation section (3.10) of the SDEIS (Blandow's helodium moss, sweetgrass, and Rannoch-rush); all three species are considered wetland plants. Blandow's helodium moss (also named <i>Elodium blandowii</i>) forms in mats and hummocks in wet areas of the forest (e.g., fens, wetlands, and near streams). One occurrence is located near Trapper Creek within 300 feet of Burntlog Route, but there are 705 acres of mapped potential habitat.	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.

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Samuel Penney (Chairman)	19396	130	Imperiled in Idaho, northern sweetgrass (also named Heirochloe hirta) is found in wetlands near Trapper Creek and mapped as having 996 acres of potential habitat. Sweetgrass growing in the Landmark area was documented by the Idaho Native Plant Society during a botanical survey in 2022.	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Samuel Penney (Chairman)	19396	131	Rannoch-rush is a perennial, herbaceous, and vulnerable plant that grows in wetlands. It is listed on the National Wetland Plant List as an obligate hydrophyte (almost always occurs in wetlands) and is documented in the Mud Lake area within 300 feet of Burntlog Road (modeled potential habitat is 850 acres). None of these species were included in past special status surveys.	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Samuel Penney (Chairman)	19396	132	Blandow's helodium moss, sweetgrass, and Rannoch-rush have not been surveyed by the Forest since 2004.	VEG	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	133	Sensitive species Least moonwort (or little grapefern) is a native wetland, perennial, facultative hydrophyte fern. It is listed on the National Wetland Plant List as a facultative perennial fern (occurs in wetlands and non-wetlands). According to the SDEIS, two subpopulations of a single occurrence occur in swales adjacent to Johnson Creek Road. To realize the full impacts on these subpopulations, the Forest needs to revisit these sites and potential habitat (838 acres), assess impacts and disclose them in the SDEIS. These sites have not been surveyed since 2005.	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Samuel Penney (Chairman)	19396	146	The Forest needs to update the SDEIS to reflect changes to whitebark pine status as an ESA-threatened species.	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Samuel Penney (Chairman)	19396	179	Compost and fertilizers will likely support greater establishment and growth of noxious weeds and non-native plants.	VEG	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	229	4.10 Vegetation The Tribe is concerned about the irreversible and irretrievable impacts to vegetation, including the destruction and loss of ESA-threatened whitebark pine, loss of potential habitat for special-status plant species, spread of non-native and noxious, invasive plant species (on more than 3,000 acres of disturbed land), and likely permanent changes to the function and structure of vegetation that supports wildlife, nutrient cycling, and soil stability. Impacts may result in changes to the Project area that persist in perpetuity. The SDEIS discloses that land disturbed under both alternatives would not maintain and move towards Forest Plan desired conditions into the foreseeable future (> 2,000 acres under both alternatives, including >270 acres of land where mine activities would prevent the regrowth of vegetation).	VEG	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	230	Impacts to vegetation are greater under the preferred alternative (2021 MMP) than the Johnson Creek Road alternative. These lands currently support native vegetation that sustains terrestrial and aquatic habitats on the Forests. The proposed actions are unacceptable and inconsistent with NFMA policies, Forest Plan direction, and, most important, the Forest's trust responsibility to the Tribe.	VEG	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	231	The Forest needs to take a hard look at impacts to plant resources used by the Tribe, which are only briefly described in the SDEIS. Reference in the analysis should also be made to associated habitat types where these plant resources are found (i.e., impacts need to have spatial (e.g., linked with PVGs) and temporal (e.g., phenology and gathering season) context). The SDEIS fails to discuss the "so, what?" aspect of an environmental effects analysis. For example, the SDEIS describes that there will be increased habitat fragmentation for plant populations, but fails to explain where, how, when, and why it is meaningful. Under all action alternatives, construction and maintenance of utilities and access roads could fragment many wetlands indefinitely – the SDEIS needs to explain the consequences of	VEG	Text has been added per the comment. Additional information has been added to Section 3.17 and Section 3.24 of the Final EIS regarding these plant species and Section 3.10 and 4.10 is cross-referenced within Section 3.17 and 3.24.

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			fragmentation to vegetation, soils, hydrology, aquatics, and wildlife. The SDEIS needs to interpret and support (using best available scientific information) the conclusory statements. The magnitude, extent, direction, duration, and speed of effects of each alternative need to be defined quantitatively and/or qualitatively. These interpretations of resource impacts should also be built on and integrated with other resources. The Forest concludes that both action alternatives will not contribute to the loss of viability of plant species within the planning area (i.e., Payette and Boise administered lands), however, the Tribe is deeply concerned that the activities will reduce viability and availability of plant species for Tribal harvest and use within the Project area, which is just as important as the entire planning area.		
Samuel Penney (Chairman)	19396	232	In many places throughout Chapter 4 (Environmental Consequences), the SDEIS discloses impacts to plants and pollinators from dust and emissions, however, the types, conditions, and seasonality of pollinators are not discussed as part of the affected environment. The SDEIS fails to include pollinators, or any invertebrate, as part of the affected environment for soils, vegetation, and wildlife. This information, including but not limited to, the diversity and abundance of pollinators that exist in the project area, needs to be a part of the SDEIS.	VEG	Text has been added to Sections 3.13 and 4.13 regarding pollinators that may occur in the analysis area.
Samuel Penney (Chairman)	19396	233	The SDEIS does not adequately analyze components or effectiveness of the RCP. If the Project is required to adhere to Forest Service-required mitigation measures, the design features and resource protection measures, and procedures in the RCP, then the SDEIS needs to consider these in the effects analysis and explain their effectiveness. The reclamation seed mixes proposed in the RCP, for example, are not reflective of the PVGs in the Project area. The likelihood that these areas will comply with NFMA policies and Forest Plan directions is low. The SDEIS even discloses that vegetation removal and tree clearing under all action alternatives would not maintain or move toward desired conditions for vegetation as described in the Forest Plans, and likely that any or all impacts may result in changes to the surrounding ecosystem that persist in perpetuity and would result in these areas not being able to meet desired conditions for the foreseeable future. The SDEIS fails to give adequate attention to the permanent loss of habitat types. Most impacts to PVGs under all action alternatives would be related to disturbance activities at the mine site and would occur in the Warm, Dry Subalpine Fir (PVG 7) and Persistent Lodgepole Pine (PVG 10) types, which are the most extensive PVGs in the analysis area. This is unacceptable.	VEG	No text revisions made. The Forest Service has approved the RCP and it has been incorporated appropriately into Section 4.10.
Samuel Penney (Chairman)	19396	234	According to the SDEIS, dust abatement measures would be used during construction, operation, and closure to reduce the amount of fugitive dust. The SDEIS provides a few scientific references but fails to disclose impacts from these measures. The SDEIS lacks relevant references as to the impacts of dust abatement chemicals on soils, vegetation, and wildlife. Magnesium chloride (MgCl ₂) and MgCl ₂ - lignin sulfonate products used to suppress dust on roadsides can damage vegetation foliage, alter soil quality, move in roadside drainages of up to 98 m from roads, and accumulate over time, often to toxic concentrations, in trees and soils. High MgCl ₂ soil concentrations from application caused mortality of Douglas-fir, lodgepole, ponderosa, and limber pines, and aspen in just two to four years. Considering the life of the Project (> 20 y), the Tribe is concerned about long-term consequences to soils and vegetation from dust abatement chemicals. The SDEIS fails to address and take a hard look at these actions, and the Tribe requests that the Forest Service use the least environmentally damaging dust suppressant, and monitor impacts to vegetation, soils, water, and terrestrial and aquatic ecosystems.	VEG	No text revisions made. Dust abatement measures would focus on confining chemical usage away from vegetation, non-disturbed soils, and any wildlife in the area. Fugitive dust control along roads would confine chemicals to the centerline of the roadway to avoid overspray onto adjacent non-disturbed areas; therefore, limiting any potential impacts to soils, vegetation, and wildlife.
Samuel Penney (Chairman)	19396	235	Impacts to Whitebark Pine The SDEIS lacks specific spatial and temporal details about the impacts to whitebark pine under each alternative, including number of individual trees and acreage associated with specific location (private versus federal land) and proposed actions (facilities, utilities). Instead, the SDEIS summarizes the total amount of impacted acres and number of individual trees removed. Without spatial reference, it is difficult to know where these impacts occur within the Project area. The SDEIS references the Stibnite Gold Project Vegetation Specialist Report Appendix F for details about the survey conducted by Tetra	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.

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			Tech, however Table F-1 is not associated with any maps or citation, and therefore lacks meaning. The Forest needs to do a better job at disclosing the impacts to whitebark pine.		
Samuel Penney (Chairman)	19396	236	Under ESA protection, it is unlawful to commit, to attempt to commit, to cause to be committed, or to solicit another to commit the following acts for whitebark pine: removal from federal lands; malicious damage or destruction on federal lands; engaging in interstate or foreign commerce; and import or export (into, out of, or through the U.S.). Actions under all alternatives, including the No Action Alternative (e.g., existing and approved activities described in the SDEIS), will harm whitebark pine. Under both action alternatives, utility activities include new and upgraded transmission lines, substations, communication towers, and repeater sites. According to the SDEIS, vegetation clearing would occur indefinitely on the new and upgraded transmission line (> 1,000 acres under both alternatives), which would impact an indefinite number of continuously-establishing seedlings as well. The proposed alternative would remove an estimated 193 trees for utilities (not counting what would be removed to maintain the transmission line ROW indefinitely), trees for access roads, and 564 trees for operations at the mine site. But these numbers are based on surveys of a previously proposed footprint (Alternative 2 from the Forests' DEIS) and are only estimates.	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Samuel Penney (Chairman)	19396	238	The Tribe is concerned that the SDEIS does not contain mitigation measures or a restoration plan for the loss of whitebark pine or limber pine in the analysis area.	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate. These same measures would likely also protect limber pine as this species occurs in similar habitats (and often alongside) whitebark pine.
Samuel Penney (Chairman)	19396	239	The SDEIS is silent on impacts to limber pine and to the mutualistic relationships between five-needle pines and seed dispersers.	VEG	Text revisions have been made. Limber pine is discussed in Section 4.10.2 and many of the same protection measures for sensitive and watch plant species as well as whitebark pine would identify and minimize impacts to limber pine.
Samuel Penney (Chairman)	19396	240	It is also unclear in the SDEIS what will happen to whitebark pine removed under each action alternative, and whether the Forest will require Perpetua to restore impacted habitat.	VEG	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate.
Samuel Penney (Chairman)	19396	242	Impacts to Sensitive and Forest Watch Species Actions under the preferred alternative would cause adverse impacts to known occurrences of Sensitive and Forest Watch species including bent-flower milkvetch (Cinnabar Peak subpopulation), least moonwort (wetlands along Johnson Creek Road), Blandow's helodium (wetlands along Burntlog Route), sweetgrass (wetlands near Burntlog Route), Sacajawea's bitterroot (along new and upgraded transmission line), and rannoch-rush (wetlands near Burntlog Route). In some cases, actions would completely remove individual plants and could result in conditions that would no longer support the species (e.g., for Blandow's helodium and sweetgrass). The Tribe is concerned about these impacts to known occurrences, and is also concerned that because the Forest has not surveyed for occurrences since 2004 for some of these plants, that direct impacts to individual plants and their habitats could be greater than realized. Surveys for occurrences of other plant species with potential habitat under both alternatives should also be conducted and disclosed to the Tribe prior to any decision.	VEG	No text revisions made. Occurrence data for sensitive and watch species has been provided and are still accurate for the analysis. Additionally, details regarding potential impacts to sensitive and watch species is provided in Section 4.10.2 and measures proposed by Perpetua and required by the Forest Service, primarily the requirement of preconstruction surveys to identify occurrences of sensitive and watch species and then establish protection measures, would reduce Project-related impacts to these species.
Samuel Penney (Chairman)	19396	244	The SDEIS also fails to consider impacts to vegetation considering projected climate shifts which may exacerbate reclamation efforts (estimated to take place over several decades). The Project area encompasses alpine and subalpine forests and riparian forest that are vulnerable to projected changes in climate, yet the SDEIS falls silent on these vulnerabilities and how the actions may complicate post-mining recovery and land uses.	VEG	No text revisions made. Climate Change is discussed in Section 3.4, 4.4, and 5.4.
Samuel Penney (Chairman)	19396	246	Impacts to Non-Native Plants	VEG	No text revisions made. Noxious weeds are discussed in Section 3.10 and 4.10 and measures described in Chapter 2 of the EIS to reduce the establishment and spread of noxious weeds

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			The SDEIS fails to discuss the "so, what" aspect of an environmental effects analysis regarding noxious weeds and non-native plants. The SDEIS also fails to describe the most concerning noxious weeds and non-native plants, and estimate how and to what extent they could spread under the proposed actions. What is their preferred habitat? What conditions support establishment and growth? Discussing their life histories can help create effective control measures.		would be implemented throughout the life of the Project. Additional details are also provided in the reclamation plan.
Samuel Penney (Chairman)	19396	254	The SDEIS should also reference the plant species and include it in the mitigation plan for planting and should suggest removing species from the site and replanting them at the mitigation site.	VEG	No text revisions made. Section 2.4.9 of the EIS includes details on reclamation, required protection measures by the Forest Service, and EDFs proposed by Perpetua.
Samuel Penney (Chairman)	19396	379	The SDEIS fails to analyze impacts to large or medium-size forest stands that have species composition required to achieve old forest habitat for applicable PVGs. According to the Boise National Forests Plan, management actions within large or medium size class forested stands that have the species composition required to achieve old forest habitat for the applicable PVGs shall contribute to or not preclude restoration of old forest habitat (Boise Forest Plan Standard WIST 09). The SDEIS fails to analyze actions that would not retain forest stands that meet the definition of old forest habitat for the applicable PVGs, management actions are permitted in such stands as long as they will continue to meet the definition of old forest habitat (Boise Forest Plan Standard WIST08).	VEG	No text revisions made. The vegetation analysis, including Forest Service-specific data on PVGs and other specific species data is included in Sections 3.10 and 4.10. Outside of permanently disturbed areas, the reclamation plan addresses replanting of trees in areas to be reclaimed based on previously occupied vegetation characteristics, including species composition, density, and stand structure.
Samuel Penney (Chairman)	19396	410	5.10 Vegetation: General Vegetation Communities, Botanical Resources, and Non-native Plants Under all alternatives, RFFAs, past, and present actions would impact vegetation communities, occurrences and habitats of special status plants (e.g., whitebark pine), and distribution of noxious weeds and non-native plants. The Tribe is concerned that perpetual disturbances from mining coupled with wildland fire, climate change, forest management, and other human activities will cause irreversible and long-term damage to vegetation communities within and adjacent to the Project. Acres disturbed by the Project plus acres disturbed by other activities (e.g., exploration, transportation, wildland fire) have the cumulative potential to increase the occurrence of noxious weeds and non-native plants. If the Forest allows this Project to violate many Forest Plan Standards and Guidelines and proceed as planned, then the footprint of "sacrifice areas" will continue to grow. The Forests' actions will pave the way for future mining activities and thus create a great magnitude of adverse and long-term impacts to treaty resources.	VEG	No further response required. General in nature or position statement.

Wetlands and Riparian Resources

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	38	VI. THE SDEIS LACKS ANALYSIS OF CWA 404 b(1) GUIDELINES In addition to the above comments addressed to the Forest Service and the Army Corps of Engineers (Corps), the following additional comments pertain more directly to the Corps' review of Perpetua's application for a CWA Section 404 permit, although they should be considered by the Forest Service too, as the Forest Service cannot authorize any activities that could violate the CWA or other federal or state laws/regulations. Congress enacted the CWA in 1972, to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). The Act sets several goals, including attainment and preservation of "water quality which provides for the protection and propagation of fish, shellfish, and wildlife..." Id. § 1251(a)(2). To further its goals, the Act prohibits "discharge of any pollutant" into navigable waters except in accordance with the CWA terms. Id. § 1311(a). The Corps issues permits for the discharge of dredged or fill material pursuant to section 404 and subject to the Corps' and EPA's 404(b)(1) Guidelines (Guidelines). 33 U.S.C. §1344; 40 C.F.R. pt. 230. Corps regulations governing the issuance of Section 404 permits declare that "[m]ost wetlands constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be	WET	Compliance with the 404(b)1 Guidelines is determined by the USACE following submission of a complete 404 permit application from the proponent. No application had been submitted at the time of the SDEIS. However, the USACE and the Forest Service have ensured that the procedural requirements to include the development and evaluation of the Action Alternatives, resource identification, and the evaluation of effects considered in the guidelines were fully analyzed in the NEPA effort which will inform that future determination. Relevant sections informing the varying parts include, but are not limited to; Chapter 2, and Sections 4.8, 4.9, 4.10, 4.11, 4.12,4.13, 4.18, 4.19, and 4.23, and their counterpart sections within the EIS.

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			<p>discouraged as contrary to the public interest.” 33 C.F.R. § 320.4(b)(1); see also id. § 320.4(b)(2) (identifying eight types of wetland functions important to the public interest).</p> <p>The Corps’ and EPA’s 404(b)(1) Guidelines impose important limitations on the Corps’ ability to issue a Section 404 permit. 40 C.F.R. pt. 230. The Corps must ensure compliance with the 404(b)(1) Guidelines before issuing a permit. The Guidelines impose important limitations on when a Section 404 permit may be issued. Id. The Guidelines prohibit the permitting of any discharge of dredged or fill material: (1) if there is a practicable alternative to the proposed discharge; (2) if the discharge causes or contributes to violations of applicable state water quality standards; (3) if the discharge will cause or contribute to significant degradation of the environment; or (4) unless all appropriate steps have been taken to minimize potential adverse impacts. Id. § 230.10. The 404(b)(1) Guidelines provide that significant adverse effects on human health or welfare; aquatic life and other water dependent wildlife; aquatic ecosystem diversity, productivity, and stability; or recreational, aesthetic, and economic values are effects contributing to significant degradation. Id. § 230.10(c)(1)–(4). These factors both individually and cumulatively must be considered when evaluating the specific details of the 404 application.</p> <p>The Corps cannot authorize a discharge without “sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with [the Section 404(b)(1)] Guidelines.” Id. § 230.12(a)(3)(iv); see 33 C.F.R. §§ 320.2(f) and 320.4(a)(1). EPA notes that: the record must contain sufficient information to demonstrate that the proposed discharge complies with the requirements of Section 230.10(a) of the Guidelines. The amount of information needed to make such a determination and the level of scrutiny required by the Guidelines is commensurate with the severity of the environmental impact (as determined by the functions of the aquatic resource and the nature of the proposed activity) and the scope/cost of the project.</p> <p>As discussed herein, the proposed discharge does not comply with the 404(b)(1) Guidelines. Pursuant to the Guidelines, no discharge of dredged or fill material shall be permitted if, among other things, a practicable alternative to the proposed discharge would have less of an adverse impact on the aquatic ecosystem. 40 C.F.R. § 230.10. The Corps also cannot authorize any discharge of dredged or fill material that will cause or contribute to significant degradation of the waters of the United States. Id. § 230.10(c). The “degradation or destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts covered by the[] Guidelines.” Id. § 230.10(d).</p> <p>Under the 404(b)(1) guidelines, the Corps is required to consider the following effects, individually and collectively, that contribute to significant degradation:</p> <p>(1) Significantly adverse effects of the discharge of pollutants on human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites.</p> <p>(2) Significantly adverse effects of the discharge of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and spread of pollutants or their byproducts outside of the disposal site through biological, physical, and chemical processes;</p> <p>(3) Significantly adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability. Such effects may include, but are not limited to, loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; or</p> <p>(4) Significantly adverse effects of discharge of pollutants on recreational, aesthetic, and economic values. § 230.10(c).</p> <p>As shown throughout these comments, the proposed mine will violate these requirements and thus a 404 permit cannot be issued.</p> <p>The Corps is required to base this determination on factual determinations, evaluations, and tests required under the guidelines, and to focus, in particular, on the persistence and permanence of the</p>		

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			<p>effects. Id. The Guidelines require the Corps to make certain factual determinations addressing the potential short-term or long-term effects of a proposed discharge of dredged or fill material on the physical, chemical, and biological components of the aquatic environment. This includes determinations on (a) physical substrate; (b) water circulation, fluctuation, and salinity determinations; (c) suspended particulate/turbidity determinations; (d) contaminant determinations; (e) aquatic ecosystem and organism determinations; (f) proposed disposal site determinations; (g) determinations of cumulative effects on the aquatic ecosystem; and (h) determinations of secondary effects on the aquatic ecosystem. Id. § 230.11(a)–(h).</p> <p>When a project is not “water dependent,” as in the case of the mine, and the project would fill “special aquatic sites,” including wetlands, the Corps’ regulations create a rebuttable presumption that there are practicable and environmentally preferable alternatives, and such alternatives are presumed to have less adverse impact unless “clearly demonstrated” otherwise. 40 C.F.R. § 230.10(a)(3). This substantive requirement mandates the Corps to select the least environmentally damaging practicable alternative (LEDPA).</p> <p>An alternative is practicable “if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.” 40 C.F.R. § 230.10(a)(2). Practicable alternatives include “activities which do not involve a discharge of dredged or fill material,” as well as “discharges of dredged or fill material at other locations” where such discharges would result in fewer impacts to the aquatic environment. § 230.10(a)(1). The applicant has the burden of demonstrating that no feasible alternative exists, and the Corps must engage in a reasoned analysis of this issue.</p> <p>The Corps cannot blindly and uncritically accept an applicant’s study of alternatives and its assertions that no practicable alternative exists. Under the regulations, any “practicable” alternative to achieve the basic and overall project purposes must be determined to be cost-effective, when viewed from the perspective of the industry as a whole. The financial circumstances of a particular applicant are not considered relevant if an alternative could be achieved practicably by a “typical” applicant. The preamble to the 404(b)(1) regulations states: “Our intent is to consider those alternatives which are reasonable in terms of the overall scope/cost of the proposed project. The term economic might be construed to include consideration of the applicant’s financial standing, or investment, or market share, a cumbersome inquiry which is not necessarily material to the objectives of the Guidelines. We consider it implicit that, to be practicable, an alternative must be capable of achieving the basic purpose of the proposed activity.”</p> <p>But the least environmentally damaging practicable alternative need not be the least costly, nor the most profitable. The regulations presume that less environmentally damaging alternatives are available to the applicant and practicable, unless the applicant clearly demonstrates otherwise. In the absence of such a clear showing, the Corps is required to deny the permit application. See 40 C.F.R. § 230.12(a)(3)(i), (iv). Thus, in this case, the preferred tailings location in upper Meadow Creek does not comply with these requirements.</p> <p>To ensure the mandatory CWA requirements are satisfied, the Corps must evaluate the direct, secondary, and cumulative impacts of the activity on a number of resources. See, e.g., 33 C.F.R. §§ 320.4(a)(1), 336.1(c)(5) (endangered species), 336.1(c)(8) (fish and wildlife); 40 C.F.R. §§ 230.11(a)-(h), 230.20-23 (aquatic ecosystem), 230.53 (aesthetics). The EPA Guidelines require the Corps to make detailed factual determinations regarding the individual and collective effects associated with the discharge activity, and “no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States.” 40 C.F.R. §230.10(c). “Findings of significant degradation related to the proposed discharge shall be based upon appropriate factual determinations, evaluations, and tests required by subparts B and G . . . , with special emphasis on the persistence and permanence of the effects outlined in those subparts.”</p>		

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			<p>The “factual determinations, evaluations, and tests” mandated in subpart B include Section 230.11, which requires that “[t]he determinations of effects of each proposed discharge shall include the following:</p> <p>(h) Determination of secondary effects on the aquatic ecosystem.</p> <p>(1) Secondary effects are the effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. Information about secondary effects on aquatic ecosystems shall be considered prior to the time final section 404 action is taken by permitting authorities.</p> <p>(2)... Activities to be conducted on fast land created by the discharge of dredged or fill material in waters of the United States may have secondary impacts within those waters which should be considered in evaluating the impact of creating those fast lands. 40 C.F.R. §230.11(h)(emphasis added).</p> <p>The Guidelines also require the Corps to “control runoff and other discharges from activities to be conducted on the fill.” Id. § 230.77(a).</p> <p>Thus, the secondary effects that the Corps is required to consider are not limited in time or space to just the initial discharge. Rather, they encompass all activities and impacts “associated with” the fill activities. Furthermore, “[f]undamental to these Guidelines is the precept that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern.” 40 C.F.R. § 230.1(c)(emphasis added).</p> <p>Indeed, according to the regulatory preamble to EPA’s promulgation of the 404(b)(1) Guidelines: “in authorizing a discharge which will create fast lands the permitting authority should consider in addition to the direct effects of the fill itself the effects on the aquatic environment of any reasonably foreseeable activities to be conducted on that fast land.” And, regarding the “factual determinations” in § 230.11 (including secondary effects in 230.11(h)), EPA stated: “in response to many comments, we have moved the provisions on cumulative and secondary impact to the Factual Determination section to give them further emphasis. We agree that such impacts are an important consideration in evaluating the acceptability of a discharge site.”</p> <p>In another rulemaking implementing the CWA, the Corps and EPA reiterated that the Corps’ must fully consider the indirect/cumulative impacts as well as direct impacts from the discharge itself: EPA’s long-standing interpretation of Section 404, as reflected in the Section 404(b)(1) Guidelines, demonstrates that EPA and the Corps are not limited to considering solely the environmental effects of the discharge itself. The Guidelines expressly require consideration of “secondary effects,” which are defined as: effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. 40 CFR § 230.11(h).</p> <p>EPA and the Corps believe that considering the primary and secondary effects of a discharge is clearly consistent with the language and intent of Section 404 to ensure protection of the aquatic system from effects associated with the discharge of dredged and fill material.</p> <p>The agencies highlighted the Tenth Circuit’s decision in <i>Riverside Irrigation Dist. v. Andrews</i>: In this case, the Corps denied nationwide permit coverage for the construction of a dam, the operation of which would have resulted in depleted stream flows that would adversely affect habitat of an endangered species. Even though the discharge of fill material itself to construct the dam would not have had an adverse impact, the court held that the CWA authorized the Corps to consider the total environmental impact of the discharge, including indirect effects such as the impact of the operation of the dam on flows downstream and associated wildlife impacts. The court in <i>Riverside</i> concluded that “the Corps was required to consider all effects, direct and indirect, of the discharge for which authorization was sought.” Additional courts have acknowledged the Corps’ duty to consider secondary and cumulative effects resulting from issuance of a 404 permit. In <i>Greater Yellowstone Coalition v. Flowers</i>, the Tenth Circuit upheld a Corps 404 permit in part because of the Corps’ analysis of the “upland aspects” of the entire</p>		

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			<p>development, not just the limited direct impact of the fill itself: “the Corps’ §404(b)(1) analysis should, and we believe did, take into account the impact of the Canyon Club development as a whole on bald eagle nesting and foraging habitat.” The court highlighted the Corps’ requirement to consider the impacts on the “aquatic ecosystem,” which includes “habitat for interrelated and interconnecting communities and populations of plants and animals.” In confirming the need to consider the adverse impact of the “development as a whole” on wildlife habitat and species, the court further found that: “A discharge of dredged or fill material may adversely affect these species either by directly impacting these [wildlife habitat] elements, [citing §230.30(b)(2)], or by ‘facilitating incompatible activities,’ id., § 230.30(b)(3).” For the Stibnite Gold Project, there is no question that issuance of the 404 Permit “facilitates incompatible activities” of the mine’s construction and operations, which will adversely affect wildlife and habitat.</p> <p>In <i>Sierra Club v. Van Antwerp</i>, the plaintiffs challenged the issuance of Section 404 permits to limestone mining companies. In order to determine whether the permitted activities would cause or contribute to “significant degradation” of the aquatic ecosystem, “[t]he Court must decide whether the Corps considered, as required by the CWA and implementing regulations, as well as NEPA, the significant adverse effects on municipal water supplies (which were a reasonably foreseeable result of the mining).”</p> <p>In <i>Sierra Club v. U.S. Army Corps of Engineers</i>, the plaintiffs challenged the issuance of a 404 permit for a stretch of new highway. The court relied on the “secondary effects” analysis requirements in 40 C.F.R. § 230.11(h), and the “cumulative effects” determinations in § 230.11(g), to find that the Corps failed to consider the “reasonably foreseeable development” and cumulative effects on the nearby operation of a dam and associated water flow conditions.</p> <p>The same was true in <i>Fox Bay Partners v. U.S. Corps of Engineers</i>, where the court upheld the Corps’ denial of a 404 permit for a commercial marina. The court relied on §230.11(h) and § 230.10(c) to find that “the Corps must look not only at the direct effects of a discharge but also at the indirect effects.” There, even though “[n]o one claims that the proposed fill or construction [of a marina boat ramp] itself will cause a significant degradation of the waters of the Fox River and Chain-O-Lakes,” the court found that the Corps properly considered the degradation that would result from increased boat traffic on the river and lakes that would result from building the boat ramp.</p> <p>The court’s analysis in <i>Saylor Park Vill. Council v. U.S. Army Corps of Engineers</i>, is also applicable here, as the court enjoined the upland development associated with a 404 permit for a barge facility on the Ohio River, where “the upland portion... would be practically useless without the water-based portion” and the upland development would have potential adverse visual effects on nearby historic properties. The court highlighted the need for an injunction of the entire project, including the upland portion, as “Federal courts have recognized that both economic pressure and regulatory inertia may substantially and improperly impact the decision-making of a federal agency.”</p> <p>In <i>Save Our Sonoran v. Flowers</i>, a case challenging a 404 permit, the court upheld a preliminary injunction against the entire development, despite the fact that the actual acreage of the waters of the United States (WOTUS) discharge was limited. There, the Corps failed to review the impacts from the project as a whole, focusing only on the limited direct impacts from the fill discharge. “[B]ecause the uplands are inseparable from the washes, the district court was correct to conclude that the Corps’ permitting authority, and likewise the court’s authority to enjoin development, extended to the entire project.”</p> <p>Because this project’s viability is founded on the Corps’ issuance of a Section 404 permit, the entire project is within the Corps’ purview. <i>SOS</i> makes this clear. 408 F.3d at 1124. In <i>SOS</i>, we affirmed an injunction barring any development pending adequate environmental review. We did so “[b]ecause no development could occur without impacting jurisdictional waters.”</p> <p>The Corps cannot issue a 404 permit if it “would be contrary to the public interest.” 33 C.F.R. § 320.4(a)(1). This requires the Corps to consider “the probable impacts” of a proposed project on “[a]ll factors which may be relevant to the proposal[,] including the cumulative effects.” <i>Id.</i> “Evaluation of the</p>		

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			<p>probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case.”</p> <p>All factors which may be relevant to the proposal must be considered including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.</p> <p>The Corps must fully consider the impacts from the entire mine in making its public interest determination. “To require [the Corps] to ignore the indirect effects that would result from its actions would be to require it to wear blinders that Congress has not chosen to impose.” In addition to the above-analyzed cases, the Ninth Circuit has recognized the Corps’ duty to consider these impacts in order to ensure that issuance of the 404 permit is in “the public interest.” In Ocean Advocates, after finding that the Corps failed to consider the cumulative impacts from increased shipping traffic resulting from the issuance of a 404 permit for an oil refinery dock, the court noted that upon remand and consideration of these effects, “the Corps may impose conditions on the operation of permitted terminals at any time ‘to satisfy legal requirements or to otherwise satisfy the public interest.’ 33 C.F.R. § 325.4(a).”</p> <p>In Clatsop Residents Against Walmart v. U.S. Army Corps of Engineers, the court upheld a Corps 404 permit needed to construct a Walmart, including the Corps’ public interest review, because the Corps had “balanced the ‘benefits which reasonably may be expected to accrue from the proposal... against its reasonably foreseeable detriments.’ 33 C.F.R. § 320.4(a)(1),” which included the potential indirect detrimental effects of the Walmart “on small businesses.”</p> <p>The same was true in Greater Yellowstone Coalition, discussed above, where the Corps successfully argued to the court that it properly considered the impacts of the “development as a whole” on wildlife and habitat, not just impacts from the fill itself. The Corps had argued that the impacts of a proposed project “beyond those associated with the proposed discharge into waters of the United States – such as the environmental impacts of upland aspects of the overall project – are for the most part meant to be addressed... through the Corps’ public interest review,” and that the Corps had “thoroughly considered and addressed the impacts on bald eagles from upland aspects of the proposed Project as part of its public interest and NEPA reviews.” If the Corps properly considered in its public interest determinations these larger regional cumulative effects to wildlife from the golf course development in Greater Yellowstone, and on the regional economy and traffic resulting from the Walmart project in Clatsop, then it certainly must consider the cumulative and indirect impacts from construction and operation of the Stibnite Gold Project and all associated facilities and impacts – impacts that show the mine/project is not in the public interest and thus the 404 permit cannot be issued.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	39	<p>The 404(b)(1) Guidelines also prohibit the Corps from issuing a 404 permit “unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.” 40 C.F.R. § 230.10(d). Those seeking a 404 permit must mitigate the impacts of the proposed dredge and fill activities by “avoiding, minimizing, rectifying, reducing, or compensating for resource losses.” 33 C.F.R. § 320.4(r)(1). The purpose of the compensatory mitigation program is to “offset unavoidable impacts to waters of the United States authorized through” 404 permits. 40 C.F.R. § 230.91(a)(1). See also Id. § 230.93(a). Mitigation is required for “significant resource losses which are specifically identifiable, reasonably likely to occur, and of importance to the human or aquatic environment.” 33 C.F.R. § 320.4(r)(2). These adverse effects to aquatic resource functions, whether direct or indirect, must be mitigated. Id.; 40 C.F.R. § 230.93(a).</p> <p>Additionally, under NEPA, an EIS must: (1) “include appropriate mitigation measures not already included in the proposed action or alternatives,” 40 C.F.R. § 1502.14(f), and (2) “include discussions of... Means to mitigate adverse environmental impacts (if not already covered under 1502.14(f)).” 40 C.F.R. § 1502.16(h). “All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperation agencies...”</p>	WET	<p>Compliance with the 404(b)(1) Guidelines is determined by the USACE following submission of a complete 404 permit application from the proponent. No application had been submitted at the time of the SDEIS. However, the USACE and the Forest Service have ensured that the procedural requirements to include the development and evaluation of the Action Alternatives, resource identification, and the evaluation of effects considered in the guidelines were fully analyzed in the NEPA effort which will inform that future determination. Relevant sections informing the varying parts include, but are not limited to; Chapter 2, and Sections 4.8, 4.9, 4.10, 4.11, 4.12, 4.13, 4.18, 4.19, and 4.23, and their counterpart sections within the EIS.</p> <p>The Agencies, as well as Perpetua have developed EDFs which further avoid, minimize, or eliminate identified effects, as well as developed mitigation in addition what is proposed by Perpetua. These efforts are described in detail in the SDEIS (Section 2.4.9). Additional refinement of conceptual plans, to include a Compensatory Mitigation Plan will be submitted by the Applicant as part of the submission of a 404 permit application. The USACE will</p>

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			<p>As part of reviewing and approving the mitigation plan, Corps regulations require that Resolution provide “financial assurance” to cover mitigation costs: “(n) Financial assurances. (1) The district engineer shall require sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with applicable performance standards...” 33 C.F.R. § 332.3(n). “The rationale for determining the amount of the required financial assurances must be documented in the administrative record for either the DA permit or the instrument.” 33 C.F.R. § 332.3(n)(2).</p> <p>“The final mitigation plan must include the items described in paragraphs (c)(2) through (c)(14) of this section...” 33 C.F.R. § 332.4(c)(1)(i). Item (c)(13) is “Financial assurances.” 33 C.F.R. § 332.4(c)(13). The mitigation plan must include: “A description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards (see §332.3(n)).” Id. § 332.4(c)(13). See also id. § 332.3(k)(“permit conditions... must...(iv) Describe any required financial assurances or long-term management provisions for the compensatory mitigation project, unless they are specified in the approved final mitigation plan.”).</p> <p>“[T]he district engineer must assess... the costs of the compensatory mitigation project.” 40 C.F.R. § 230.93(a)(1). “District engineers must document the analysis used to determine the amount of the financial assurance, and must include this analysis in the administrative records for their permits.”⁹⁵ As noted herein, the SDEIS neither mentions nor analyzes financial assurance, although Perpetua has made varying estimates in both its Pre-Feasibility and Final Feasibility studies.</p>		consider all available information to include within the Final EIS, in determining compliance with the 404 Guidelines.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	8	Including continuous monitoring and inspections to address uncertainty and potential underestimation of indirect impacts and functional loss to wetlands and riparian resources.	WRI	There would be a monitoring plan required by the ROD. The specifics of that plan would start with the existing Environmental Monitoring and Management Plan, with further requirements added by the Forest Service, IDEQ, USACE, etc. In addition, monitoring to inform the magnitude of effect, as well as the success of proposed mitigation actions would be considered to further support Adaptive Management commitments in the Compensatory Mitigation Plan (CMP), if approved by USACE.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	49	<p>Wetlands and Riparian Resources</p> <p>Uncertainty and Underestimation of Indirect Effects</p> <p>Regarding “[f]unctional loss due to other indirect effects, including changes in hydrology, water quality, and increase dust and/or mercury deposition has been examined through inspection of dewatering drawdown and distance to roadways, but is difficult to quantify precisely. As a result, functional units that would be lost if these indirect effects occur, may be underestimated.”</p> <p>To address these uncertainties and underestimation of impacts, EPA recommends the FEIS include a mitigation measure to Section 4.12.2 that would require continuous monitoring and inspections to determine whether there are incremental changes that are contributing additional impacts to hydrology, water quality, increased dust/mercury deposition, etc. that are indicative of additional functional loss to wetlands or riparian resources. EPA further recommends that the monitoring and inspections be used to identify if additional best management practices, adaptive management, and/or compensatory mitigation are needed during project operations.</p>	WRI	<p>Monitoring of surface water conditions and wetlands would be required as part of an approved Water Resources Monitoring Plan. The Final EIS includes a mitigation measure regarding use of monitoring information to trigger mitigation of effects on water resources and wetlands when detected.</p> <p>The EIS was revised to make indirect effects clearer and reduce uncertainties. Regarding the potential for underestimation, added language clarifying that within the mine area most wetlands would be affected by direct impacts first. Some inherent potential remains for underestimation in other areas (i.e., along roads, transmission line, etc.).</p>
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	50	<p>Conceptual Stream and Wetland Mitigation Plan</p> <p>The DSEIS provides little information about the overall objectives and elements of the proposed Conceptual Stream and Wetland Mitigation Plan compared to descriptions of the other proposed mitigation plans developed for other resources. EPA recommends the FEIS provide more details about the actions proposed in this mitigation plan that demonstrates that this plan will provides adequate and appropriate compensatory mitigation. Language like what is found on page 4-322 (Section 4.11.3 - Mitigation Measures) – “Perpetua proposes to accomplish compensatory mitigation for impacts to wetlands through a combination of mitigation bank credits in the North Fork Payette subbasin and permittee-responsible on-site mitigation within the SFSR subbasin (Tetra Tech 2021b)”, would be</p>	WRI	Perpetua submitted a draft Compensatory Mitigation Plan, specific to wetlands and other waters as part of their 404 Permit Application to USACE. A determination of sufficiency of the proposed plan will be reserved to USACE, informed by the Forest Service and other agencies. Additional details were incorporated into the Final EIS where applicable.

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			helpful to summarize earlier in the FEIS, such as in the Stibnite Gold Mitigation Plan section of the Alternatives chapter.		
Joseph Pietri	19062	9	I am extremely concerned about the discharge of Dredge and Fill materials into WOTUS and Wetlands. ES-1 What materials will the USACE approve in that practice?	WRI	For Project components other than the Tailings Storage Facility (TSF) and the TSF Embankment/Buttress, native material from the surrounding area would be used for fill. The construction and materials placed in the TSF and TSF Embankment/Buttress are described in Chapter 2 of the EIS with the effects of those materials on water quality described in Section 4.9.2.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	93	" 119.8 acres of wetlands would be lost at the mine site (28% of wetlands at the mine site). " PRII is proposing a total of 145.5 acres of wetland impacts for the mine site focus area and the off-site focus area per the wetland ledger and November 2021 CMP.	WRI	Acreages have been updated. However, the 119.8 acres only represents direct loss and does not appear to account for dewatering drawdown (15.6 acres).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	94	" 2021 MMP : 1,054.4 functional units would be lost, including 375.9 high-value functional units. " " Johnson Creek Route Alternative : 1,028.3 functional units would be lost, including 370.6 high-value functional units. " PRII is proposing 704.5 units of functional impacts for the mine site focus area and the off-site focus area per the wetland ledger and November 2021 CMP. This number includes functional units for temporary impacts and is misleading. Same for the Johnson Creek Route Alternative. Please review and revise.	WRI	Functional units updated and functional units for temporary direct impacts are called out separately.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	95	" 196.1 wetland acres lost. " PRII contends this is 145.5 acres. Also, recommend rewording "lost" to "impacted and fully mitigated". This number apparently includes temporary impacts. See comments related to this in Section 4.11 and on the Wetland Specialist Report. Please review and revise.	WRI	Acreages updated and temporary impacts called out separately. Definition of loss per USACE added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	657	" <i>Potential cumulative effects to wetlands are limited to ASAOC activities</i> " - Please clarify for the reader. This is presented as negative wetland impacts, although the ASAOC activities are required to replace impacted wetlands.	WRI	Added clarification that although there would be some short-term impacts due to the disturbance of stream channels and adjacent riparian habitats to remove mining wastes, the results would be beneficial in the long term.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	658	" <i>Although no new impacts would occur, existing elevated arsenic, antimony, and mercury concentrations would continue to contribute to contaminant loading to surface water, affecting adjacent and downstream wetlands.</i> " Please clarify that these are due to legacy mining.	WRI	Revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	659	" It is assumed that required compensatory wetland mitigation would replace all permanently lost wetland acreages and functions, and therefore this alternative would not contribute to cumulative losses of wetland acreages or functions in the wetland and riparian resources CEA." Please delete " It is assumed that " as compensatory mitigation is required under Section 404, and if the JC Route Alternative were selected, PRII's Compensatory Mitigation Plan would apply.	WRI	Revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	32	" <i>The TSF and TSF Buttress proposed to be located in the Meadow Creek valley would lower groundwater levels and permanently remove six delineated wetland areas within the footprint of the TSF and TSF Buttress. The permanent reduction in local groundwater levels would be due to the installation of liner and cover systems over these facilities to inhibit meteoric recharge leaching through</i>	WRI	No change made as this is just the executive summary. The CMP is discussed in multiple other locations in the document. Added language in Section 4.11.2.2 defining loss as being permanently filled, flooded, excavated, or drained. Also added language stating that although mitigation for all impact would occur as described in Section 4.11.13, resulting in no net loss in acreage in the long term, the original wetlands would still be lost.

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Resources Idaho, Inc.)			<i>the mined materials.</i> " Recommend clarifying for the reader that the loss of these wetlands will be offset by the creation of new wetlands on top of the TSF during reclamation and closure.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	39	" <i>The 2021 MMP and the Johnson Creek Route Alternative would result in the same loss of 120 wetland acres within the mine site focus area (approximately 28 percent of the 429 total acres of wetlands within the SGP analysis area) and 619 acres of riparian areas.</i> " This is the first mention of this area of analysis and is only used in the Wetland and Riparian Areas discussion. Please consider including a map as it is important in validating the impact numbers in the remainder of this section. For example, without knowing how the mine site focus area and the off-site focus areas are defined, this number (120 acres) and the off-site focus area number (76.3 acres) combined for a total project impact of 196.3 acres, which is considerably more than what PRII's wetland ledger indicates as direct impacts (145.4 acres). Please review and revise, if needed.	WRI	Acreages updated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	40	" <i>Both action alternatives would have direct permanent impacts on water quality due to contributions of new sources of mine waste material to the East Fork SFSR drainage.</i> " Please replace " would " with " could " as planned active water management should prevent this.	WRI	No revision made, "would" is appropriate for this statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	294	" <i>Wetlands were not evaluated within the larger surrounding watersheds for the off-site corridors or areas not associated with the SGP.</i> " Please verify. This statement appears inaccurate as Table 3.11- 1 identifies many more acres of wetlands than PRII provided in delineations conducted by their contractors in the off-site mine focus area.	WRI	Revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	295	" <i>Operations Area Boundary</i> " - Section 3.11.2 identifies a mine site focus area and an off-site focus area. Figure 3.11-1 does not identify these areas and needs clarity for the analysis area for this resource. Suggest making the connections between the mine site focus area and the Operations Area Boundary more clear in the text and figures in this and following sections.	WRI	Edits to applicable figures have been made for clarity.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	296	<i>Total Acres for Off-Site Focus Area</i> - Please clarify how this acreage was calculated. It appears that NWI information was added and should be cited as such. HDR and TT did not provide this many delineated acres of wetlands; in fact, the analysis area for wetland delineations conducted by HDR and TT produced 807 delineated acres of wetlands that included both the mine site focus and off-site focus areas (CMP 2022).	WRI	Updated to state "identified" instead of delineated and that off site includes NWI mapped wetlands in the larger analysis area.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	297	<i>Off-Site Focus Area/RCA acres</i> - The number of perennial and non- perennial stream feet for the off-site focus area appears incorrect. PRII would expect the off-site focus area to have considerably more feet of stream and the mine site focus area to have considerably more acres of RCA, even considering footnote #2. Please check numbers in the table.	WRI	No revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	298	Footnote 1 reference - Please correct the reference list for baseline studies to include all applicable documents. For example, the Tetra Tech reference is a summary of data gap work conducted in 2018 and 2019, and should be one of several references for this footnote.	WRI	Revision made.
Alan Haslam (Vice President,	19325	299	From this sentence: " <i>Per the assessments conducted by HDR and Tetra Tech, 1 of the 21 evaluated wetland AAs rated as Category IV, 17 rated as Category III, and 3 rated as Category II (Tetra Tech</i>	WRI	No revision made as the figure reference was used since this figure displays various AAs.

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Permitting, Perpetua Resources Idaho, Inc.)			2021c, Forest Service 2022h; Figure 3.11-2). " - Please clarify the relevance of this particular figure reference. Alternatively, this could reference the technical report that presents the series of figures that show all 21 AAs.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	301	"The SGP may affect water balance, which could reduce seasonal water input frequency ...". The way this is phrased makes it seem like a biased indicator; what if there are increases in seasonal input? Please reconsider how this indicator is phrased.	WRI	No revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	303	"Losses of wetland and riparian areas and their functions would occur throughout the construction and operation phases." - This fails to characterize wetland and riparian areas as temporal losses that are mitigated by the Compensatory Mitigation Plan activities. Please include discussion of mitigation of temporal effects.	WRI	No revision made, simply a general statement. Mitigation is discussed later in the section.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	304	"The magnitude of impacts would be major (i.e., a large measurable change), localized, and the impacts would range from temporary to permanent ". As in comments above, it should be clarified here that these impacts would be mitigated for through the implementation of the CMP.	WRI	No revision made, impacts would be major thus the requirement for mitigation.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	305	"Acres of wetlands and RCAs that would be directly impacted in the off- site focus area under the 2021 MMP are shown in Table 4.11-2 and by HUC 10 drainage basin in Table 4.11-3 ." - Suggest adding figures illustrating these areas listed in tables.	WRI	Reference to figures that can be found in the Wetlands and Riparian Resources Specialist Report has been added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	306	"The greatest impacts in areas outside the mine site would occur in the Johnson Creek watershed, with fewer impacts in the other watershed s". Seems non-intuitive: please verify that the JC water shed would have greater impacts under the Burntlog Route alternative (MMP).	WRI	This statement refers to the Johnson Creek watershed and is accurate. The Johnson Creek watershed contains newly constructed segments of the Burntlog Route. Language added for clarification.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	307	"Wetland functional units that would be loss due to direct impacts and indirect impacts due to wetland conversion are presented in Table 4.11- 4 ". Gains/losses of wetlands should be provided by separate categories, as direct impacts are certain, and indirect impacts are not certain...they "may" occur. Also, this is presenting confusing data as wetland conversion is not explicitly explained. The fact that "tree clearing in RCAs could not be quantified" should be explicitly stated here and not relegated to a small footnote in the table 4.11-4.	WRI	Revisions made to clarify differences between direct and indirect impacts and move RCA information to the text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	308	"distance to roadways ..." - Please explain why "distance to roadway" is important and how it is considered or delete this reference. In Section 3.11, and 4.11, this sentence is the only occurrence, which is repeated in Section 4.11, again with no explanation.	WRI	Distance to roadways is important as changes due to hydrology, water quality, and dust and/or mercury deposition can be affected by the distance of roads to adjacent wetlands.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	309	"2021 MMP Impacts to Wetlands, Streams, and RCAs in the Mine Site Focus Areas" - Needs to say "Direct" impacts or else misleading. <i>Please revise.</i>	WRI	Tables edited to clarify and quantify direct vs indirect impacts.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	310	Table 4.11-2 footnote 3 - The indicators call for permanent and temporary impacts to be identified and discussed. Suggest that permanent and temporary impacts should be split out and discussed separately since the mitigation focuses on permanent and temporal losses, which are different than temporary losses.	WRI	Updated to call out temporary impacts separately.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	311	<i>Impacted Habitat Value Total</i> - This table is misleading in terms of the total project impacts. A previous paragraph indicates that 414 functional units that are included in this number are from temporary impacts. This table should be modified to include a column that lists and summarizes the temporary impacts by AA as well.	WRI	Revisions made to separate out permanent and temporary impacts.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	312	Table 4.11-4 footnote 3 - See previous comment on permanent vs temporary impact. PRII is proposing to mitigate all permanent impacts. Defining and reporting the different impact types (direct, indirect, temporary, temporal) allows the reader to better understand the overall impacts, rather than summing all impacts together. Section 6.2 of the CMP clearly defines these impacts and quantifies them as they relate to project disturbance, where possible.	WRI	Updated to call out temporary impacts separately.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	313	This paragraph should have a header related to the roads indicator. Please revise. To define the impacts for duration and intensity as defined by table 4.1-1.	WRI	Since the impacts to wetlands, including by new or improved roads, is filtered throughout the discussion of the other indicators, this specific road indicator was deleted and "including by new or improved roads" was added to the other four indicators.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	314	"New roads would bisect 39 total individual wetlands. Fragmentation effects could occur as a result of these impacts" - Please clarify whether these impacts occur on site or off-site. Also, impacts for duration and intensity should be defined consistent with Table 4.1-1.	WRI	Additional narrative was added to this subsection of the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	315	"Alteration of Wetlands and Riparian Areas Due to Changes in Water Balance" - Section 4.8 Surface and Groundwater Quantity and Section 4.11 Wetlands and Riparian Resources both use groundwater drawdown as an important part of impact characterization. Section 4.8 refers to streams and wetlands and groundwater dependent ecosystems (GEDs) (Impacts to Groundwater Dependent Ecosystems) and Section 4.11 (Alteration of Wetlands and Riparian Areas Due to Changes in Water Balance) does not use this terminology at all, and only addresses wetlands, and not streams. The part of Section 4.11 that addresses groundwater drawdown effects on wetlands does not specifically reference Impacts to Groundwater Dependent Ecosystems. As a result, there are two sections that analyze the same thing, but are independent and present things differently. Suggest removing analysis of groundwater dependent resources out of 4.8 (since it includes more resources) and integrate it into 4.11 and make the terminology consistent.	WRI	The analysis of groundwater dependent ecosystems has been retained in Section 4.8 because that effect is tied to the groundwater drawdown described in that section.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	316	"...was estimated based on groundwater modeling. " - Please clarify the estimated impacts, how they are defined and the impacts for duration and intensity as defined by table 4.1-1. Also, A figure indicating where these indirect impacts would occur on the project (Yellow Pine Pit, Hanger Flats Pit...) would be helpful.	WRI	Text has been added referencing the groundwater modeling in Section 4.8 and also Figure 4.8-10 which depicts the wetlands within the drawdown contour. As stated in the EIS, "Impacts due to surface water input changes have not been quantified." However, Section 4.8 describes that impacts would occur only in cases where the hydrology of the seeps, springs, and wetlands affected is dominated, or largely influenced by groundwater discharge from the aquifer where water levels are subject to drawdown. The actual impact to each specific seep or spring would depend on the degree of interconnection between that perennial surface water and the aquifer affected by mine-related pumping.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	318	Footnote 3 - Suggest that permanent and temporary impacts be split out and discussed separately as the mitigation focuses on permanent and temporal losses, which are different than temporary losses.	WRI	Updated to call out temporary impacts separately.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	320	<i>Impacted Habitat Value Total</i> - This table is misleading. A previous paragraph indicates that 414 functional units that are included in this number are from temporary impacts. This table should be modified to include a column that lists and summarizes the temporary impacts by AA as well.	WRI	Table was revised and temporary impacts called out separately in the text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	321	<i>Mitigation Measures</i> - This section should address the Compensatory Mitigation for Losses of Aquatic Resources under CWA Section 404 (Final Rule) and that the USACE must permit the least environmentally damaging practicable alternative. Please revise.	WRI	This section describes the Compensatory Mitigation Plan that proposes mitigation for impacts to wetlands regulated by the USACE. USACE permitting requirements are described in SDEIS Section 3.11.3.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	323	"The current CMP describes an accounting process for tracking the various wetland impacts (losses) and associated wetland mitigation (gains) ". Section 4.11.3 does not include discussion on mitigation proposed for effected streams. The CMP details mitigation proposed for streams, many of which are WOTUS (Waters of the United States)and will require compensatory mitigation. If this is discussed in another section, please refer the reader to it.	WRI	Reference to streams has been added to this section.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	324	"The ledger system also provides a way to track and assess temporal effects, which as described in Section 4.11.2 ..." - Temporal effects are not described in Section 4.11.2. Please revise to include a discussion of temporal effects.	WRI	Removed reference to temporal effects being discussed in Section 4.11.2 as temporal effects are most relevant and appropriate to be mentioned in the mitigation section.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	325	In this paragraph, we suggest it is worth noting that the current CMP identifies nearly 1000 residual wetland functional credits, nearly 1.5 times more credits than are needed for compensatory mitigation.	WRI	No suggested text has been added because the USACE still needs to approve the final mitigation plan and the residual wetland functional credits could change. Further and as the SDEIS stated, "At the conclusion of the Forest Service process, final wetland impacts would be assessed, any agreed upon off-site compensatory mitigation projects would be finalized, and a final mitigation plan would be prepared, including a final assessment of functional units lost and created, and then the final credits/debits would be documented in an application for CWA Section 404 permit."
Alan Haslam (Vice President, Permitting, Perpetua	19325	326	We suggest that this section may include a summary table of wetlands and RCA issues and indicators by alternative and by assessment area (on site and off-site). Additionally, these impacts should also be described by intensity and duration as described in Table 4.1-1. This would allow the reader to determine which action alternative is more impactful to wetlands and riparian areas.	WRI	No additional summary table added as the text and Tables in Section 4.11.2 already provide a clear comparison of impacts and Table 2.8-1 also provides a concise comparison.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	331	Please re-evaluate and correct the citations for the sources for the data in Table 6-2. For example, PRII did not conduct delineations in the Gold Fork River; these data appear to be from the NWI. That is the case for many of the acreages represented in this table.	WRI	Citations have been reevaluated and corrected as applicable.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	333	Please verify the number of perennial and non-perennial stream feet for the off-site focus area. Assuming similar ratios that are represented in Table 6-3 for wetlands, off-site focus area would be expected to have considerably more feet of stream.	WRI	No revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	334	"Wetland and riparian losses would be most substantial within the mine site focus area, where both action alternatives would remove approximately 28 percent of the existing wetlands within the contributing basin for the East Fork SFSR watershed above the Sugar Creek/East Fork SFSR confluence." - Please correct this inaccurate statement. Not all of the wetlands in the EFSFSR watershed were officially delineated. This calculation likely is using a mix of on-the-ground delineations and NWI data (which typically underestimate wetlands). Consider rephrasing this statement to say something like "Of the delineated wetlands in the EFSFSR watershed above Sugar Creek EFSRSR confluence, xx% of wetlands would be removed."	WRI	Statement has been revised. It is important to note that NWI data was ground truthed by Perpetua's consultants during development of the EFSF TSF, and Fern Creek TSF alternatives and the values referenced are much more refined than NWI.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	335	"The USACE is working with Perpetua to address wetland impacts through compensatory mitigation, as described in Section 7.3.1 and Tetra Tech (2021c)." - Tetra Tech 2021c is the Functions and Values document, not the CMP. Please cite Tetra Tech 2021a if referring to the CMP.	WRI	Citation has been revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	337	"An estimated total of 1,054.4 wetland functional units would be lost, approximately 375.9 of which would be due to impacts to high value wetlands" - We have included a comment in the attached letter regarding the total impacts to wetlands: the value is incorrect and causes this number to be incorrect and overstates the impact. Please revise.	WRI	Revisions made to clarify functional units lost.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	338	"Functional loss due to other indirect effects, including changes in hydrology, water quality, and increase dust and/or mercury deposition has been examined through inspection of dewatering drawdown and distance to roadways" - Please explain why "distance to roadway" is important and how it was considered or delete this reference.	WRI	Distance to roadways is important as changes due to hydrology, water quality, and dust and/or mercury deposition can be affected by the distance of roads to adjacent wetlands.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	340	"Under the 2021 MMP, the total extent of wetland losses would be approximately 119.8 acres at the mine site and 76.3 acres outside the mine site." - Please provide where this specific reference is coming from in the MMP.	WRI	Acreages updated.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	341	"An estimated total of 1,028.3 wetland functional units would be lost, " - We have included a comment in the attached letter regarding the total impacts to wetlands; the value is incorrect and causes this number to be incorrect and overstates the impact. Please revise.	WRI	Revisions made to clarify functional units lost.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	343	"The 2021 MMP would result in temporary and permanent losses of approximately 119.8 acres of wetlands in the mine site focus area (Table 7-3), 76.3 acres outside the mine site (Table 7-4), and 1,054.4 wetland functional units (375.9 of which would be high-value functional units) (Table 7-6). " - Please see previous comments on incorrect wetland acreage impacts. Please revise.	WRI	Acreages updated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	344	The Total for Proposed Wetland Removal Acres (188.0) is not the number represented in the Nov 2021 CMP tables 7-2a and 7-2b. That means the number of functional units affected is also incorrect. Please revise.	WRI	Acreages and functional units updated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	345	The Total for Proposed Wetland Removal Acres (181.2) is not the number represented in the Nov 2021 CMP tables 7-2a and 7-2b. That means the number of functional units affected is also incorrect. Please revise.	WRI	Acreages updated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	327	"The most recent report, Tetra Tech (2021a)... ". This reference should be Tetra Tech 2021c.	WRI	Citation has been revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	328	"This resulted in 21 AAs and is explained in further detail in Tetra Tech (2021a) ". This reference should be Tetra Tech 2021c.	WRI	Citation has been revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	329	"All other wetland AAs (11-14, 16-18, and 21)... " - Recommend calling out which AAs are on which figures (5-3a-f, 5-4a-h and Figure 5-5a-o).	WRI	Requested figure references have been added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	332	Please re-evaluate and correct the citations for the sources for the data in Table 6-3.	WRI	Citations have been reevaluated and corrected as applicable.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	336	Total Wetland Impact acreage reported in Table 7-4 (page 79 and page 81) do not match CMP tables 6-6a and 6-6b.	WRI	Acreages updated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	339	The Totals values presented in Table 7-6 do not match with tables 7-2a and 7-2b in the CMP.	WRI	Acreages updated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	342	The Totals values presented in Table 7-10 do not match tables in the CMP.	WRI	Acreages updated.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	300	"Qualitative analysis..." is not an indicator. Please rephrase. What indicator and analysis for fragmentation was used?	WRI	Indicator was revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	302	Please discuss the Perpetua ASAOC project under the no action alternative here as it is in many of the other resources.	WRI	Applicable text added to Section 4.11.2.1.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	317	" <i>direct permanent impacts on water quality</i> ". - Please clarify what the impacts are, or refer to a section that defines them.	WRI	Added reference to Section 4.9.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	322	"These mitigation measures..." - Please clarify what "mitigation measures" are being referred to here.	WRI	Revised to say "Any required mitigation measures..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	330	The presented Total (Acres) values do not match the numbers in the CMP.	WRI	Acreages updated.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	12	<p>Comments are provided on all applicable SDEIS sections including Section 3.11, Section 4.11, and the Wetlands and Riparian Resources Specialist Report.</p> <p>One persistent topic in sections addressing Wetlands is the absence of discussion on compensatory wetlands mitigation. In Section 4.11 Wetland and Riparian Resources, the author describes the impacts to wetlands in both acres disturbed and functions and values lost. In Tables 4.11-2 and 4.11-3, footnote #3 indicates: “Disturbance includes both temporary and permanent effects associated with transmission line construction.” While Perpetua Resources acknowledges there will be temporary impacts, we are not willing to have them included with permanent impacts that have a compensatory requirement for mitigation. Perpetua Resources would like to know how the temporary impacts were calculated as we did not provide those acreage calculations, and, to the best of our knowledge, those have not yet been calculated. Table 4.11-4 identifies 196.9 acres of impacted wetlands. That calculation includes both temporary and permanent impacts, but this is not clear to the reader. If the reader is familiar with Perpetua Resources Conceptual Mitigation Plan for Streams and Wetlands, they will know that Perpetua Resources is proposing to mitigate for approximately 150 acres of direct and permanent impacts to wetlands that includes their lost functions and values. Perpetua Resources opinion is that Section 4.11 poorly differentiates the temporary and permanent impacts to wetlands and this could be rectified by adding columns to Section 4.11 tables that show temporary and permanent impacts and their respective functions and values calculations. That way, the reader can cross reference the proposed permanent impacts to those identified in the Conceptual Mitigation Plan for Streams and Wetlands.</p>	WRI	Revisions made to call out permanent and temporary impacts separately.
Jon Robison	19330	6	At the site, I am deeply disturbed by the proposed conversion of the Upper Meadow Creek stream and wetland complex into a Tailings Storage Facility filled with toxic mining waste.	WRI	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	141	<p>I. Wetlands and riparian resources</p> <p>According to the Wetlands Specialist Report (p. 76), losses under the 2021 MMP would be approximately 28 percent of the 428.8 acres of wetlands identified in the mine site focus area, 23 percent of the 2,655 acres of RCAs, 24 percent of the 208,302 linear feet of perennial streams, and 18 percent of the 110,224 linear feet of non-perennial streams.</p> <p>Based on an estimate, the proposed mine will directly fill at least 76 acres of diverse wetlands and streams. Also, at least 300 acres of riparian habitat would be directly filled. This acreage figure does not account for full range and extent of indirect (secondary) impacts downstream of the mine facilities, e.g., riparian wetlands along the East Fork of the South Fork of the Salmon River (EFSFSR), as well as several smaller streams that would be affected by the proposed SGP.</p> <ul style="list-style-type: none"> • There are significant information gaps for the SGP regarding alternatives, adverse impacts, and compensatory mitigation. • The alternatives analysis under both NEPA and CWA Section 404 is inadequate. Besides the SGP, no other alternatives have been proposed and described. • The likely direct, indirect (secondary), and cumulative adverse impacts must be more fully described and analyzed. • It is premature to address compensatory mitigation in a meaningful and definitive manner. Until the least environmentally damaging practicable alternative (LEDPA) has been identified, all appropriate and practicable compensatory mitigation cannot be determined. 	WRI	<p>The EIS provides the required disclosure and analysis for wetland and stream impacts under NEPA and the USACE is a Cooperating Agency for the Project and has been involved with the coordination and preparation of the EIS. The USACE, in coordination with the Forest Service, will also be responsible for reviewing and approving the Compensatory Mitigation Plan for wetland impacts. Perpetua's 404 Permit Application will be reviewed by the USACE and the USACE will ultimately determine if they can issue a 404 Permit for the Project.</p> <p>Additional language was added to Section 3.11 explaining why impacts were analyzed at the chosen scale.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	142	<p>I. Function and Value Assessment</p> <p>It is clear that a great deal of effort went into this report, and it contains much useful information for understanding the ecological functions provided by the wetland systems identified in the study area. The report helps view wetlands at the landscape (“30,000 feet”) level, which is fine for getting “the big picture.” However, reducing ecology to a collection of acreages and subjective rating numbers does not provide adequate context for understanding both landscape and ecological functions of the wetlands in question, and what types, extents, ranges, and degree of function would be lost and disturbed and how</p>	WRI	No further response required. General in nature or position statement.

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			best those functions might be compensated (whether permittee responsible or mitigation bank). The mitigation rule notwithstanding, some adverse impacts to extensive and complex wetland systems can be uncompensable, which may be the case here.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	145	<p>4. Section 230.10 (c): Adverse Impacts</p> <p>Adverse impacts to wetlands and other waters are described in Section 4.1.1 of the SDEIS. Under both NEPA and CWA Section 230.10(c) of the Guidelines, all direct, indirect (secondary), and cumulative adverse impacts must be described and accounted for. For instance, Table 7-2, Wetland and Riparian Area Function/Value and Qualitative Corresponding Potential Impacts and Consequences, explains that for habitat for general wildlife species, there would be loss, alteration, or degradation (e.g., invasive species encroachment, loss of standing surface water, temperature, fragmentation) of wetland and riparian areas that could result in a loss of habitat suitability for wildlife. Though helpful to understand the broad types of impacts that would occur, the narrative descriptions are only moderately useful in understanding the extent and range of those impacts. Tables 7-3 to 7-5 provide acreage and linear feet impacts to wetlands and streams, respectively, however, the acreage amounts appear too precise for how those amounts were derived. Nevertheless, the acreage and length numbers in the three tables still give one a “ballpark” idea of the scope and range of impacts.</p> <p>According to these tables, direct loss of wetlands and riparian resources in the mine site focus area would be approximately 120 acres and more than 70,000 linear feet of perennial and nonperennial streams. For the off-site focus area, wetland and riparian loss would exceed 75 acres, while more than 38,000 linear feet of perennial and non-perennial streams would be disturbed and degraded.</p> <p>Indirect (NEPA) and secondary (Guidelines) adverse impacts can be challenging to account for and quantify (as mentioned in Section 7.2.1.1 of the Stibnite Gold Project, Wetlands and Riparian Resources Specialist Report (“the Report”). Because of these challenges, indirect impacts are often underestimated. For instance, indirect effects of roads (big and small) are discussed in Road Ecology. Several types of indirect effects (e.g., noise and lights, rainfall/snow meltwater runoff, air pollution deposition, habitat fragmentation) of roads can be felt as much as several hundred feet from the edge of some roads. This extent depends, among other things, upon,</p> <ul style="list-style-type: none"> • the volume of traffic; • time of day when road is commonly used; • types of vehicles using the road; and, • terrain and adjacent habitat. 	WRI	<p>Portions of the comment require no further response as they are general in nature or a position statement.</p> <p>Additional language was added to clarify the scope of the analysis.</p> <p>Regarding indirect impacts, the commentor is correct, they can extend several hundred feet beyond roads, and are difficult to quantify. Additional language was added to further describe indirect impacts.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	146	<p>Constructing a road in an expansive and mostly roadless area can be likened to the impact of a small stone on the windshield of an automobile. The first road is like the small dimple or dent caused by the small stone. A small crack first appears, growing out from the dent. Over time, the one small crack begins to extend and branch out. With more time, the branch cracks extend and branch out too. Weeks or months later, much of the windshield has suffered this fate to the point where, when viewed from several feet back, the original dent and the myriad branching cracks resemble a large spider web. The entire windshield has become compromised and at risk of shattering. The roadless expanse would likely undergo a similar progression of insults to a point where its ecological integrity and value are considerably degraded.</p>	WRI	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	147	<p>Groundwater drawdown is another indirect adverse impact that must be accounted for and described. According to the SDEIS, approximately an additional 47 acres of wetlands could be altered and degraded from the maximum drawdown area under the 2021 MMP. (SDEIS 7.2.3.4 and Table 7-7). Again, this figure may be underestimating the extent of the impact. Most indirect effects have not been quantified.</p> <p>According to the Wetlands Specialist Report (p. 71), “The full extent of indirect effects due to dust and/or mercury deposition, hydrology changes, and water quality changes have not been quantified.</p>	WRI	Additional language was added discussing impacts due to groundwater drawdown.

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			<p>(Tetra Tech 2021a).” (emphasis added). The Wetlands Specialist Report (p. 74) also states that “In the off-site focus area, roads are the primary feature that may result in hydrologic alterations, directly and/or indirectly. These alterations could affect the ability of portions of impacted wetlands outside the disturbance footprint to persist into the future due to changes (either reductions or increases) in seasonal water input frequency and duration for on-site and off-site, downstream wetlands. Potential impacts to wetlands from alterations such as roads are not quantified; however, examples of potential impacts and consequences are summarized in Table 7-2.” (emphasis added).</p> <p>The SDEIS acknowledges that indirect effects due to changes in hydrology and water quality may lead to wetland and riparian losses beyond estimates in Tables 7-4 and 7-5 if these indirect impacts do occur.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	149	<p>Section 5.0 of the SDEIS and Section 7.0 of the Wetland and Riparian Resources Specialist Report, address cumulative adverse impacts in very general fashion. There is little actual detail regarding anticipated cumulative adverse impacts. Table 7-2 of the Specialist Report provides a brief summary of cumulative impacts, however, there is no real discussion of those anticipated impacts other than general types (e.g., “loss, alteration, or degradation”). Overall, most of the sections dealing with adverse impacts to wetlands are focused upon acreage numbers. As with other sections dealing with impacts, here is a lack of narrative discussion that describes indirect and cumulative impacts in a meaningful way.</p> <p>The Wetlands Specialist Report (p. 72) states that “For the SGP, the potential for indirect impacts to wetlands and riparian functions from dust deposition, soil erosion and hydrology alternation are likely to be higher in the immediate areas of roads and other surface-disturbance actions, but would diminish with distance from these actions. However, implementation of regulatory and Forest Plan Requirements plus project engineering design features would avoid and/or minimize these potential indirect impacts.” Yet, the report provides no data or analysis to support this assertion. Similarly, the Report states that “Although the impact of dust deposition has not been quantified, effect magnitude would most likely be minor (small but measurable change) and long-term, limited to the life of the SGP.” Yet, once again, there is no data or analysis to demonstrate that the effects of dust deposition on wetlands would be minor.</p> <p>The SDEIS must take a hard look at the potential direct, indirect and cumulative effects to wetlands.</p>	WRI	Sections 4.11 and 5.11 analyze the potential wetland and riparian resource impacts from the SGP. Additional analysis was added relative to dust and mercury deposition.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	203	<p>13. SDEIS fails to address “91-meter” buffer zones as described in the DEIS</p> <p>Riparian habitat conservation areas (RHCAs) were developed to mitigate sediment migration to streams, stream temperatures, and to control the amount of harvest/management adjacent to streams. They can reduce harvest generated or road produced sediment depending on the amount of materials on the slope surface to trap sediment, the steepness of the slope, etc. 91 meters (300 ft) is a common distance for perennial streams. For road sediment, IF the roads were out-sloped (the road design for the DEIS is IN-sloped to a ditch line) the 300 ft distance generally would slow and possibly trap the sediment. What is not accounted for are the culverts, and ditch lines focusing the sediment to specific locations, which can add sediment directly to streams, or create a stream channel (from water concentration) and start to erode the slope to the nearest stream and deliver sediment. There is no known use or promulgation of an RHCA as a “filter” or “buffer” for spills, especially for diesel and gasoline products.</p> <p>The SDEIS instead relies on defining the number of stream crossings and miles of road, “within 0.5 miles of surface water resources,” (SDEIS, p. 4-139). However, the SDEIS fails to justify the change in reference from a 91-meter buffer zone to how close a road segment is to surface water sources. If a hazardous materials spill is anywhere near a drainage, perennial or otherwise, the chances increase that the hazardous materials will reach a surface water source, particularly with nearly 40 miles of surface water/streams being identified within this 0.5 mile zone. The Forest Service/Perpetua need to describe how the “91 meter stream buffer discussed in the DEIS was replaced by the “0.5 mile” value in the SDEIS, what the significance of the change is, and how the agency justifies the pivot.</p>	WRI	<p>RCAs are used in all calculations of riparian area baseline acreage and impacts. They are defined in Section 3.11.4.3 as 300-feet (91 meters) for perennial forested streams, 150 feet for intermittent forested streams, and the land within a buffer equal to the extent of the flood prone width, or riparian vegetation, whichever is greatest for non-forested streams. Edited section 4.11 to clarify the use RCA and “riparian area”.</p> <p>The SDEIS does not use a 0.5 mile distance as a replacement for RCA width. Rather, the number of stream crossings and miles of road within 0.5 miles is used as a metric to describe the amount of roads within close proximity to water resources. That distance does not represent a buffer area.</p> <p>The SDEIS analysis does not utilize riparian habitat conservation areas as a measure to buffer or filter spilled materials from stream areas. Methods to prevent and respond to spills are described in SDEIS Section 4.7.2.2.</p> <p>Additional language was added regarding culverts and ditch lines.</p>
Bonnie Gestring (Northwest Program Director,	17634	218	The new Johnson Creek OSV route would be created on the western side of Johnson Creek Road between the proposed Cabin Creek Road groomed OSV route and Landmark. This new OSV route may require removing vegetation from riparian areas and could require new stream crossing structures, all of	WRI	Comment noted. Impacts to vegetation, water quality, and fisheries are fully analyzed in the EIS and Section 2.4.9 of the EIS describes the OSV route would only be established

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Earthworks) and seven others			which may affect water quality in streams occupied by threatened fish species. The Forest Service can minimize OSV impacts at these stream crossings by installing bridges or culverts, to reduce direct contact between OSVs and surface water (including when streams are frozen).		seasonally during the Project construction period when sufficient snow cover exists for stream crossings.
Amelia Weber	18155	3	As proposed, this project will result in the loss of over 120 acres of high-functioning wetlands. It will negatively impact the general water quality of streams found within the site from additional sedimentation and the potential release of additional contaminants mobilized by mining and construction.	WRI	The Project effects on wetlands would be mitigated through a Compensatory Mitigation Plan required for Section 404 permitting through the USACE.
Samuel Penney (Chairman)	19396	128	<p>3.11 Wetlands and Riparian Resources</p> <p>The SDEIS notes: IDFG considers wetlands associated with Mud Lake, Tule Lake, and Warm Lake, to be poor fens (IDFG 2004). Mud Lake and its associated wetlands are designated as a Class I site under the Wetland Conservation Prioritization Plan (IDFG 2012), indicating that this area is in near pristine condition and likely provides habitat for high concentrations of state rare plant or animal species (IDFG 2004). All these sites are within the analysis area for wetlands and riparian resources but outside of the construction footprint for the SGP. Mud Lake occurs near the existing Burnt Log Road (FR 447) and Warm Lake and Tule Lake occur south of Warm Lake Road (CR 10-579). For this analysis, wetlands associated with Mud Lake, Tule Lake, and Warm Lake are considered fens. Idaho has one of the lowest wetlands concentrations in the United States, with less than one percent of its land mass designated as wetlands, and has lost 56% of its wetlands since 1860. In addition, wetland cover is associated with biodiversity in arid regions, and is disproportionately important for the maintenance of biodiversity in Idaho. Therefore, any loss of wetlands in Idaho is significant.</p> <p>Wetlands are the most carbon rich terrestrial habitat, and losses of wetlands and their functions releases soil carbon into the atmosphere, and reduces the ability of the landscape to hold carbon, filter water, and sustain biodiversity.</p>	WRI	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	135	The National Forest Management Act (“NFMA”) of 1976 includes direction to prevent watershed conditions from being irreversibly damaged and to protect streams and wetlands from detrimental impacts. The Organic Act of 1987 recognizes watersheds as systems that need to be managed to sustain their hydrologic function. The disruption of the hydrology of the slope above these wetlands due to road construction threatens wetlands that were not in the original assessment, and affects the availability of these habitats for wildlife. The disruption and destruction of wetland habitat for the duration of the project, and the extended timeline to reconstruct wetland habitat, displaces the communities that depend upon these habitats for nearly two decades, a significant impact that was not adequately addressed.	WRI	Within Section 4.11, some potential wetland impacts are disclosed being long-term which is defined in Table 4.1-1 as "...lasting beyond 3 years to the end of mine operations and through reclamation, approximately 20 years." In addition, long-term impacts were addressed in Section 4.11.5 Short-term Uses versus Long-term Productivity.
Samuel Penney (Chairman)	19396	183	Upon further review of the SDEIS and RCP, the Tribe notes that wetlands on or along the Burntlog Route are not proposed for restoration after mine closure and road decommissioning.	WRI	<p>As described in Table 2.4-13: "Once all final mine closure/reclamation work has been completed, Perpetua would reduce the 21-foot-wide travel way of 19.8 miles of Burntlog Road (FR 447), 1.3 mile of Meadow Creek Lookout Road (FR 51290), and 2.0 miles along Thunder Mountain Road (FR 375) of Burntlog Route to their approximate pre-mining width."</p> <p>Project effects on wetlands are subject to compensatory mitigation as implemented through the USACE 404 permitting process. The compensatory measures would apply to the wetlands effected by the access route.</p>
Samuel Penney (Chairman)	19396	243	The SDEIS fails to disclose that wetlands along the Burntlog Route will not be reclaimed, which may cause irretrievable and irreplaceable habitat for many plant and wildlife species, including Sensitive and Forest Watch species.	WRI	Tables 4.11-1 and 4.11-2 disclose the impacts to wetlands from the Burntlog Route. Sections 4.10 and 4.13 disclose potential impacts to plant and wildlife species, including Sensitive and Forest Watch species.
Samuel Penney (Chairman)	19396	248	<p>4.11 Wetlands and Riparian Resources</p> <p>The SDEIS states, “Wetlands would continue to function within natural ecosystem processes that include these natural events...”It seems that including the word “provide” prior to function in that sentence would better describe the role of wetlands during those events as they provide sediment capture, slow runoff, and retain/filter contaminants.</p>	WRI	Added "provide their existing" function...

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Samuel Penney (Chairman)	19396	249	The No Action Alternative would be the best option for wetland and riparian areas.	WRI	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	250	The 2021 Modified Mine Plan and Johnson Creek Route proposed mining actions in SDEIS suggests that “the mine site wetland and riparian area losses due to other indirect impacts (e.g., hydrology changes) would be contained within a 45.08-acre area of delineated wetlands within the mine dewatering drawdown area (Figure 4.8-10). The magnitude of impacts would be major, and localized, and the impacts would range from temporary to permanent”. The site would be permanently impacted at the mine site and the dewatering is a huge change in the wetlands hydrology. To say that it could be a temporary impact is not justifiable.	WRI	Language was added to clarify permanent and temporary impacts.
Samuel Penney (Chairman)	19396	251	In the SDEIS, “temporary impacts” are not defined, but the USACE definition is “temporary impacts occur when fill and/or cut impacts occur in wetlands that are restored to preconstruction contours when construction activities are complete. (e.g., stockpile, temporary access). These impacts must be minimized to the greatest extent possible.” The temporary impacts on the mine site would not be considered temporary, but would be permanent impacts. The SDEIS states that “As project design progresses, temporary loss would be better defined.” This needs to be addressed in the SDEIS now, not as the project progresses. Temporary is referred throughout the SDEIS 13 times in the wetland section 4.11 alone.	WRI	As stated in Table 4.1-1, temporary impacts are defined as impacts that are anticipated to last no longer than 1 year. Temporary wetland impacts were identified for some roads and the transmission line facility construction that would result in short-term loss or alteration as the wetlands would be restored as soon as possible. Further, as stated in the Wetlands and Riparian Resources Specialist Report, "Although the full extent of temporary effects has not been quantified, temporary construction roads used for transmission line construction and the transmission line ROW are considered temporary effects for this analysis." The acres of temporary wetland impacts are associated with the transmission line right-of-way, work areas, access roads. Additional language added to Final EIS for clarity.
Samuel Penney (Chairman)	19396	252	As stated in SDEIS “Regarding the clearing of tall trees, clearing within 50 feet of the centerline of transmission lines could impact wetlands and riparian areas due to the loss of overstory components. Loss of overstory in forested wetlands could lead to conversion to other wetland types even when a reduction in total wetland acreage would not occur. Potential wetland conversion losses due to the clearing of tall trees are included.” The loss of overstory could cause flashier periods of runoff and reduce water retention during hotter months resulting in downstream impact. The transmission lines will have continued maintenance with tree clearings and pesticide treatments to secure the transmission lines, unless the transmission line is decommissioned. The SDEIS states that Johnson Creek Route Alternative transmission line disturbance would be temporary. The Wetlands and Riparian Resources Specialist report states that the transmission lines would remain in use by Idaho Power Company and that the impacts of tall tree clearing on 4-18 wetlands in these areas would be considered permanent. Please clarify and/or correct the contradiction.	WRI	As stated in both the EIS and Wetlands and Riparian Resources Specialist Report, the majority of wetland impacts from the transmission line disturbance would be temporary as the areas disturbed during construction would be restored following construction. However, the text/tables also state that there would be some permanent impacts to wetlands from access roads. Tall tree clearing within the ROW are also considered permanent impacts as wetland conversion could potentially occur.
Samuel Penney (Chairman)	19396	253	“Wetland functional units that would be loss [sic] due to direct impacts and indirect impacts due to wetland conversion are presented in Table 4.11-4. An estimated total of 1,054.4 wetland functional units would be lost, approximately 375.9 of which would be due to impacts to high value wetlands.” Meaning about a third of the wetlands are considered highly functioning wetlands. Are there Forest Watch Species or Sensitive Species found within wetlands to give them a higher functional value? And if functional units are higher because of the wetland plant species for functional values, there needs to be a plan for the plant species in that site/wetlands.	WRI	Sections 4.10 and 4.13 of the EIS provide the impact analysis of sensitive plant and wildlife species regardless of what habitat they might be located within. In addition, the functional assessment does account for the potential presence of sensitive species within a given wetland and considers this in the rating assessment.
Samuel Penney (Chairman)	19396	255	The SDEIS states, “The indirect effects, including changes in hydrology, water quality, and increase [sic] dust and/or mercury deposition has been examined through inspection of dewatering drawdown and distance to roadways, but is difficult to quantify precisely. As a result, functional units that would be lost if these indirect effects occur may be underestimated.” An underestimation is not efficient; if anything, there should be an overestimation. Within the wetland section alone, underestimating was referred to two times when suggesting the functional units lost for each mining action. The SDEIS suggests the “magnitude of two actions are expected to be greater along the Johnson Creek Route than would be expected on standard roads due to frequency of travel, size of equipment, and use across seasons. However, the potential impacts would be less than for the Burntlog Route, as the Johnson Creek Route is not near Mud Lake and would not have impacts on the fen. Although the impact of dust deposition has not been quantified, effect magnitude would most likely be minor (small but measurable change) and long-term, limited to the life of the SGP.	WRI	Comment noted. The potential impacts, although not quantifiable, were disclosed based on the best available information. The range of impacts is due to the various factors that can result in potential impacts that are hard to quantify. Additional analysis was added to reduce uncertainty, although uncertainty still exists. It should be noted that various EDFs are included, as well as monitoring to inform and reduce effects.

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			Effects from changes to hydrology and water quality could range from negligible to moderate and could be long-term or permanent depending on the actual impact". This is a huge range of impacts that should be addressed better than given a wide range from negligible, moderate, longterm to permanent.		
Samuel Penney (Chairman)	19396	256	The SDEIS states that "some of the functional units that would be lost would be due to temporary impacts associated with transmission line construction, the estimated total of functional units that would be lost is greater than reported in the CMP (which only considered permanent effects). Approximately 414.1 of the functional units lost would be temporary." The temporary losses are not being used in the Conceptual Mitigation Plan. This needs to be verified and addressed in the mitigation plan and explained why it is not.	WRI	As stated in Table 4.1-1, temporary impacts are defined as impacts that are anticipated to last no longer than 1 year. Temporary wetland impacts were identified for some roads and the transmission line facility construction that would result in short-term loss or alteration as the wetlands would be restored as soon as possible. Further, as stated in the Wetlands and Riparian Resources Specialist Report, "Although the full extent of temporary effects has not been quantified, temporary construction roads used for transmission line construction and the transmission line ROW are considered temporary effects for this analysis." The acres of temporary wetland impacts are associated with the transmission line right-of-way, work areas, access roads. Additional language added to the Final EIS for clarity.
Samuel Penney (Chairman)	19396	257	The SDEIS mentions BMPs attributable to road usage. However, no details are provided on what those BMPs would include. A summary of BMPs specific to Waters of the United States impacts in the construction of either of the access routes and offsite areas would aid readers in understanding initial avoidance measures outside of mitigation (e.g., silt fencing, dust control, revegetation, buffers, weed control, contaminant transport, etc.). For example, it states in SDEIS that although the impact of dust deposition has not been quantified, the effect magnitude would most likely be minor (small but measurable change) and long-term, limited to the life of the SGP. A BMP such as dust minimization during vehicular travel (e.g., road watering) should be considered to minimize the potential effect.	WRI	Section 2.4.9 of the EIS describes the EDFs that would be implemented and complied with for the Project and also mentions the BMPs for Mining in Idaho would be implemented that would minimize potential impacts to a variety of resources. A variety of dust minimization measures are described in this section.
Samuel Penney (Chairman)	19396	258	The SDEIS states that "Coordination with the USACE for approval of existing and predicted wetland functional assessment scores is ongoing and may also result in changes relative to the totals listed in this section. Wetland baseline functions may be revised in a way that results in a change to baseline functional scores. Final impact acreages would be determined as part of the CWA Section 404 permit application and would be agreed upon by the USACE." How can the baseline scores of functions change, that is why they are considered baseline scores. Changing the scores should result in further assessment of the functional values by someone outside the Perpetua involvement, a neutral party.	WRI	A draft Compensatory Mitigation Plan (CMP) has been submitted and after the USACE reviews the CMP, they might have changes to the methodology for the functional assessment evaluation which could result in changes in the Final Mitigation Plan to ensure mitigation reflects any resulting changes. Any changes would need to be approved by the USACE for the Project.
Samuel Penney (Chairman)	19396	259	The SDEIS states that Perpetua proposes to utilize mitigation bank credits in the North Fork Payette subbasin. Details on the mitigation bank are lacking and may impact the feasibility of using a wetland bank. For example: What wetland bank would be used? Would this bank have ample enough credits to utilize for the impacts of SGP to the North Fork Payette River subbasin? What is the credit ratio? What are the anticipated costs of credits? Will onsite wetland mitigation/restoration offset the cost of purchasing credits? Consider the timeframe of mitigation. These answers may be included in the Conceptual Mitigation Plan but should be summarized in the SDEIS so readers may gain a broad understanding of the details of how these impacts will be mitigated.	WRI	Perpetua's 404 Permit Application will be reviewed by the USACE and the USACE will ultimately determine if they can issue a 404 Permit for the Project, including the Wetland Mitigation Plan.
Samuel Penney (Chairman)	19396	260	The SDEIS Section 4.11.3 should include tables 7-15, 7-16, and 7-17 from the Wetland and Riparian Resources Specialist report would be helpful for readers to compare the losses of wetland and riparian function and habitat fragmentation metrics for the two alternatives.	WRI	No additional summary tables have been added as the text and Tables in Section 4.11.2 already provide a clear comparison of impacts and Table 2.8-1 also provides a concise comparison. The information in Wetlands and Riparian Resources Specialist Report Tables 7-15, 7-16, and 7-17 is available in that companion document to the EIS.
Samuel Penney (Chairman)	19396	332	Table ES-3 quantifies the total mine component acreage impacts on previously undisturbed land; 881 acres for the mine site, 341 acres for access roads, 422 acres for utilities, 30 acres for off-site facilities, all of which totals 1,1674 acres of impacts on undisturbed land. This impact of land surface area changing from vegetated to unvegetated as a result of mine development will increase sediment delivery to streams. As mentioned earlier, the Project is located in an area of highly erosive, decomposing granitic soils where revegetation takes time, and the erosive effects of steep unvegetated banks in a watershed with flashy hydraulic events cannot be underestimated. With these acres of Project impacts leaving unvegetated, disturbed ground it is hard to understand predictions in Table 4.12-6 moving	WRI	Quantification of what percent of this disturbance occurs in riparian conservation areas or adjacent to streams was added to the Final EIS.

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			sediment and turbidity from FUR to Functioning at Risk ("FR") during mine years 1-20. Quantifying what percent of this disturbance occurs in riparian conservation areas or adjacent to streams is needed in the FEIS.		
Samuel Penney (Chairman)	19396	399	Wetlands The Tribe agrees with the Forest's assessment that the Project will result in major impacts to numerous wetlands within the contributing basin within the headwaters of the East Fork SFSR, a place of known importance to the Tribe. These impacts, as the Forest further observes, will substantially affect water quality, water storage/recharge, and water flow.	WRI	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	400	The Project will also cause major and permanent impacts to usual and accustomed fishing places including Sugar Creek and portions of the East Fork SFSR, as well as to tribal treaty rights and resources, including those associated with potential historic properties, sacred sites or places, TCPs, and CLs, depending on the wetland and the type of tribal use.	WRI	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	411	5.11 Wetlands and Riparian Resources The Forest needs to take a hard look at the impacts on wetland plant resources used by the Nez Perce Tribe, which are not described in the SDEIS. Reference in the analysis should also be made to associated habitat types specific to wetlands where these plant resources are found (i.e., impacts need to have spatial (e.g., linked with Potential Vegetation Groups) and temporal (e.g., phenology, gathering season) context).	WRI	Sections 3.24 and 4.24 have been updated to include the wetland plant resources used by the Nez Perce Tribe.
Samuel Penney (Chairman)	19396	412	The magnitude is expected to be greater on roads used for the SGP than would be expected on standard roads due to frequency of travel, size of equipment, and use across seasons. In addition, the Burntlog Route would be near Mud Lake, which is characterized by Idaho Department of Fish and Game as a poor fen. Indirect impacts of road improvements and vehicle travel (i.e., increased dust) are likely to impact this fen and degrade its function as habitat for a fen-specific special status plant, Rannoch-rush (<i>Scheuchzeria palustris</i>), which is described further in Section 4.10 Vegetation. Although the impact of dust deposition.	WRI	No further response required. General in nature or position statement.

Fish Resources and Fish Habitat

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Elizabeth Barnes	6652	41	4-367 Impacts to Steelhead and other fish are categorized under "water temperature" "flow productivity" "intrinsic potential" and "critical habitat". There is no criteria for water quality, which will create toxic conditions for fish embryos, larva, and critical invertebrate food sources that are not analyzed in this impact statement.	FIS	Section 3.12 of the SDEIS used the water quality criteria as defined for the protection of aquatic life by the EPA, and other agencies when more specific criteria were available. Impacts to fish health and the health of other aquatic life were inferred based on modeled increases relative to baseline and modeled exceedances of IDEQ's strictest potentially applicable surface water quality standards.
Elizabeth Barnes	6652	42	How can the mine be approved without an analysis of water quality impacts on stream invertebrates or fish? Besides fish, many other riparian insectivores rely on sensitive populations of stream invertebrates such as birds, amphibians, and bats, including the big-eared bat. Are loss of food sources included in wildlife cumulative effects statements?	FIS	Section 3.12 of the SDEIS used the water quality criteria as defined for the protection of aquatic life by the EPA, and other agencies when more specific criteria were available. Impacts to fish health and the health of other aquatic life were inferred based on modeled increases relative to baseline and modeled exceedances of IDEQ's strictest potentially applicable surface water quality standards. Water quality effects to terrestrial species are described in Section 4.13.2.2 in the SDEIS.
Brooke Green (Representative, District 18)	7183	3	Perpetua Resources has committed to restoring Stibnite as close to natural conditions as possible, which goes far beyond the reclamation measures required by law. They will reconnect chinook salmon, bull trout and steelhead with over 20 miles of habitat that has been inaccessible for over 80 years in the first few years of construction. And the Supplemental EIS supports the company's prediction that this project will have a positive impact on fish populations. The document says that "The restoration activities, particularly providing volitional passage in the East Fork SFSR, would result in a major, permanent, regional, and beneficial effect on Chinook salmon, steelhead, bull trout, and westslope cutthroat trout within the vicinity of the mine." (Chapter 4.12.2.2 2021 MMP; p.4-334)	FIS	No further response required. General in nature or position statement.
Kevin Andrus (Representative, District 35)	7215	3	During construction of the mine site, Perpetua will be a nearly mile long fish tunnel to reconnect native fish species with over 25 miles of habitat that has been inaccessible for over 80 years. By restoring the connection between waterways, Perpetua will have created a longstanding solution to fish migration in the region ensuring a lasting impact. In fact the supplemental draft EIS supports this claim. In chapter 4, it says "The greatest benefit to Chinook salmon and steelhead passage comes in Mine Year -1 with the construction of the fishway, which would allow these species to volitionally access habitat that they have not naturally accessed for decades." (4. 12.2;p.4-343)	FIS	No further response required. General in nature or position statement.
Faye Thompson	7262	2	Perpetua Resources has made it clear reclamation efforts will start alongside operations. For example, before mining ever begins, fish will be reconnected to their native spawning groups upstream through a fish passageway. Perpetua Resources also identified more ways to help fish populations. Originally, the company proposed not replacing the pit lake at the Yellow Pine Pit, however, a pit lake is included in the 2021 Modified Mine Plan to make sure currently used habitat is replaced and available for the fish that use it today. The company is also adding more plantings along waterways to reduce water temperatures for fish. Perpetua also has proposed using Burnt Log Road in order to keep vehicles away from precious waterways.	FIS	No further response required. General in nature or position statement.
Jeff Cornilles (Representative, District 12, Seat A)	10759	2	Previous mining of the Stibnite area left serious environmental issues that have disrupted the natural fish habitat that once thrived in the Salmon River. Perpetua has promised to leave the land in a better condition from what exists today, and I don't believe they'd make that promise given Stibnite's history. The SDEIS incorporates strategies to remove fish migration barriers to re-establish the salmon and steelhead fish passage.	FIS	No further response required. General in nature or position statement.
Conway Ivey (Executive Chairman, Ivy Minerals, Inc.)	13274	6	Similarly, the No Action alternative does nothing to reestablish fish passage upstream past the Yellow Pine Pit; many existing road crossings that currently provide either no fish passage, or impaired fish passage, will remain as impediments to free movement of fish; and the enormous sediment inputs from Blowout Creek would go unaddressed. These are but a few examples of the environmental improvements proposed by Perpetua that will not occur under the No Action alternative.	FIS	No further response required. General in nature or position statement.

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Lehrer, Laura	16878	6	The effects on fish habitat - per the SDEIS, "Post-closure, a net decrease in quality and quantity of bull trout habitat would occur despite removal of passage barriers and an increase of lake habitat for bull trout..." (SDEIS Fisheries Specialist Report p. 150). I object to the framing of this as a "restoration project."	FIS	No further response required. General in nature or position statement.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	16	<p>In addition to improving water quality in the watershed, the SGP includes substantial stream restoration measures that would greatly improve fish habitat. The most notable improvement would be reconnecting the portion of the East Fork that currently dead ends in the Yellow Pine Pit. For over 80 years, fish have been unable to migrate along this segment of the East Fork due to the cascade into the pit that completely precludes fish migration.</p> <p>The SGP will remedy this situation by constructing a fish passage tunnelway around the pit while it is being mined. This fish passage tunnelway is designed with features that are in common use and have proven to effectively enable two-directional fish migration. Once construction of the fish passageway tunnel is completed, volitional fish passage will be possible for the first time in over four decades. Starting in Mine Year 11, when the mined-out Yellow Pine Pit is backfilled, the East Fork stream channel will be restored as a meandering stream traversing the backfilled pit. To provide additional fish habitat enhancement, Stibnite Lake will be created to become the functional replacement of the lake habitat for fish that currently exists in the Yellow Pine Pit. Stibnite Lake will also help minimize fluctuations in stream temperatures, which was one of the concerns voiced in the public comments on the DEIS. The combined habitat restoration and improvement measures to construct the fish passageway tunnel to accommodate fish migration during mining of the Yellow Pine Pit, the restoration of the East Fork stream channel through the backfilled pit, and the addition of Stibnite Lake demonstrate Perpetua's environmental stewardship commitment and how the Company has gone the extra mile to restore and enhance the environment at the SGP. WMC suggests that the discussion of the fish passageway tunnel needs to be clarified in the Final EIS. The SDEIS uses inconsistent terminology to discuss this tunnel which could confuse some readers. This feature is called a tunnel without mentioning that it will be built as a fish passageway throughout most of the SDEIS. For example, in Chapter 4, the first description of the tunnel as a "fishway" does not occur until Page 4-334. Problematically, much of Chapter 4 suggests the tunnel may create adverse impacts to fish. The fact this tunnel will provide immediate access for chinook salmon, bull trout, and steelhead to roughly 29 miles of stream habitat that have been blocked for over 80 years by the Yellow Pine Pit is not consistently discussed throughout the section on fish resources and fish habitat (e.g., Section 4.12.) Consequently, some readers may not understand that the "tunnel" (without qualification) and the "fishway" are the same structure. The Final EIS should more consistently and clearly describe the tunnel around the Yellow Pine Pit as a fish passageway.</p>	FIS	Text in the Final EIS was clarified to utilize consistent terminology.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	17	The Final EIS should make more use of and highlight Figure 4.12-1 to clearly show the stream restoration accomplishments in numerous segments of the East Fork, Meadow Creek, and the East Fork of Meadow Creek. Although Section 4.12 presents a great deal of information, the discussion is not optimally organized. It needs to include a summary that describes the many stream restoration benefits shown in Figure 4.12-1. This shortcoming can be readily addressed in the Final EIS using the data presented in the SDEIS.	FIS	Additional references to Figure 4.12-1 have been incorporated into the Final EIS and Fisheries and Aquatic Habitat Specialist Report.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	18	Finally, the SDEIS should give Perpetua proper credit for adding Stibnite Lake to the MMP in response to public comments on the Draft EIS that raised concerns about the loss of the lake habitat with the removal of the Yellow Pine Pit Lake during mining. The Company should be commended for modifying the SGP and adding Stibnite Lake to the MMP. This modification to Perpetua's project proposal is an excellent example of how the NEPA process can improve and refine a proposed project.	FIS	No further response required. General in nature or position statement.
Wasley, Dustin (Principal P.E., Haley Aldrich)	17633	3	In addition to addressing mine wastes on site, the project includes extensive stream restoration measures which are shown in the SDEIS to result in a net benefit to salmon and steelhead, as well as provide local benefits to cutthroat trout. Perpetua has hired experienced stream restoration consultants to specify industry leading restoration practices with an emphasis on creating geomorphologically appropriate channel and habitat conditions conducive to functioning fisheries. These designs will result in an overall improvement in existing habitat. The removal of the fish barrier at the Yellow Pine pit and operation of	FIS	No further response required. General in nature or position statement.

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			the fish passage tunnel around the pit during operations will reconnect tens of kilometers of existing and improved spawning habitat, resulting in a net benefit to ESA species.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	2	Our members seek to protect and support restoration efforts in the South Fork Salmon River watershed so that it will continue to provide habitat for Endangered Species Act-listed Chinook salmon and steelhead, and to facilitate bull trout recovery efforts. We do this under the belief that these fish species, as an integral part of the watershed ecosystem, are what make the South Fork Salmon such an amazing place in central Idaho. These fish are the essence of what makes Idaho, Idaho.	FIS	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	8	The South Fork Salmon River is a major tributary to the second longest free-flowing river in the lower 48 states, the Wild and Scenic Main Salmon River. Most of the South Fork Salmon and many sections of its tributaries have been deemed eligible and suitable under the Wild and Scenic Rivers Act by the U.S. Forest Service. It continues to boast critically important spawning habitat for migratory fish. Recognizing this importance, federal agencies, tribes, and other organizations have expended significant efforts to improve the ecological health of the watershed. The South Fork Salmon watershed is indeed a cornerstone in ongoing efforts to restore threatened Chinook salmon and steelhead to Idaho.	FIS	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	24	Similarly, as described below, Chapter 4 of the SDEIS only analyzes effects to fisheries or water quality at the mine site area; it fails to analyze consequences of the project to fisheries and surface water quality in the larger analysis area downstream and outside of the local mine site. For example, impacts to waters downstream of the Yellow Pine pit lake -- which may be the most impacted waters--are not evaluated. Such impacts that could occur well-beyond the local mine site include, but are not limited to, increased water temperatures, increased risk of hazardous spills, increased detrimental impacts from roads, and increased metals concentrations. The geographic scale of the impacts does not match, and well exceeds, that of the management areas identified and affected by the proposed Forest Plan amendment at SDEIS, Appendix A-3. By failing to include impacts beyond the mine site, the geographic scope of the proposed amendment was unreasonably narrow. The true impacts of this proposed amendment were neither considered nor disclosed to the public.	FIS	SDEIS Section 4.9.2.2 describes predicted water quality effects of the Project and notes that these effects are not expected to extend downstream from monitoring location YP-SR-2.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	88	The SDEIS fails to demonstrate that the proposed project will comply with Clean Water Act requirements for mercury. According to the SDEIS (p. 4-353), mercury concentrations in the East Fork SFSR downstream of Sugar Creek would be predicted to increase during active mining due to expanded excavation. Baseline, predicted active mine, and predicted post-closure mercury concentrations in the East Fork South Fork Salmon River downstream of Sugar Creek are not predicted to exceed the aquatic life criteria. However, uncertainty remains whether incremental changes in mercury concentrations beyond baseline would increase bioaccumulation of methylmercury in fish tissue at concentrations exceeding the tissue-based criterion." The SDEIS (p. 4-353) further states that "Long-term, regional influences on downstream mercury methylation are not quantified." Idaho has adopted the fish tissue residue criterion for mercury as the state's water quality standard. The SDEIS must demonstrate that the mine plan will be in compliance with the state's tissue-based water quality standard, not defer to some potential future action. It must also analyze the long-term regional influences on downstream mercury methylation, and the potential impacts to water quality, aquatic, avian and other wildlife.	FIS	SDEIS Section 4.9.2.2 describes predicted mercury concentrations that remain below applicable standards. Application of a methylation ratio to these predicted mercury concentrations indicates that methylmercury concentrations would remain below standards in the Project area. Limitations on information regarding mercury methylation downstream of the Project area are disclosed, but information on future downstream conditions is not available for detailed assessment. However, the potential for mercury methylation in surface water departing the SGP is not changed compared to existing conditions and therefore, Project-related effects on methylation downstream are not anticipated.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	95	The SDEIS displays major shortcomings of virtually every factor used to evaluate impacts to fish (particularly intrinsic potential, streamflow productivity, barrier, and stream temperature models), and concludes negative impacts to Chinook salmon, bull trout, steelhead, and westslope cutthroat trout and their habitat. It does so without consideration of climate change, accidents and spills, and the cumulative and synergistic effects of overall habitat simplification and degradation. In general, the conclusion of negative impacts to habitat quantity and quality is oversimplified and underestimated. The SDEIS reports substantial impacts to fisheries and their habitats throughout the mining period and beyond. These impacts are of particular concern for Chinook salmon, bull trout, steelhead, and westslope cutthroat trout, where decades of mining impacts, particularly when combined with the plethora of other impacts on the populations, could adversely affect population persistence.	FIS	SDEIS Section 4.12.2.2 describes the implications of climate change and potential spills on Project area fish species. Section 4.12.2.2 also concludes with a description of the synergistic effect of all the factors incorporated into the impact analysis. The methods and rationale for quantifying the effects are described, and those results are described in the section.

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			<p>For Chinook salmon, “Following closure and reclamation, the overall net effect from the SGP would be a net increase in available habitat; however, flows and temperatures make the additional habitat less optimal.” “Changes in flows would result in a net decrease in (steelhead) productivity”. “There would be net decreases in both quantity and quality of habitat for bull trout and westslope cutthroat trout.” A slightly beneficial outcome for steelhead habitat could only occur assuming the models are correct (which is highly questionable), and the habitat restoration is done appropriately and to the extent modeled. These are the longest migrating salmon and steelhead at this elevation in the world. Even small losses to these species cannot be "mitigated" by near-river sources of other runs of salmon and steelhead.</p>		
<p>Bonnie Gestring (Northwest Program Director, Earthworks) and seven others</p>	<p>17634</p>	<p>96</p>	<p>The SDEIS incorrectly assumes that mitigation and restoration efforts are possible and effective. The SDEIS assumes that mitigation for historic mining efforts will offset impacts to salmon and trout from proposed mining efforts. Experience has shown that habitat restoration and mitigation is difficult, expensive, and often ineffective. Restoration activities to restore salmon, trout, lamprey, and other fish are ongoing and extremely expensive. From 1980 to 2018, BPA spent just under \$25 billion (which is close to \$27 billion, adjusting for inflation) towards its Fish and Wildlife program to aid in the restoration of the ESA listed salmon that inhabit the river, including configuration and operational changes to the dams." Multi-billion dollar expenditures continue, although no Pacific salmon population has been removed from the ESA list of threatened and endangered species. Even modern fish passage design simply cannot account for spatial and temporal variability of historic baseline conditions, current conditions, and future conditions that will result from mining and associated development activity in addition to climate change. SDEIS mitigation methods proposed rely heavily on unspecified and/or unproven habitat “improvements,” fish salvage, and trap and haul operations. Trap and haul operations are well documented to induce significant stress (e.g., increased cortisol levels, gill flaring, etc.), disorientation (particularly in salmon homing to natal rivers and streams), deleterious changes to migration timing, increased mortality, and direct injury. Experience throughout Pacific salmon habitat, and particularly in the Columbia River basin, indicates beyond question that trap and haul operations and most other restoration techniques are simply palliative. Already threatened salmonid populations will not be restored by (and may not survive) mining activity and the mitigation methods proposed in the SDEIS.</p> <p>3. Water temperature increases ignore climate change, are otherwise underestimated, and their impacts are unreasonably minimized</p> <p>The SDEIS reports alarming increases in stream temperature in occupied salmonid habitat: “Meadow Creek temperatures are predicted to increase by up to 10 degrees C as the stream channel is “restored” atop the TSF” (SDEIS 4-275). And: “ On the Meadow Creek segment atop the reclaimed TSF, temperature...would remain warmer than existing conditions after 100 years” (SDEIS 4-274). And: Predicted temperatures are based on effective implementation of stream restoration and riparian shading. Increased temperatures attributable to climate change are not incorporated (SDEIS Table 4.12-2, pg. 4-339). And: “Insufficiently effective closure activities and/or adverse changes in broader climate conditions could result in higher than predicted stream temperatures. Stream temperatures downstream of the Yellow Pine Pit could be greater than existing conditions” (SDEIS 4-281).</p> <p>Crozier, in their assessment of the climate change threat to Chinook salmon throughout their life cycle, concluded that “...dramatic increases in smolt survival are needed to overcome the negative impacts of climate change for this threatened species.” Temperature increases in the SDEIS analysis area were outlined as follows. Meadow Creek upstream from the East Fork of Meadow Creek is expected to have temperature increases for up to 52 years, with predicted temperature increases up to 6.8° C above baseline (Table 4.12-12 of the SDEIS). Additionally, “...stream temperatures are increased in restored stream channels until revegetation establishes to provide riparian shading for the streams” (SDEIS) and “Following closure and reclamation, the overall net effect from the SGP would be a net increase in available habitat; however, flows and temperatures make the additional habitat less optimal” (SDEIS). These increases were predicted in addition to climate change which is “...predicted to increase average August stream temperatures by “an average of 0.72°C (1.3°F) by 2040 and 1.4°C (2.6°F) by 2080 (Isaak et al. 2017)” (SDEIS).</p>	<p>FIS</p>	<p>The SDEIS presents its analysis of the proposed measures for managing impacts to fish in Section 4.12. Limitations and uncertainties regarding these measures are described in the SDEIS. The SDEIS analysis represents the reasonably foreseeable conditions for the SGP which would be subject to monitoring verification and plan adjustments as necessary. For example, the distance the fish would be moved through a trap and haul process reduces the risk of impacts and would be assessed through monitoring.</p> <p>As described in responses to comments on water resources, quantitative modeling of climate change is outside the scope of the water temperature analysis. A qualitative description of climate change effects on water temperature is provided in SDEIS Section 4.9.2.2.</p>

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			<p>Water temperature is fundamental to salmonid growth and survival during multiple (and for some species all) aspects of their freshwater life history. Therefore, seemingly small increases in temperature could result in drastic impacts to these species. In addition to temperature, climate change is expected to reduce summer flows, which further impacts stream temperatures. Tonina found that climate-induced changes in flow resulted in large reductions in usable habitat area and connectivity between the main channel and adjacent off-channel habitats. These reductions decrease the capacity of freshwater habitats to support historical salmon abundances and could pose risks to population persistence in some areas.</p> <p>Given the negative relationship between summer temperature and survival and flow and survival for juvenile Chinook salmon, permitting a project that is predicted to increase stream temperature and decrease flow, in the face of imminent climate change, which will also increase stream temperature and decrease flow, will undoubtedly negatively impact salmonid species of concern in the analysis area and downstream. Water temperature predictions rely on the same baseline hydrologic model outputs (indicating they are also flawed), predict substantial temperature increases, but fail to incorporate well documented impacts of climate change. Because water temperature is fundamental to salmonid growth and survival during multiple (and for some species all) aspects of their freshwater life history, seemingly small deviations from predictions could result in drastic underestimations of mining impacts. In addition to other shortcomings of SPLINT, the model used to predict project related temperature changes, it fails to incorporate temperature increases due to climate change. Climate change is already impacting bull trout and cutthroat trout habitat and those impacts will only be compounded by project related temperature increases.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	97	<p>Stream Function Analysis (SFA)</p> <p>The Stream Function Assessment (SFA) (Rio ASE 2019) was developed for the Stibnite Gold Project to track impacts on streams before, during, and after mining following restoration, as a tool to quantify compensatory mitigation debits and credits for the U.S. Army Corps of Engineers to determine compliance with the Clean Water Act, and for the SDEIS analysis and associated ESA consultation. The SFA is an unproven, unreproducible model, based loosely on Watershed Condition Indicators (WCIs), used in the SDEIS to assure mitigation for the Stibnite Gold Project's unavoidable impacts on jurisdictional aquatic resources. Other proven models exist and are used in the Payette and Boise National Forests and in the Pacific Northwest to characterize impacts to streams (p. 2-9). Using a new, unproven, made-for-Stibnite model does not comply with NEPA's best available science requirement.</p> <p>The SFA used some WCIs to feed the model, and ignored others, replacing the WCI analysis with SFA analysis for Stibnite Gold Project NEPA and ESA consultation. Forest Plans, ESA Biological Opinions, and associated NEPA direct using the WCI analysis for all NEPA and ESA consultation for projects affecting ESA-listed aquatic species. Usage of the SFA instead of the WCI needs to go through ESA consultation to be a valid replacement for WCI analysis.</p> <p>Description and results of the SFA do not appear anywhere in the body of the SDEIS. Yet they are pivotal to the SDEIS conclusions that mitigation for historic and proposed mining efforts will offset impacts from proposed mining efforts.</p>	FIS	The SFA tool was not used as an evaluation or impact assessment tool in the SDEIS nor is it being used in the BA. However, during the SFA modeling development, reaches were developed and periodically applied to the tools used in the SDEIS/BA.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	98	<p>The SDEIS does not adequately consider synergistic effects on fish</p> <p>By considering fish species, stream reaches, and limited habitat impacts (e.g., stream dewatering, temperature increases, increases of metals concentrations, migration barriers) all separately, the SDEIS fails to acknowledge the broad ecological understanding that multiple stressors will amplify one another's effects on the ecosystem. This assumption ignores volumes of peer-reviewed and other literature contradicting it, particularly that related to the so-called "death of a thousand cuts" leading to salmon population declines. It results in a serious underestimate of impacts to fish and their habitat.</p> <p>The SDEIS does not sufficiently discuss the inextricable connections between the myriad impacts to fish. An impact from, for example, temperature increase, will inevitably cause synergistic and/or cumulative impacts to other impacts such as metals exceedances (i.e., mercury, arsenic).</p>	FIS	Section 4.12 of the EIS and the Fisheries and Aquatic Habitat Specialist Report includes a summary of effects, tying the impacts together.

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			In general, mining typically causes stream habitat simplification, decreased water quality and quantity, increased water temperature, migration barriers, and introduction of non-native species. The SDEIS discusses these impacts but fails to define the interrelationship of these and other stressors, and does not adequately consider their synergistic effects.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	99	Impacts to all non-salmonid fishes — and other aquatic life that support them- are ignored in the SDEIS Mountain sucker, mottled sculpin, longnose dace, speckled dace, redbside shiner, mountain whitefish, Pacific lamprey and other important fish, freshwater insects, algae, and other primary producers are all critical elements of the food webs supporting the salmonids that are not considered in the SDEIS. Ignoring impacts to salmonid food webs is equivalent to ignoring impacts to salmonids at large.	FIS	Regarding Pacific lamprey, the following text has been added to the Affected Environment section of the SDEIS and Fisheries and Aquatic Habitat Specialist Report - "It is important to note that while Pacific lamprey may occur in the vicinity of the Project, no observations of these fish have been made in snorkel surveys and electrofishing surveys, and eDNA studies conducted did not detect any lamprey DNA within or downstream from the Project area." The analysis in the EIS covered the ESA federally protected species and the USFS sensitive species. Effects described for the four species that were analyzed in the EIS are expected to affect the non-salmonid species in a similar manner. Benthic macroinvertebrates were monitored between 2012 and 2018. Results of the monitoring showed that most of the invertebrate species present were considered sensitive to poor water quality, indicating water quality under baseline conditions are considered suitable. Adverse water quality effects are not predicted related to Project activities. No revision made.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	100	Failure to analyze impacts on macroinvertebrates Macroinvertebrates are food for fish, and therefore are critical elements of the aquatic environment which support salmon and trout life histories. The SDEIS does not include any analysis or data presentation of the decades of macroinvertebrate sampling which occurred in Stibnite mine site streams from the mid 1990s through the mid 2000s (Payette National Forest files). These species were completely disregarded in the SDEIS analysis, despite their roles in the aquatic ecosystem.	FIS	Benthic macroinvertebrates were monitored between 2012 and 2018. Results of the monitoring showed that most of the invertebrate species present were considered sensitive to poor water quality, indicating water quality under baseline conditions are considered suitable. Adverse water quality effects are not predicted related to Project activities. No revision made.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	101	Failure to analyze impacts on Pacific lamprey Lamprey are mentioned only three times in the SDEIS. They are indicated to be found within the analysis area (Section 3.12.4.1 page 3-266), historically harvested and dried by the Nez Perce Tribe (Section 3.24.4.1 page 3-504), and culturally important (Section 3.24.4.4 Page 3-515). However, no analysis of the extent, duration, or scale of impacts to individuals, populations, or habitat was provided. Pacific lamprey were historically widespread along the West Coast of North America, though their abundance has declined, and their distribution is contracting throughout Oregon, Washington, Idaho, and California. The declines were extensive enough that, in January 2003, the USFWS received a petition to list Pacific Lamprey as threatened or endangered under the Endangered Species Act of 1973, as amended. In December 2004, the USFWS found that the petition and additional information in their files did not present substantial scientific or commercial information indicating that listing the species was warranted (Department of the Interior, Fish and Wildlife Service, 50 CFR Part 17, Endangered and Threatened Wildlife, and Plants; 90-Day Finding on a Petition To List Three Species of Lampreys as Threatened or Endangered). However, recent advancements in the understanding of Pacific lamprey ecology and causes of population declines support a renewed look at listing lamprey under the Endangered Species Act. Like salmon, Pacific lamprey are a tribal trust resource, and thus the federal government has a heightened responsibility to ensure the continued existence of the species. Pacific lamprey are also classified as a Species of Greatest Conservation Need Tier 1, a Bureau of Land Management Sensitive Species Type 2, a U.S. Forest Service Northern Region Sensitive Species, and Endangered and Protected Nongame by the state of Idaho. Threats to Pacific lamprey include restricted mainstem and tributary passage; reduced flows; dewatering of streams; stream and floodplain degradation; degraded water quality; invasive species and predation; and changing marine and climate conditions. Several of these impacts are anticipated within the mine and analysis areas.	FIS	Text was added to clarify the lack of presence of Pacific lamprey in the Project area. eDNA sampling and snorkel surveys indicate Pacific lamprey nor any other species of lamprey occur in or near the Project site, and therefore were not included in the analysis. Text added states "It is important to note that while Pacific lamprey may occur in the South Fork Salmon River, no observations of these fish have been made in snorkel surveys and electrofishing surveys, and eDNA studies conducted did not detect any lamprey DNA within or downstream from the Project area."

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			Since 2012, the Nez Perce Tribe has been planting lamprey in the South Fork Salmon River and screw traps downstream from those locations in the South Fork Salmon River have captured numerous juvenile lamprey outmigrants. The SDEIS did not indicate whether lamprey were present in the analysis area or what impacts might occur to the species or to their habitat that would be caused by implementation of the MMP 2021.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	102	The validity of the model results should be viewed with skepticism SDEIS models used to predict fish habitat conditions are fraught with uncertainty, including flow (SDEIS 3-282), temperature/SPLNT (SDEIS 3-318, 4-268, 4-280), reclamation success (SDEIS 4-78), soil productivity (SDEIS 4-86), groundwater flow (SDEIS 4-153 and 162), hydrological model (SDEIS 4-175), water treatment rates (SDEIS 4-212), stream restoration (SDEIS 4-274), and mercury bioaccumulation (SDEIS 4-353). The models used output from other models for input into these models, constituting an estimate of an estimate. And, as in the case of the PHABSIM model, 30-year-old data from another area was used to predict habitat changes in the mining area. Multiple models used to describe various aspects of habitat are flawed oversimplifications of salmonid ecosystems, and/or rely on model inputs generated by other flawed and inaccurate models. This renders their utility for predicting and measuring impact questionable at best. Flawed models include the stream and pit lake network temperature (SPLNT), intrinsic potential (IP), occupancy (OMs), and physical habitat simulation (PHABSIM) models.	FIS	NEPA requires the use of the best available science. Model outputs were applied to the impact assessment, but professional judgement, based on extensive knowledge of the fisheries conditions, resulted in qualifications provided alongside model results. Additionally, resource agencies (NMFS, USFWS) were involved with Perpetua and the Forest Service in informal ESA consultation in which the specific tools were selected for use in the SDEIS analyses.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	103	The SDEIS failed to evaluate effects of winter conditions, and winter survival effects on ESA-listed fish species This is especially problematic given that winter temperature and flow, both affected by mining operations, have been shown to strongly correlate with winter survival and, thus, population abundance and, ultimately, persistence. The interaction of groundwater to fish habitat and fish distribution, a vitally important component of bull trout winter and spawning habitat, which also affects other salmonid species, was completely ignored, despite the best available science showing significant relationships.	FIS	Winter water temperatures within and adjacent to the mine site area are typically below 5°C and would not be expected to be measurably different with changes in connection to groundwater. SDEIS Section 4.8.2.2 examines the effects of the Project on groundwater discharge to stream flow and groundwater dependent ecosystems.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	107	Metals concentrations in fish Metals concentrations of tissue from fish and other aquatic species can be a useful indicator of baseline conditions and an early indicator of low-level, chronic and/or indirectly accumulating increases of metals concentrations that may go undetected by routine monitoring. The DEIS evaluation of baseline metals concentrations in tissues are limited to a very small number of highly mobile westslope cutthroat trout specimens, and two sculpin specimens. Because of their mobility, cutthroat trout are a poor indicator of local conditions. Sculpin tend to more closely reflect their environment, though sample size is vastly insufficient for any utility in characterizing baseline or measuring future impacts. Moreover, metals concentrations in tissues of biota inhabiting lower trophic levels are absent in the SDEIS. The SDEIS indicated that “In 2015, fish tissue was collected to check for metal concentrations ...” but no metal concentrations in fish tissue data was reported or referenced. More baseline metals concentration data from area biota should be required prior to any permitting decisions.	FIS	Fish tissues and sediment were sampled for metal concentrations in the aquatic baseline monitoring program (MWH 2017). Sculpin were assessed; however, they were found in very low numbers.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	110	Loss of headwater streams, and other impacts within the project area, are falsely assumed to have no downstream impacts While the loss of stream miles and impact to habitats are estimated for the project area itself, those estimates exclude consideration of the function of upstream, contributing water bodies, and downstream, receiving water bodies. Headwater and/or upstream habitats are fundamental drivers of physical, chemical, and biological characteristics of their downstream receiving waters. Intact headwaters and wetlands comprise fundamental elements of thriving salmon habitat, and their fragmentation is considered a leading cause of global salmon declines. Both long-term small-scale and short-term large-scale developments fragment and simplify the complex physical habitat mosaics upon which all fish and aquatic life depend, introduce contaminants into the environment, and ultimately degrade the biological	FIS	This Project would provide additional headwater habitat that is not currently available to Chinook salmon, steelhead, or adfluvial bull trout. This would reduce fragmentation. While there would be some effects to water temperature during operations, these would reduce over time, improving habitat quality, along with stream restoration and enhancement programs. Highest water temperature increases would occur in areas of Meadow Creek in which fish would no longer have access, and temperatures rapidly decrease below this stretch of Meadow Creek. Evaluations also indicate that water quality effects, such as temperature, do not migrate far downstream. Chemical contaminants effects are expected to be minimal because of the small, if any, temporary elevation in concentrations. These would be minimized by mitigation efforts.

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			<p>interactions that support robust fish populations. Failure to incorporate those impacts in the SDEIS result in a substantial underestimation of project impacts.</p> <p>The SDEIS describes the fish analysis area as encompassing all areas in which fish resources and fish habitat may be affected directly or indirectly by the Stibnite Gold Project, and not merely the immediate area involved. The analysis area is located in the South Fork Salmon River hydrological subbasin and the North Fork Payette River hydrological subbasin as illustrated Figure 3.12-1, Yet, the SDEIS does not analyze potential effects to subwatersheds downstream and outside of the Stibnite Gold Project mine site area within the fish analysis area illustrated in Figure 3.12-1. Effects to waters downstream of the Yellow Pine pit lake — which may be the most impacted waters — are not evaluated. Failure to incorporate those effects in the SDEIS results in substantial underestimation of project effects. (i.e., increases in temperature, spill risk effects, road effects, metals concentrations, and synergistic effects on fish populations).</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	112	<p>ESA-listed salmon, steelhead, and bull trout migrate through many miles of waters downstream and outside of the mine site, and rely on habitat conditions therein to complete their life histories. A supplemental SDEIS needs to describe and analyze effects of the mine downstream of the mine site to water quality and fish, and if not, analyze and describe why there are no downstream effects.</p>	FIS	<p>This Project would provide additional headwater habitat that is not currently available to Chinook salmon, steelhead, or adfluvial bull trout. This would reduce fragmentation. While there would be some effects to water temperature during operations, these would reduce over time, improving habitat quality, along with stream restoration and enhancement programs. Highest water temperature increases would occur in areas of Meadow Creek in which fish would no longer have access, and temperatures rapidly decrease below this stretch of Meadow Creek. Evaluations also indicate that water quality effects, such as temperature, do not migrate far downstream. Chemical contaminants effects are expected to be minimal because of the small, if any, temporary elevation in concentrations. These would be minimized by mitigation efforts.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	115	<p>Project actions are not consistent with ESA recovery plans</p> <p>Blockage of fish passage is not consistent with U.S. Fish and Wildlife Service bull trout recovery plan actions which include: 1) Protect, restore, and maintain suitable habitat conditions for bull trout, and 2) Minimize demographic threats to bull trout by restoring connectivity or populations where appropriate to promote diverse life history strategies and conserve genetic diversity.</p> <p>Decreased flows and increased temperatures resulting from mining actions (see SDEIS Figure 4.12-3 and Table 4.9-24). are inconsistent with the National Marine Fisheries Service Chinook salmon and steelhead recovery plans, which lists improving degraded water quality and maintaining unimpaired water quality as a strategy to address factors limiting recovery of Chinook salmon and steelhead populations.</p>	FIS	<p>While there would be a barrier placed in Meadow Creek, there is no indication that bull trout pass through this area. Only one bull trout was detected in a snorkel survey in the lowest reaches of Meadow Creek, and bull trout DNA was detected in the farthest upstream reaches. This indicates that bull trout no longer migrate through the area to the upstream reaches. They appear to be a residual population that may have had passage prior to historic mining activities.</p> <p>With respect to Chinook salmon and steelhead, while these habitat conditions temporarily degrade (e.g., slightly warmer temperatures), this occurs in habitat in which steelhead currently do not occupy, and Chinook salmon are only present when released by IDFG. Overall, there would be an improvement to the degraded habitat upstream, including passage, habitat restoration, and enhancements, and therefore provide overall benefits. Perpetua is currently and would continue to improve water quality conditions.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	116	<p>Work windows are inadequate to prevent adverse impacts to salmonid fishes</p> <p>A substantial length of both perennial and non-perennial streams is listed to be impacted in both the focus and off-site focus areas. Work windows are listed to avoid individual species, but when species are considered together, there is no time of the year when some non-mobile salmonid life form is not present in mining area streams where adverse effects are predicted. In addition, Proposed work 300 feet upstream from redds is inadequate to protect redds from impacts of turbidity generated from that distance.</p>	FIS	<p>The work window is intended to avoid the most sensitive life stages, i.e., eggs and alevins, when they are not able to move from the area of activity. Actions would be taken to ensure juvenile and adult fish are out of the area prior to construction activities (restoration/enhancement/ barrier removals).</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	117	<p>Current baseline conditions are insufficiently and inaccurately characterized, rendering predictions of impact unreliable</p> <p>With the exception of descriptions of proposed mitigation methods, physical habitat characteristics — past or present — are virtually ignored in the SDEIS despite their fundamental role in fish population productivity. Gradient, stream flow, substrate, off-channel habitat, floodplain connectivity, and other habitat elements known to influence salmonid productivity receive little consideration regarding fish resources and habitat. Degradation of those habitats from decreased flows, road crossings, increased</p>	FIS	<p>Most of the analytical tools apply habitat characteristics such as flow and gradient to determine overall effects. Habitat connectivity is addressed through the inclusion of passage into the upper watershed, as well as the exclusion from upper Meadow Creek. The impact assessment also addresses the effects of road crossing and changing sedimentation to the streams.</p> <p>Data collected by MWH (2017) identifies the general abundance and distribution of fish in the mine site area as well as downstream and other tributaries. These methods were approved by</p>

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			<p>sediment loads, spills, and other activities associated with mine development will inevitably impact salmonid populations.</p> <p>Salmonid distribution, abundance, and density estimates use flawed methodology and interpretation and lack the spatial and temporal resolution to characterize baseline variability. Consequently, adequate characterization of existing, listed salmon and trout populations are lacking. The SDEIS concludes that population-level effects are not expected from construction, but after reclamation, the net effect would be: a loss of habitat quality for Chinook salmon, bull trout, and cutthroat trout, a net gain of habitat quality and quantity for steelhead trout, and water quality improvements from the removal of legacy mine materials that would partially, but not completely, offset geochemical impacts associated with the SGP (U.S. Forest Service 2020).</p> <p>Because an adequate characterization of existing listed salmon and trout populations are lacking, population level impacts to salmonids from the Stibnite Gold Project cannot be evaluated from the information provided in the SDEIS. The SDEIS states that the percentage of populations affected by impacts described in Chapter 4.12 is expected to be small and population-level impacts are not expected. This statement is flawed because of the lack of adequate baseline characterization of salmon populations.</p>		<p>the Forest Service and followed specific protocols. The Forest Service does not feel the distribution and abundance data are flawed.</p> <p>In addition, there is no reduction in habitat quality for Chinook salmon or adfluvial bull trout as they do not naturally occur upstream from the Yellow Pine pit - Chinook salmon only occur when they have been translocated. Access to the upper reaches of Meadow Creek would be blocked; however, translocated Chinook salmon do not occupy these habitats under current conditions.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	119	<p>According to the SDEIS, “the magnitude of impacts could be major to individuals exposed to harmful concentrations of hazardous materials” (SDEIS 4-348). A large diesel spill could kill 100 percent of the Chinook salmon juveniles, adults, alevins, and eggs for a considerable distance (several miles) downstream of the accident (National Marine Fisheries Service [NMFS] 1995). In terms of toxicity to water-column organisms, diesel is one of the most acutely toxic oil types. Fish, invertebrates, and aquatic vegetation that come in direct contact with a diesel spill may be killed (U.S. Environmental Protection Agency [EPA] 2019). Thus, a large spill could potentially kill a substantial number of adult salmon depending on various factors (NMFS 1995). A spill in the fall could kill all the 1-year old juveniles and zero age eggs/alevins, thus eliminating 2 years of Chinook salmon progeny. Diesel from a spill could mix with spawning gravels and sand and be retained in the stream substrate for a year or more, and thereby negatively affect salmon eggs, alevins, and juveniles for several years.”</p>	FIS	The determination made on this impact is identified as major if spills occur, thus acknowledging the potential impacts to fish in the vicinity of any spill.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	120	<p>Impacts to salmonids from project-related groundwater changes are ignored in the SDEIS</p> <p>Groundwater and hyporheic inputs increase salmonid incubation and emergence success, and often support higher densities of fish due to their temperature and oxygen profiles relative to surface waters. Not only are groundwater flows poorly predicted in the SDEIS, their role in salmonid survival and resulting impacts to it from changing groundwater levels is unaddressed.</p>	FIS	SDEIS Section 4.8.2.2 examines the effects of the Project on groundwater discharge to stream flow and groundwater dependent ecosystems.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	121	<p>Effects of the East Fork Fish Tunnel inadequately characterize impacts and improvements</p> <p>The East Fork Fish Tunnel is described in Brown and Caldwell et al. 2021: Fishway Operations and Management Plan. Claims of the success of this tunnel are assumed in the body of the SDEIS. However, “There is some question regarding the effectiveness and efficacy of the EFSFSR tunnel to pass fish. The U.S. Fish and Wildlife Service (USFWS) notes, in a letter to Midas Gold dated October 3, 2019, “[E]ven after close consultation and collaboration with NMFS, meeting applicable NMFS passage criteria and guidelines, and executing all potential adaptive management measures, there exists a reasonable probability that the project will not be able to volitionally pass fish safely, timely, or effectively.” Results are presented, with the assumption that the tunnel would allow volitional passage (SDEIS 2-60).</p> <p>There is little rationale to support the proven success of such a tunnel in the SDEIS. Of the three references cited, none analyzed Chinook salmon, bull trout or steelhead, or sites with characteristics similar to Stibnite (i.e., from an accessible river to an inaccessible channel upstream). Gowans et al. 2003 tracked Atlantic salmon in Scotland on a river system from a reservoir through four fish passes including fish ladders, fish lifts, and a tunnel. Only 4 out of 54 tagged adults made it to spawning grounds. Wollenbaek et al. (2011) examined genetic connectivity of lake-dwelling Arctic char in Norway across a dam through a subterranean tunnel and spill gates. The char were represented by two genetically distinct lake populations, and connectivity was demonstrated, but it was questioned to what extent char utilized the tunnel for upstream migration. Rogers and Cane (1979) indicated “numbers of</p>	FIS	While it is correct that the success of the fishway tunnel would not be known until it is constructed and operated, the guidelines used in the design of the fishway tunnel follows both NMFS guidelines for fish passage as well as incorporated construction components affecting flow and velocity that meet the conditions needed for bull trout passage.

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			<p>fish succeeding the tunnel and weir” for Atlantic salmon from a pumped storage reservoir to upstream spawning grounds in New Wales, but the complete study was unavailable.</p> <p>The backup plan, should the tunnel not work, would be to trap and haul fish up and downstream of the Yellow Pine Pit until the reconstructed East Fork is completed. This relies on the assumption that the constructed and enhanced stream reaches would perform as described in the Stream Design Report. According to the DEIS, about 100,000 fish are modeled to be “affected” (injured/killed) from 1.6 km of stream removals and diversions in the East Fork (Table 4.12-2b, and p. 4.12-17) due to dewatering, fish salvage, and relocation. (From DEIS Table 4.12-2b: 84,066 Chinook salmon + 1,009 steelhead + 620 bull trout + 10,647 cutthroat = 96,342 fish potentially affected). While this analysis was included in the DEIS and these components of the plan have not changed, this information is not included in the SDEIS. This discrepancy must be explained.</p>		
Idaho Regulatory Agencies	17718	141	<p>All IDEQ-inventoried waterbodies at the proposed mine site (except for West End Creek) are listed under Section 303(d) of the federal CWA as “impaired” due to water quality. The causes for listing of these waters are associated with elevated concentrations of arsenic, antimony, mercury, and temperature (state, IDAPA 58.01.02.250, and/or EPA 1997 bull trout temperature criteria in 40 CFR 131.33). Beneficial use “cold water communities” should be “cold water aquatic life”</p> <p>Beneficial use “drinking water supply” should be “domestic water supply”</p>	FIS	Text revised as requested.
Idaho Regulatory Agencies	17718	142	<p>“All IDEQ-inventoried waterbodies at the proposed mine site (except for West End Creek)...” should Johnson Creek be considered part of the mine site?</p>	FIS	Johnson Creek is not considered part of the mine site, though the effects analysis does address the Johnson Creek Road route.
Idaho Regulatory Agencies	17718	181	<p>The SDEIS analysis adequately contrasts these alternatives and associated management trade-offs. The risks to key anadromous and resident fisheries associated with the Johnson Creek Route Alternative are substantial, and potential effects could be consequential to the State’s long-term management and recovery goals for Salmon River fisheries. Opportunities to manage risks along the Johnson Creek Route and effectively address environmental impacts, particularly those associated with accidental spills, may be limited. Adverse effects, e.g., from spills, have the potential to extend far downstream and may be difficult to remediate.</p>	FIS	No further response required. General in nature or position statement.
Idaho Regulatory Agencies	17718	171	<p>Citation associated with Big Creek Water Diversion Project (NMFS 2013) is not found in the references.</p>	FIS	Missing NMFS reference added to the Final EIS.
Idaho Regulatory Agencies	17718	172	<p>The citation associated with the 2018 Morrow study is not found in the references.</p>	FIS	Missing Morrow reference added to the Final EIS.
Idaho Regulatory Agencies	17718	173	<p>The SDEIS presents temperature thresholds for Chinook salmon, steelhead, bull trout, and Westslope cutthroat trout; however, there is limited discussions on the averaging period for thresholds or how those temperature thresholds are compared to modeled baseline conditions or modeled future conditions that are presented as a maximum weekly (7-day average) maximum temperature (MWMT). For example, in table 4.12-7, the temperature criteria used for Chinook salmon spawning is a maximum 13°C or less (IDAPA 58.01.02), while the QUAL2K outputs are a MWMT. In general, comparing an average modeled output to a maximum temperature threshold is not appropriate. A discussion of the implications of comparing threshold values to model output with different average periods is warranted. An analysis, using measured stream temperatures, that calculates and compares MWMT to other threshold averaging periods may aid in that discussion. In addition, a table that shows the threshold value and averaging period for each life stage would aid in the interpretation of the temperature analysis.</p>	FIS	The water temperature criteria applied in the water temperature modeling used either constant or average predicted water temperatures, consistent with the EPA guidelines.
Idaho Regulatory Agencies	17718	174	<p>Flow productivity model for steelhead uses proxy data from the Lemhi River. The SDEIS states “the differences in streamflow regimes, physical habitat characteristics, population sizes, and other differences between Johnson Creek and the mine site streams creates uncertainty that cannot be addressed with the available data.” Please clarify how the differences in characteristics of Johnson Creek are important for the steelhead flow productivity model or reference the Lemhi River.</p>	FIS	Text revised to replace Johnson Creek to Lemhi River.

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Idaho Regulatory Agencies	17718	175	Adult Chinook and Steelhead are unable to pass the 22 percent gradient barrier above Yellow Pine Pit (YPP). The Nez Perce Tribe and Idaho Fish and Game (IDFG) have intermittently released excess McCall Hatchery origin Chinook salmon spawners into Meadow Creek between 2008 and 2018 (excluding 2014). It does not appear excess spawners have been released above Yellow Pine Pit since 2018. Currently there are no steelhead above the barrier. The flow productivity modeling for Chinook Salmon was completed using proxy data from Johnson creek, assuming conditions within the mine site are similar to Johnson Creek. Flow productivity modeling for steelhead was completed using proxy data from the Lemhi River. The interpretation of flow productivity should be related to the number of fish since the productivity is based on a ratio of adult returns to spawners. Since there is no natural escapement above the migration barrier, in years when Chinook salmon are not transported above the migration barrier the baseline productivity would be zero. Additionally, the current productivity of steelhead above the barrier is zero; therefore, any discussion of reduction of productivity should be discussed as a reduction in potential benefit instead of reduction in overall productivity. Additional narrative is needed to provide context to limitation, assumptions, and uncertainty regarding the flow productivity analyses.	FIS	Because of the lack of population estimates in the mine site area, it is not appropriate to apply the productivity to a number of fish.
Idaho Regulatory Agencies	17718	176	The fishway and subsequent restoration work to provide volitional travel up the East Fork SFSR will significantly increase habitat available to Chinook salmon and steelhead and provide access to fluvial bull trout. Addressing the fish passage barrier upstream of YPP is unlikely to occur without the commitment of the project proponent to complete habitat restoration and restore connectivity of the East Fork SFSR. The SDEIS states, "The fishway may be a partial barrier discouraging migration of some fish, but the extent of this is unknown." Given the analysis of habitat gained or lost for Endangered Species Act Listed fish species and resident fish, is predicated on the assumption of a functional fishway during Mine Year -1 and the project proponent's commitment to a functional fishway, please provide additional information and discussion on which fish species and life stages are anticipated to be discouraged from utilizing the fishway and under what conditions fish may be discouraged from utilizing the fishway.	FIS	Salmonids, regardless of age class, may be hesitant to enter a fishway tunnel; however, adults are more likely to be affected than juveniles. Anadromous juvenile salmonids would use the tunnel in their outmigration; however, adults may choose to remain below the tunnel for spawning. After Mine Year 11, the natural channel would be restored, and fish would be able to fully and naturally access the upstream habitat.
Idaho Regulatory Agencies	17718	177	The rerouting and dewatering portions of Meadow Creek may extirpate bull trout in approximately 10 KM of stream and impact critical bull trout habitat. Mitigation measures for bull trout focus on the dewatering of YPP and fish salvage operations. If there are planned mitigation measures for bull trout in Meadow Creek, consider describing those mitigation measures in section 2.4.9	FIS	Text revised to indicate the extirpation may result from lack of passage to increase number of individuals. As shown in MWH 2017, bull trout only occur in the uppermost section of Meadow Creek, and likely in very low numbers. These fish would be isolated from downstream fish; however, current data indicates there does not appear to be passage into the upper headwaters of Meadow Creek that would replenish the population. Conducting a salvage operation in the upper headwaters of Meadow Creek would be difficult at best.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	18649	3	And some laws, such as the Federal Endangered Species Act (ESA), will rightfully direct the early business model of the SGP to direct, for example, the avoidance of habitat destruction and the taking of listed species. However, upon closer examination, the Stibnite Gold Project is instead purposefully designed to fulfill, not confront, the ESA's vision of species recovery and habitat restoration. For example, the Project's fish tunnel will provide temporary support for species migration until the historic hydrology over the Yellow Pine Pit can be replicated through the Project's ongoing restoration activities during operations. Further, the Project's long-term water quality improvements cannot be discounted as an investment in future better habitat within the Stibnite Mining District. But for the Stibnite Gold Project, the unfortunate legacy of species protected under the ESA and blocked from their natural migration patterns – not to mention ever-degrading water quality - will continue for the foreseeable future.	FIS	No further response required. General in nature or position statement.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	45	Fish Exposure to Interim Conditions The DSEIS includes a summary of measures to avoid and minimize impacts to fish habitat and describes the fishway (with trap and haul capability) and direct and indirect impacts to individual fish. Measures such as removal or blockage of access will be taken to ensure fish are not exposed to mining activities that are known to be potentially harmful or lethal such as noise and vibration. The DSEIS is unclear about whether reaches that are in sub-optimal/poor condition are accessible to fish (with consideration to both anadromous and non-anadromous salmonids). Fish will have access to the active area, if the	FIS	Each environmental condition (flow, temperature, water quality) are evaluated in Chapter 4 (Section 4.12) of the SDEIS, indicating where in each waterway there would be impacted environmental conditions. Passage through the fishway tunnel and subsequent restored EFSFSR channel would provide access to all reaches of the EFSFSR and Meadow Creek except upstream from the TSF barrier. Additionally, the SDEIS describes any necessary mitigation measures to ensure fish protection.

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			fishway provides upstream and downstream passage as planned. The DSEIS indicates fish will have access to stream reaches recently impacted and have marginal/poor condition in terms of habitat quality, stability, temperature, etc. EPA recommends the FEIS clarify whether there will be fish access to recently reclaimed reaches in marginal/poor condition and discuss related control measures to ensure fish protection.		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	46	Stream Construction and Enhancements Successful stream reclamations and enhancements are constructed to function in relative equilibrium with inputs/transport of wood, water, and sediment/bedload that vary in time and space. Therefore, design and construction are dependent on adequate modeling of these three inputs. Even with careful effort, risk of improper function can result leading to negative outcomes, such as erosion, incision, bed aggradation, channel widening, etc. This risk has been acknowledged in the DSEIS stream design report. Once completed, these stream constructions/restorations require ongoing evaluation and monitoring to ensure proper function until they are established and stable. EPA encourages that the FEIS include the best available data and modeling methods for the stream reclamation/enhancement effort. EPA further recommends following a rigorous monitoring effort, particularly following large precipitation events (e.g., rain-on-snow) to ensure that this restoration can be realized in the long-term. We recommend that these measures be identified and committed to in the FEIS.	FIS	Performance monitoring for stream channel restoration and overall reclamation would be requirements under the Reclamation Closure Plan and its associated stream design that would be components of the Forest Service decision on the Project. This general reclamation monitoring would include completion reporting and inspections for erosion, slope stability, surface water drainage, soil performance, vegetation, and sediment. Specific monitoring for the restored stream channels would include channel conditions, habitat conditions, riparian vegetation establishment, and functional assessment.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	47	Mitigation for Tissue-based Mercury Criteria Exceedances The DSEIS states “[f]or mercury, while the predicted concentrations do not exceed the aquatic life criterion based on water column, it is uncertain whether incremental change in water column concentrations beyond baseline would cause fish tissue concentrations to exceed the tissue-based criterion.” This uncertainty directly relates to whether the SGP would result in exceedances of Idaho’s EPA-approved fish tissue-based human health criterion for mercury. The 2014 NMFS Biological Opinion for Idaho’s water quality standards for toxics concluded that the aquatic life criterion is not protective of aquatic life and that it is unlikely to be protective of the human health fish tissue criterion. Therefore, EPA recommends that this uncertainty be addressed by including a mitigation measure to section 4.12.3 that would require mercury monitoring and analysis to determine whether the incremental changes could result in exceedances of the tissue-based mercury human health criterion over time and that adaptive management occur if exceedances are predicted. EPA also recommends the FEIS include this mitigation along with a list of potential adaptive management measures or mercury offsets.	FIS	Monitoring for mercury in surface waters would be a requirement of the Water Resources Management Plan that would be a component of the Forest Service decision on the Project. These results would be used to verify and assess potential project effects on mercury concentrations pertaining to water quality and fish. Direct monitoring of mercury in fish tissue would not be included in this monitoring effort due to the inability to determine the precise sources of mercury encountered by individual fish that may be resident or migrating.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	73	Fish Resources and Fish Habitat • The DSEIS states “[t]he SGP area could experience natural climate change impacts to fish resources...” EPA recommends the FEIS clarify and/or rephrase this sentence to either remove “natural” from the sentence or clearly identify what is meant by “natural climate change.”	FIS	Text revised to remove 'natural' in Section 4.4.2.2 of the Final EIS under the Climate Change Impacts to Analysis Area - Fish Resources and Fish Habitat section.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	5	Consistent with the Tribes' Snake River policy, the Tribes' Fish and Wildlife Department developed the following mission statement to provide additional guidance to program managers and Department personnel. The mission of the Shoshone-Bannock Tribes Fish & Wildlife Department is to protect, restore, and enhance, fish and wildlife related resources in accordance with the Tribes ' unique interests and vested rights in such resources and their habitats, including the inherent, aboriginal and treaty protected rights of Tribes members to fair process and the priority rights to harvest pursuant to the Fort Bridger Treaty of July 3, 1868 (15 Stat. 673). The Department is guided by a collective Tribal vision for responsible management, creating and implementing programs for fish, wildlife and their habitats. Through holistic action implementation the Department engages each year in habitat restoration, vegetation management, technical consultation, production measures, research, monitoring and evaluation efforts for a variety of species. Using the best available science, traditional ecological knowledge, and integrated and innovative project planning the Department is able to deliver a wide-array of technical expertise for fish, wildlife, and plants. Our initial	FIS	No further response required. General in nature or position statement.

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			assessment of the project Proposal does indicate that perpetual landscape level disturbances are likely, and that long-term (100+ years) impacts will occur for a number of culturally important species and their habitat.		
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	9	ESA-Listed Anadromous and Resident Fish The species 'at-risk' from Project actions creating near-term extinction risks are anadromous fish species (Snake River Spring Summer Chinook and Snake River Steelhead), as well as resident fish (Bull Trout); all of which are listed under the Endangered Species Act. The SEIS notes that once mitigation measures are balanced this Project will not improve species habitat, passage, or their respective populations; in fact, the SEIS confirms that once all factors are considered this Project will have a negative impact on these species and their habitat. The Tribes recommend including legally-binding, specific actions in the Final EIS and Record of Decision that require the Project Proponent to commit to: a specific timeline for all restoration actions, a fully funded fisheries program that engages in active mitigation throughout the project life and is required to meet specific metrics for all life cycles of each species, and, a fully vested stewardship fund to address legacy mining issues in the post-closure period.	FIS	This is an incorrect characterization of the SDEIS. The SDEIS shows that removal of the barrier upstream from the Yellow Pine pit as well as updating the box culvert would increase fish passage, and that restoration and enhancement activities would improve species habitat.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	10	The Tribes have significant reservations about the overall reliance on the bypass system for fish passage, particularly because this type of bypass has not been demonstrated as effective for anadromous fish. Typical bypass systems are definitely more labor intensive (i.e. trap and haul programs) and typically require on-site personnel for long periods of the field season; although the Project relies on an untested bypass system, more conventional solutions may be required. It is clear that connected watersheds provide the greatest opportunity for anadromous colonization and recruitment above the project, and the Tribes are supportive of removing the legacy passage barrier; however, utilizing untested methods may result in significant expenditures for 'mitigation' without realizing any real species benefit. The expansive nature of the Project includes a landscape level modification that requires a commensurate level of evaluation for impacted species to fulfill the adequacy requirements of the NEPA process.	FIS	While it is correct that the success of the fishway tunnel would not be known until it is constructed and operated, the guidelines used in the design of the fishway tunnel follows both NMFS guidelines for fish passage as well as incorporated construction components affecting flow and velocity that meet the conditions needed for bull trout passage.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	11	The Project utilizes a relatively complicated formula to provide for large-scale passage barriers from current mining operations, in exchange for removing passage barriers through untested means (i.e. fish bypass system). This leads the SEIS to conclude that the effect on fish will be ultimately negative, but largely mitigated; without including basic assumptions about the cumulative effects of climate change and increased stream temperatures. In addition to this oversight in the modelling, there are also uncertain assumptions about the beneficial effects of riparian planting for 'cooling' measures given the results from analogous restoration actions in the Salmon River basin. In short, the SEIS reveals significant risks to listed species that are not mitigated through the Project plans; leading the Tribes to conclude that this Project is not in the best interests of these species or our membership.	FIS	Section 4.12.2.2 qualitatively discusses the effects of climate change on stream temperature and fish habitat. Incorporation of climate change into the predictive modeling is outside the scope of the EIS.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	6	Hazardous spills are certain to occur and the effects to fish from spills are underestimated. We question why project-specific spill risk calculations for number of spills and spill probability are not included in the SDEIS. This is an industry standard and should be calculated for the life of the project.	FIS	As described in Section 4.12.2.2 (Spill Risk) and Section 7.2.3.1 of the Fisheries and Aquatic Habitat Specialist Report, spill impacts assumptions are based on hazardous materials BMPs and rapid spill response as integral components of the Project. The SDEIS does not assume a spill would or would not occur but assesses spill risk over the active mine life to fish populations at locations where a spill impacting waters could occur. Additionally, the SDEIS and Fisheries and Aquatic Habitat Specialist Report do not include fuel spills impacting streams located at a distance greater than 0.5 miles from the spill location.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser	18871	7	For a variety of mine-related environmental changes, stream temperatures will increase up to 6.8 degrees C (12 degrees F). This degradation does not include the effects of climate change. High elevation, coldwater habitat is becoming increasingly rare throughout the Intermountain West. Climate models show that only the highest elevation habitats will support bull trout and westslope cutthroat into the future. These changes will surely affect anadromous species that inhabit the drainage as well. Long term effects of this temperature change could push already listed species further towards extinction. At a minimum, hundreds of generations of salmon and trout are likely to perish over time.	FIS	The highest water temperature changes occur in Meadow Creek upstream from the TSF barrier between Mine Year 22 and Mine Year 27. Fish would not be able to access this reach, and therefore would not be affected by these high temperatures. Downstream of the TSF barrier, where there would be salmonid presence, water temperatures would be consistently lower than baseline conditions.

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(Idaho Wildlife Federation)			Shading from plantings is supposed to bring temperatures down, but only after 100 years. Even that could be an optimistic estimate considering the lack of growth media available for the project.		Section 4.12.2.2 qualitatively discusses the effects of climate change on stream temperature and fish habitat. Incorporation of climate change into the predictive modeling is outside the scope of the EIS.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	8	Habitat will be decreased and made less optimal for bull trout, salmon, and cutthroat. Decreased and suboptimal fish habitat will result from mining activities, despite claims of mitigations, including removal of passage barriers and an increase of lake habitat for bull trout. For bull trout, given their temperature sensitivity, they are losing in all aspects. Following closure and reclamation, there will be a "net decrease in both quantity and quality of habitat for bull trout and westslope cutthroat trout." Even though the SDEIS states that there will be MORE habitat available for Chinook salmon, it will be considered "less optimal habitat." Chinook may be temporarily or permanently displaced from several mine streams.	FIS	As described throughout Section 4.12 of the SDEIS, access to available habitat would be increased as a result of the Project, and following restoration and enhancement activities, habitat conditions would improve. While not factoring in climate change, water temperatures are expected to regulate or even decrease over time.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	9	Upper streams will be blocked and inundated by millions of pounds of mine waste. The proposed, 1-mile tunnel is heavily relied upon to open up miles of habitat upstream of and around the mine that will supposedly compensate for the waste dump. The tunnel is highly engineered, has had a lot of money and good thought put toward its construction. But it is fraught with uncertainties and unproven success for Chinook salmon, steelhead, bull trout, and cutthroat. It is questionable that resident species of trout and salmon will use the tunnel when in operation. It is unclear where this has been verified to be successful for fish transport. Bull trout, for instance, have been known to not use short fish ladders that allow passage around water diversions, let alone a mile long tunnel. A detailed discussion of possible mortality and fish movement, including trap and haul, is necessary.	FIS	While it is correct that the success of the fishway tunnel would not be known until it is constructed and operated, the guidelines used in the design of the fishway tunnel follows both NMFS guidelines for fish passage as well as incorporated construction components affecting flow and velocity that meet the conditions needed for bull trout passage.
Amelia Weber	18155	2	The SGP will have adverse effects on Chinook salmon and bull trout. Given the billions of dollars spent on Snake River salmon recovery, this project represents a severe risk and flies in the face of this investment and effort to restore these species to a sustainable population. Stream temperatures are predicted to be elevated for up to 100 years within the mine site boundary and the habitat for these sensitive species will be for the worse, not better, as a result of this project.	FIS	SDEIS Section 4.12.2.2 describes the effects of the Project on Fish and Aquatic Resources. There would be a net increase in available Chinook salmon habitat and a net decrease in available bull trout habitat. These effects are incorporated into the Section 7 consultation for ESA species and would be addressed via measures coming out of that consultation.
Jolie Drake	18929	6	Beyond surviving the threat of pollution, native and endangered fish species must successfully navigate the East Fork of the South Fork of the Salmon River (EFSFSR) to reach their crucial spawning grounds. Today the Salmon River flows directly into the Stibnite pit, where 80 feet of collected toxic sediment blocks a major migratory route, cutting off the spawning passage entirely. Perpetua plans to build a 0.9 mile long tunnel fishway to allow fish to swim back to historical spawning areas for the first time in over 80 years. This tunnel will feature resting pools, riffles, simulated river hydraulics, artificial lights, and low water velocities, yet it will travel directly below a large open pit of toxic mine tailings and chemicals. While this might sound promising to investors and the public, it is not without controversy and risk, nor has a complete fishway like this ever been tested, other than at the individual component level. The true impact of such a long, underground, artificial passage on endangered fish, and their ability to successfully spawn, remains unclear.	FIS	Flow in the fishway comes from the East Fork SFSR which is diverted around the open pit by the tunnel and does not contact mine tailings. Fishway operations include monitoring of fish migration and management measures if tunnel performance varies from its design intent.
Deantha Skibinski, Executive Director, Alaska Miners Association	18899	2	The SGP will Make Significant Fish Habitat Improvements Given the importance of salmon to Alaskans, AMA's comments on the DEIS focused on Perpetua's commitment to reestablish a viable fish passageway and restore fish migration in the East Fork of the South Fork of the Salmon River (East Fork). Our comments on the SDEIS will also focus on the significant fish habitat improvements that will result from the SGP. AMA continues to be impressed with Perpetua's commitment to improve stream and fish habitat conditions at in the SGP area. The proposal to construct Stibnite Lake in the backfilled Yellow Pine Pit, which Perpetua added to in its October 2021 updated Plan of Operations (the ModPRO 2)1, will further enhance fish habitat in the Stibnite mine area. Perpetua added Stibnite Lake to the ModPRO2, in response to concerns raised in public comments on the DEIS about the loss of lake habitat for fish that the Yellow Pine Pit Lake currently provides. Stibnite	FIS	The Executive Summary is intended to summarize the effects analysis presented in Section 4.12 and in Table 2.8-1. The information regarding how effects on fish would be realized and mitigated appear in those sections.

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			<p>Lake will also help mitigate temperature fluctuations in this segment of the East Fork. Perpetua and the Forest Service deserve credit for using these public comments to refine the ModPRO2 for the SGP to provide additional habitat improvements and ecological benefits. This modification to Perpetua’s project proposal</p> <p>is an excellent example of how public comments received during the NEPA process can improve and refine a proposed project.</p> <p>The cascade that flows into the Yellow Pine Pit has created an insurmountable barrier to fish migration for over 80 years. The opportunity to remove this barrier and ultimately reconstruct the East Fork is both exciting and laudable. Perpetua’s mine plan includes the above-and-beyond conservation measure to construct a fish passageway tunnel in conjunction with building the diversion channel to route the East Fork around the pit as the first step in preparing to mine the Yellow Pine Pit. This fish passageway tunnel</p> <p>will enable volitional fish migration for the first time in four decades while the Yellow Pine Pit is being mined. Permanent and sustainable post-mining volitional fish migration will be achieved when backfilling of the mined-out Yellow Pine Pit is completed and Perpetua reconstructs the East Fork across the</p> <p>backfilled pit where it will become a meandering stream that flows through Stibnite Lake.</p> <p>AMA is concerned that the Executive Summary in the SDEIS does not mention that Perpetua added Stibnite Lake to the MMP to mitigate the loss of the fish habitat that the Yellow Pine Pit lake currently provides. Stibnite Lake is a significant conservation measure that should be discussed in the Executive Summary.</p> <p>Figure 4.12-1, “Stream Channel Changes During Construction, Active Mining, and Reclamation/Restoration Phases,” documents the numerous restored stream segments resulting from the MMP. The Executive Summary should include a copy of Figure 4.12-1 or at least mention it so that readers can readily understand how the SGP will improve riparian and fish habitats. Additionally, the Executive Summary should give credit to Perpetua for adding Stibnite Lake to the MMP in response to public comments on the DEIS.</p>		
Deantha Skibinski, Executive Director, Alaska Miners Association	18899	3	In the Final EIS, AMA suggests that the Forest Service clarify the vocabulary used to describe the fish passageway tunnel. Throughout much of the SDEIS, the fish passageway tunnel is called “the tunnel” without mentioning that it will be built as a fish passageway. Specifically, in Chapter 4, the first description of the tunnel as a “fishway” does not occur until Page 4-334. Some readers may not understand that the “tunnel” (without qualification) and the “fishway” are the same structure. The Final EIS should more consistently and clearly describe the tunnel around the Yellow Pine Pit as a fish passageway tunnel.	FIS	The reference to the tunnel is consistent with the language used in the 2021 MMP. In addition to being a fish passage, the tunnel is also the means for diverting the East Fork SFSR around the Yellow Pine pit operations.
Deantha Skibinski, Executive Director, Alaska Miners Association	18899	4	<p>Moreover, the discussion of the tunnel in Chapter 4 generally reads as if this tunnel may create adverse impacts to fish rather than emphasizing it will provide immediate passage for chinook salmon, bull trout, and steelhead to miles of stream habitat that have been blocked for over 80 years by the Yellow Pine Pit and the cascade into the pit. Section 4.12 of the SDEIS, “Fish Resources and Fish Habitat,” is difficult for the public to understand because it obscures the overarching conclusion that the stream restoration measures in the MMP will improve fish habitat. The tone of this section lacks objectivity because it does not present an appropriately balanced discussion of the potentially adverse impacts versus the significant benefits that would result from constructing the fish passageway tunnel around the Yellow Pine Pit early during project operation and reconstructing the East Fork channel through the backfilled Yellow Pine Pit in about ten years.</p> <p>The absence of balance and objectivity are especially evident in the No Action discussion in Section 4.12.2.1, which fails to acknowledge that under the No Action Alternatives, the barrier to fish migration created by the cascade into the Yellow Pine Pit would remain in place – perhaps for decades – and East Fork would to continue to be disrupted by the Yellow Pine Pit. Instead, Section 4.12.2.1 states that no</p>	FIS	SDEIS Section 4.12 describes the various individual effects of the Project on fish species, including both positive and negative effects. The analysis for each individual fish species concludes with a summation of effects that describes the aggregate of beneficial and adverse effects on fish and fish habitat. This aggregation depends on analyzing the various Project aspects individually then develops a balance between the effects as part of its conclusions.

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			<p>negative impacts to fish or fish habitat would occur if the MMP is not built and inappropriately omits any discussion of the habitat restoration and water quality improvements that would not occur without the project.</p> <p>Although the stream restoration/fish habitat benefits (e.g., the perennial stream segments that would be restored) are clearly shown in Figure 4.12-1, the SDEIS discusses this figure in a distorted way that fails to properly describe the net improvements. The text lumps “dewatering, restoration, and enhancements” together and mentions “impacts to fish” without qualifying the impacts as beneficial:</p> <p>The SGP would result in stream channel changes, including dewatering, restoration, and enhancements within the active mine area (Figure 4.12-1). Physical alterations to stream structure from the SGP that would result in impacts to fish generally fall into three phased categories construction, active mining, and reclamation and restoration. Page 4-433</p> <p>A clearer and more complete discussion would explain that Figure 4.12-1 illustrates the project area stream channels that would be restored as a result of the MMP and state that these restoration measures are expected to be beneficial to fish and fish habitat.</p>		
Deantha Skibinski, Executive Director, Alaska Miners Association	18899	5	<p>The integrated effects to bull trout discussion on Page 4-378 is another example of an incomplete and confusing narrative that includes internally inconsistent statements. First it says there will be adverse impacts to bull trout: “Post-closure, a net decrease in quantity and quality of bull trout habitat would occur despite removal of passage barriers and an increase of lake habitat for bull trout,” but then lists the following <i>beneficial or mitigated</i> impacts to bull trout:</p> <ul style="list-style-type: none"> • Changes to water chemistry would primarily have minor effects but would have an unknown level of beneficial effects through the reduction of arsenic and antimony. • The loss of the Yellow Pine pit lake would result in a net long-term impact² to bull trout, but a permanent negligible net change once the Stibnite Lake is constructed by Mine Year 11. The construction of the fishway, and subsequent channel restoration of the East Fork SFSR, would provide volitional access to habitat that was not previously accessible to the adfluvial population, which may provide additional spawning habitat. Additional enhancements to the East Fork SFSR and Meadow Creek would provide additional habitat benefits. • The removal of barriers would provide access to upstream habitat not previously volitionally accessed. This would result in a benefit to bull trout. A new barrier would be constructed in Meadow Creek along the TSF, • which would result in blockage. Overall, there would be a net increase in accessibility to habitat for bull trout. • There would be a minor net increase in occupancy potential for bull trout. <p>This discussion should be clarified in the Final EIS to make it easier to understand the streams where there will be benefits to bull trout and those stream segments where there will be new barriers or temperature impacts to bull trout. The Final EIS should be more balanced and give equal treatment to beneficial and adverse impacts. For example, rather than saying: “Post-closure, a net decrease in quantity and quality of bull trout habitat would occur despite removal of passage barriers and an increase of lake habitat for bull trout,” the Forest Service should consider editing this to say:</p> <p>“Post-closure, there would be an improvement in quantity and quality of net bull trout habitat in the East Fork SFSR due to the restored East Fork SFSR stream channel in the backfilled Yellow Pine Pit and the addition of Stibnite Lake to the MMP to replace the function of the fish habitat in the current Yellow Pine Pit Lake and to minimize temperature fluctuations in the East Fork SFSR in and downstream of the SGP. Although the TSF would create a new barrier in Meadow Creek to bull trout, overall there would be a net increase in accessibility to habitat for bull trout and a minor increase in occupancy potential for bull trout.”</p>	FIS	<p>The SDEIS Section 4.12 accounts for multiple effects of the Project on bull trout and other fish species that vary over time during the construction, operation, closure, and post-closure periods. The description of these effects often vary by Project phase and by the specific metric applied to analyze a specific effect. Effects may be adverse during one phase of the Project while being beneficial during another phase of the Project. The SDEIS analysis describes each effect during each phase. The analysis for each individual fish species concludes with a summation of effects that describes the aggregate of beneficial and adverse effects on fish and fish habitat. This aggregation depends on analyzing the various Project aspects individually then develops a balance between the effects as part of its conclusions.</p> <p>While volitional fish passage due to the removal of barriers is a prominent consideration in the analysis, it does not represent the sole effect considered when assessing potential impacts to fish and fish habitat. Therefore, the information in Figure 4.12-1 is informative to the analysis but is not determinative for all aspects of the analysis.</p>

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			Section 4.12 in the Final EIS should make better use of Figure 4.12-1 to clearly describe the stream restoration accomplishments in numerous segments of the East Fork, Meadow Creek, and the East Fork of Meadow Creek. Section 4.12 presents a great deal of information that would benefit from a careful editing to better organize this section and to include a summary that clearly discusses the stream restoration benefits shown in Figure 4.12-1.		
Leah K. Corrigan	19000	11	<p>The DEIS fails to take a hard look at impacts on fisheries and special status fish species</p> <p>The DEIS indicates that the project will result in significant adverse effects on fish species protected under the Endangered Species Act.</p> <p>The short comment period and the complexity of the DEIS precluded me from having the time needed to thoroughly review the analysis of impacts on fish species and fish habitat, and to prepare substantive comments outlining my substantial concerns about the impacts of the proposed project on fish species and fish habitat. However, based on the review that I have had time to complete, I am extremely concerned about the potential impacts of the action alternatives on fish species, particularly endangered species.</p> <p>Implementation of any of the action alternatives is inconsistent with the Forest Service’s obligation to ensure viable and resilient fish habitat in the East Fork of the South Fork river and downstream. The FS should make protecting undisturbed fish habitat, particularly for endangered fish species, a top priority, and avoid authorizing actions, such as the actions described in all of the action alternatives in the DEIS, that are inconsistent with protecting the best remaining fish habitat in the ESFSF and restoring the rest.</p> <p>The action alternatives will have significant impacts on four special status native salmonids that are protected under the endangered species act, or are species of management concern. All of these species require cold, clear, clean running water and unobstructed migration pathways to complete their life cycles. The DEIS determines that the project will adversely affect bull trout, Chinook salmon, steelhead and their critical habitats, and may indirectly impact Westslope cutthroat trout.</p> <p>The DEIS indicates that the action alternatives will have major negative impacts on special status fish species. Meadow and Fiddle Creek support populations of native fish species listed as threatened under the Endangered Species Act. These streams also contribute to the health of downstream river ecosystems. It’s difficult to overstate the potential negative impacts of destroying these streams by filling the valleys they flow through with waste rock and toxic tailings. The action alternatives will decrease total habitat availability for bull trout, due to decrease in streamflow, increase in stream temperatures and blockage of access to critical habitat in Upper Meadow Creek in perpetuity. Critical habitat for bull trout will decrease by 28-70%. The overall net effect of the project will be a loss of both quantity and quality of habitat for Chinook salmon, following closure and reclamation. A decrease in Chinook salmon productivity will result from a decrease in water flow and an increase in stream temperatures. Critical habitat for Chinook Salmon will be reduced by up to 26%. Westslope cutthroat trout would suffer from loss of suitable habitat due to stream channel changes and direct effects to individuals. Steelhead will suffer from loss of 1.91 km of habitat in Upper Meadow Creek that will be blocked in perpetuity, and may also suffer injury or mortality to individuals.</p> <p>While it is clear from the DEIS that the action alternatives will result in substantial harm to these special status fish species, the analysis in the DEIS is flawed, and underestimates the potential negative impacts of the project on these species.</p>	FIS	Project effects on ESA fish species are described in SDEIS Section 4.12.2.2. The changes in critical habitat described in the comment are not consistent with EIS analysis which shows little change or an increase in the amount of habitat.
Leah K. Corrigan	19000	12	The DEIS describes the “Fish Analysis Area” to include waters downstream of the mine. However, the analysis of impacts on fish species does not include analysis of potential impacts in waters downstream of the mine. This is problematic because there is high potential for the impacts of reduced water quantity, reduced water quality, increased sediment, and chemicals that may be introduced into the river system (and persist in sediment and in the food chain for long periods of time) to extend long distances downstream from the mine site.	FIS	SDEIS Section 4.9.2.2 describes the water quality effects of the Project. Water quality effects extending to wilderness areas downstream of the Project area are not anticipated.

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Leah K. Corrigan	19000	13	In addition, while the DEIS discloses that the action alternatives will result in direct loss of substantial amounts of habitat (including critical habitat), for fish species that are listed as threatened under the Endangered Species Act, there are no specific mitigation measures proposed to minimize the adverse impacts of such substantial loss of habitat for these species. Vague and general mitigation measures do not meet the requirements to minimize adverse impacts. Mitigation measures must be specific, described in detail, and likely to be effective at minimizing impacts.	FIS	Mitigation measures for ESA species are a component of the Section 7 consultation currently underway that informs the ROD. SDEIS Chapter 6 describes the status of that consultation.
Leah K. Corrigan	19000	14	The proposed project will result in changes in water quantity and water temperature that will have significant impacts on fish species, including endangered fish species. The DEIS does not provide an adequate analysis of how climate change, increased frequency and intensity of wildfires, drought, increased intensity and frequency of pine and spruce beetle outbreaks and other factors will act in concert with the reductions in water quantity and shade resulting from the proposed project to cause significant cumulative impacts on water temperature and fish populations.	FIS	The EIS includes monitoring and mitigation measures that would be required by the ROD to address water temperature effects that vary from current predictions.
Leah K. Corrigan	19000	16	The action alternatives will create new, permanent barriers to natural fish movement. In addition, measures to maintain fish passage over the life of the project are unproven, and there is no data to suggest that these measures are likely to be effective. The analysis of impacts should describe the possible impacts of a worst case scenario, wherein these measures are ineffective. In addition, the Payette and Boise NF Forest Plans have Standards that indicate that the FS should “not authorize new surface diversions unless they provide upstream and downstream fish passage” (DEIS Appendix A). The Stibnite Gold Project has proposed a Forest Plan amendment to this standard, to “Suspend the requirement of new surface diversions to provide upstream and downstream fish passage within the footprint of mining operations.” The standards in the Land and Resource Management Plan were designed, with substantial public input, to provide for multiple use while protecting valuable resources, including special status fish species. The FS should not amend its plans to please a single project proponent at the expense of all of the members of the public who participated in developing the Land and Resource Management Plans.	FIS	The Project includes a Fishway Operations Management Plan that includes measures to maintain fish passage in the event that the fish passages do not function as intended. The Forest Service would use a project-level Forest Plan Amendment with regard to fish passage requirements for the Project area to align the Forest Plan with requirements to review proposed mining plans.
Leah K. Corrigan	19000	17	The DEIS does not provide an adequate analysis of what percentage of the total population of each special status fish species present in the Salmon River and its tributaries, will be impacted by the project, or how this will affect long-term species viability. The Forest Service should complete a new or supplemental EIS to address these issues.	FIS	Section 4.12.2.2 describes the effects of the Project on fish occupancy in the Occupancy Probability modeling sub-sections.
Leah K. Corrigan	19000	18	The Forest Service should also have consulted with the U.S. Fish and Wildlife Service, and provided the public with a copy of the resulting Biological Opinion.	FIS	SDEIS Chapter 6 described the status of the ongoing consultation with the USFWS. Their Biological Opinion will inform the ROD for the Project.
Joseph Pietri	19062	2	I am in solidarity with the Nez Perce Tribe and have a firm belief they have been the best stewards of these lands for Millenia. The significant investment of time and money in restoring Fish Habitat to the area's watersheds will be threatened and one spill or mishap can undo their efforts where they had invested for years, with time, money and a commitment to bring back fish populations to the East and South Forks of the Salmon River. How can Perpetua assure the Tribe and Public they won't undo the good work invested?	FIS	There are multiple mitigation measures and design features focused on creating improved habitat or at a minimum, not degrading habitat for salmonids. These are described in Section 2.4.9 in the SDEIS and Section 2.4 of the Fisheries and Aquatic Habitat Specialist Report.
Joseph Pietri	19062	5	I am concerned things like the Divergent Fish Tunnel won't work be done on the concept?	FIS	While it is correct that the success of the fishway tunnel would not be known until it is constructed and operated, the guidelines used in the design of the fishway tunnel follows both NMFS guidelines for fish passage as well as incorporated construction components affecting flow and velocity that meet the conditions needed for bull trout passage.
Mark Stockton (Vice President of Sustainability, Integra Resources)	19145	3	Perpetua Resources has intentionally designed its project to clean up an abandoned mine site. The company is even proposing addressing environmental issues, like Blowout Creek, that are outside of its project footprint. This is not required of the company but a testament to its desire to leave the historical Stibnite Mining District better than they found it. The company's fish passageway is yet another example of Perpetua's desire to bring solutions to the project site early on. Fish have been blocked from their native spawning grounds by the Yellow Pine pit since the 1930s. Perpetua plans to restore the natural pathway of the East Fork of the South Fork of the Salmon River when it is done re-mining the	FIS	No further response required. General in nature or position statement.

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			pit, this will permanently reconnect migration channels. However, the company decided that wasn't fast enough, so they are going to invest millions of dollars in creating a temporary passageway to get fish back to their spawning grounds before mining begins.		
Karen Balch (North Fork Veterinary Service)	19228	4	Mining as proposed by the Stibnite Gold SDEIS profoundly threatens the quality and inherent safety of surface water and ground water. Contaminated water (containing arsenic, antimony, and mercury) in turn literally endangers all downstream micro-biota, aquatic habitats and species, including Snake River Chinook Salmon, Snake River Steelhead Trout, and Columbia River Basin Bull Trout. All these fish are legally designated "threatened" under the Endangered Species Act. Fish and fresh-water crustaceans are one of the most common sources of methylated mercury that can biomagnify or concentrate throughout trophic levels of food chains, including avian and mammalian species, and humans via food consumption. Heavy-metal pollution starting at the headwaters of the East Fork South Fork Salmon River contaminates all downstream waters, ie. creeks, streams, tributaries, rivers ultimately amassing at the Columbia River into the Pacific Ocean, the destination of the anadromous fishes – Chinook salmon and steelhead. With Chinook salmon estimated as 90 percent of Orca whales' diet, decreased numbers of salmon for food in part are causing starvation and disease in these magnificent animals.	FIS	No biomagnification model applicable to the Project was available. Impacts to fish health were inferred based on modeled water chemistry relative to baseline and modeled exceedances of IDEQ's strictest potentially applicable surface water quality standards. As stated in the SDEIS, impacts of long-term mercury methylation and biomagnification in downstream waters are unknown. However, the potential for mercury methylation in surface water departing the SGP is not changed compared to existing conditions and therefore, Project-related effects on methylation downstream are not anticipated.
Karen Balch (North Fork Veterinary Service)	19228	9	Midas Gold's proposal to bury the EFSF Salmon River and reroute legally "threatened" Chinook salmon, steelhead, and other fishes through a mile-long concrete tunnel is experimental at best with little to no supporting science. How would this tunnel effect other wildlife, such as bobcats, bears, wolves that could be swept in and possibly drown or be entrapped by materials that could collect in this tunnel? I request that all studies on the use and efficacy of "tunnels" be made available.	FIS	While it is correct that the success of the fishway tunnel would not be known until it is constructed and operated, the guidelines used in the design of the fishway tunnel follows both NMFS guidelines for fish passage as well as incorporated construction components affecting flow and velocity that meet the conditions needed for bull trout passage. Additionally, there is minimal to no risk to large wildlife. A trash rack would be constructed near the upstream entrance to the tunnel to prevent material from entering the tunnel. This trash rack would also preclude the sweeping of large mammals into the tunnel. An analysis of tunnel effectiveness was prepared for Perpetua by Barrett (2017). This reference been added to the Project description in the Final EIS.
Joel Drake	19251	7	Importantly, Warm Lake is home to a unique, highly sensitive fish species. It is commonly known that the native Kokanee salmon in Warm Lake is genetically unique to only Warm Lake. Concern for this species is on par with the widely-voiced and published concerns for Chinook salmon, bull trout, and cutthroat trout. "The 1990 sample from Warm Lake was quite distinctive, bearing little genetic similarity to any of the stocks known or likely to have been planted there. The distinctiveness and the low level of genetic variability found in this sample are consistent with the hypothesis that it represents a native gene pool that has been isolated ..." [source: Population Genetic Structure and Life History Variability in <i>Oncorhynchus nerka</i> from the Snake River Basin, p.729] https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1477&context=usdeptcommercepub]	FIS	Warm Lake is not directly affected by the Project. There may be some effects caused by runoff from the existing road (Warm Lake Road); however, the risk of spill in this region is low, as described in Section 4.12.2.2 (Spill Risk) in the SDEIS and Section 7.2.3.1 (Spill Risk) in the Fisheries and Aquatic Habitat Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	660	"Reasonably foreseeable future actions that could cumulatively contribute to fisheries and aquatic habitat impacts in the analysis area include: " Section 5.12.3 says "Improvements to fish ORVs would likely result from the RFFAs." Please include that in this section as well.	FIS	Text revised as requested.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	661	"Stallion Gold Horse Heaven Project " Please remove reference to this project in this document, including in Section 5.12.1 below. It does not meet the definition of RFFA per 36 CFR 220.3.	FIS	Revision not accepted. The Stallion Gold Horse Heaven Exploration Project does meet the criteria to be considered as an RFFA.
Alan Haslam (Vice President, Permitting,	19325	662	"These previously approved activities include construction of several temporary roads (approximately 0.32 mile of temporary roads) to access drill sites (total of 28 drill sites), drill pad construction (total of	FIS	Text revised to remove '(total of 182 drill pads)'.

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Perpetua Resources Idaho, Inc.)			182 drill pads) and drilling on both Forest Service and private lands at and in the vicinity of the SGP. " Please clarify that this is a rolling disturbance limit not 182 drill pads all at once.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	663	" Some of the RFFAs (Table 5.1-2) " Table 5.1-2 does not include RFFAs, rather it includes impact types and effects. Please edit to "Some of the effects of some RFFAs..."	FIS	Revision not accepted. Table 5.1-2 does include the RFFAs considered.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	41	"For fish and aquatic habitat, the important factors involve the removal and placement of barriers such as the Yellow Pine pit and TSF/TSF Buttress (which affect species differently), the modifications in surface water management and flows at the mine site, fish access through the East Fork SFSR tunnel, and stream channel restoration effects on stream temperature ." Please also include effects on habitat .	FIS	Text revised as requested.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	42	"However, stream temperatures are increased in restored stream channels until revegetation establishes to provide riparian shading for the streams. " Please be specific. Maximum stream temperatures would largely decrease or remain roughly unchanged for most reaches during operations and closure. Increased maximum stream temperatures would occur on the TSF (Meadow Creek upstream of Blowout Cr) for the life of the project and in the EFSFSR downstream of the YPP barrier for the 7 years between removal of the YPP pond and the proposed creation of Stibnite Lake.	FIS	Revision not accepted. The statement refers to the restored stream channels which would experience temperature increases until vegetation establishes.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	43	"Following closure and reclamation, the overall net effect from the SGP would be a net increase in available habitat; however, flows and temperatures make the additional habitat less optimal ." The WCI analysis shown in Table 3.12-17 and Table 4.12-6 show that temperature WCIs are FR under baseline conditions and either do not change or slightly improve at all WCI-scale reaches. Temperature WCIs remain FR as a result of SGP. Please revise.	FIS	Revision not accepted. The determination is based on the results of productivity modeling rather than WCIs.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	44	"Effects for trout species differ from Chinook salmon following closure and reclamation, as there would be a net increase in both the quantity and quality of habitat for steelhead trout and net decreases in both quantity and quality of habitat for bullhead trout and westslope cutthroat trout. " Net decrease for bull trout is a result of 8.5km of thermally suitable habitat removed from the equation despite reporting generally lower stream temperatures, and despite having 8 metrics evaluated as 4 beneficial, 2 negative, and 2 negligible. Net decrease for cutthroat trout is incorrect as noted in Ch 4. Given 6 criteria evaluated, 4 were reported to have a benefit and 2 with negligible change; one could reasonably expect that would equate to increased quality and quantity of habitat not decreased. Please revise this passage.	FIS	Revision not accepted. The description is based on a summation of impacts rather than a count of individual metrics.
Jon Robison	19330	4	Second, I am worried about effects from mining activities to water quality and diminished fisheries from habitat loss and unsuitable temperatures. Even if I don't fish near the mine site, these fish are highly mobile throughout the system and a "mortality sink" at the mine site could mean reduced fishing opportunities for me along the SF Salmon, EFSF Salmon, and Johnson Creek. The Forest Service should develop another alternative that avoids impacts to fisheries and reduces the time until full recovery can occur. No Forest Plan amendments should be allowed.	FIS	The 2021 MMP was developed to improve on the originally preferred alternative in the DEIS, and to result in lower water temperatures. No new alternative has been developed.
Jon Robison	19330	7	I am also concerned about the century that it will take for the water to be cold enough to support fish, if everything goes according to plan.	FIS	As shown in Table 4.12-2 in the SDEIS and Table 7-5 in the Fisheries and Aquatic Habitat Specialist Report, water temperatures in most locations are reduced relative to the baseline conditions by Mine Years 6 to 10.
Michael Gibson (Trout Unlimited), Aaron Lieberman	18871	5	The South Fork Salmon River (SFSR) ecosystem is home for steelhead, salmon, bull trout, and cutthroat trout, of which steelhead, salmon and bull trout are listed under the Endangered Species Act (ESA). Even with past mining impacts and other stressors, populations of all 4 of these fish persist in the	FIS	The Forest Service has conducted formal Section 7 consultation with both USFWS and NMFS for the SGP.

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(Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)			landscape impacted by the SGP. This is remarkable and is worthy of maintaining and stewarding for future generations. While the SDEIS readily admits to anticipated, significant adverse impacts to listed species and critical habitat, it is unclear how the project could proceed without running afoul of the strict requirements in ESA. To comply with Section 7 of the ESA, it is clear from the SDEIS and the proposed action that the Forest Service must engage in formal consultation with both FWS and NOAA Fisheries concerning the potential impacts to listed species, especially concerning the impacts to federally threatened Chinook salmon, steelhead, bull trout and their formally designated critical habitats.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	181	There are numerous impacts to fish and wildlife within the IRAs that are associated with ROWs, utilities, and facilities. The diversion of Meadow Creek into a channel and the construction of the TSF embankment will result in, “reduced aquatic habitat complexity and connectivity within Horse Heaven and Meadow Creek IRAs,” (Special Designations Specialists Report, p. 79). The bull trout, westslope cutthroat, steelhead, and Chinook salmon habitat that currently exists in Meadow Creek will be permanently lost and the Forest Service must classify these losses as irreversible and irretrievable.	FIS	The habitat that would be blocked as a result of the TSF barrier does not currently support Chinook salmon or steelhead. Bull trout occur in the headwaters of Meadow Creek, and may be able to survive, but would not have its fish numbers increased through upstream migration. Cutthroat trout would be the most affected by the loss of habitat; however, habitat would still exist upstream and downstream.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	199	9. The SDEIS does not describe what specific substrate monitoring will be done to protect fisheries habitats In the DEIS, Perpetua Resources designated two aquatic monitoring methods — nephelometry and total suspended solids — as their monitoring tools. The Payette and Boise National Forests have for the past 35-50 years used, and are now required under ESA to use, stream substrate monitoring methods — modified McNeil core samples, cobble embeddedness, and free matrix. There are no known correlations between nephelometry, total suspended solids and the three stream substrate measurements. We pointed these discrepancies out in our comments on the DEIS. However, the SDEIS again fails to answer our questions regarding how the two proposed monitoring methods correlate with methodologies required by the Payette and Boise National Forests. Further, the SDEIS fails to describe which monitoring methodologies will be used in the replacement/new construction of culverts and bridge abutments on the Burnt Log and Johnson Creek/Stibnite roads. We question why these methods are not brought forward in the analysis or monitoring portions of the SDEIS.	FIS	As shown in MWH 2017 and Stantec 2018, 2019, and 2020, substrate monitoring was conducted (McNeil core samples, cobble embeddedness and free matrix), following the guidelines established by the Forest Service. As described in Section 2.4.8 of the SDEIS, environmental monitoring would be conducted through an adaptive management process. It is expected that monitoring programs established for baseline data collection would be continued.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	205	Further, a bull trout assessment was completed for the streams in the physical APE of the mine site. However, the Forest Service/Perpetua have yet to complete a bull trout habitat assessment for the streams crossed by the existing and proposed Burnt Log (FR 447) road, which crosses many perennial and perennial fish bearing streams listed as critical habitat for bull trout. This represents a significant gap in baseline data and we recommend that the Forest Service reopen consultation with the USFWS and NOAA Fisheries to determine the existing assessment of bull trout critical habitat within the entire physical SGP APE and the impacts increased sediment delivery could have on these streams and the native fish they support. The full extent of our comments regarding sediment and water quality along the proposed roads/routes, ROWs, and utility locations are attached to this report: Newberry (2022).	FIS	eDNA samples were collected in the larger streams that would be crossed by the proposed Burnt Log route. At crossings in which fish are present or likely present, passage would be constructed. There would be no alteration of stream habitat other than providing suitable passage conditions.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	260	7. The SDEIS inaccurately states the fish ORVs will likely improve as a result from the RFFAs (Reasonably Foreseeable Future Actions) On page 114 of the Special Designations Specialist Report, the SDEIS states that there would be possible degradation of the fish ORV for Burntlog Creek with the Proposed Action (2021 MMP) and for Johnson Creek under the Johnson Creek Route Alternative. It is contradictory to claim that RFFAs will improve fish ORVs when the SDEIS also clearly states that degradation to fish and their habitat will occur.	FIS	The potential improvement in ORVs is related to other RFFAs aside from the Action Alternatives considered.
Samuel Penney (Chairman)	19396	11	Forest lands and waters provide irreplaceable habitat for tribal resources, including imperiled stocks of spring/summer Chinook salmon (<i>Oncorhynchus tshawytscha</i> , nacòx), steelhead (<i>Oncorhynchus mykiss</i> , hey-ey), bull trout (<i>Salvelinus confluentus</i> , islam), westslope cutthroat trout (<i>Oncorhynchus clarkii lewisi</i> , wawa lam) and Pacific lamprey (<i>Entosphenus tridentatus</i> , hesu). Unfortunately, many of the resources sacred to the Tribe are at risk of disappearing on, and downstream of, the Forest. The Project has the potential to further negatively affect these already imperiled treaty-reserved resources.	FIS	No further response required. General in nature or position statement.

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			The Tribe is a co-manager of its treaty-reserved resources. As co-manager, the Tribe has devoted substantial time, effort, and resources to the recovery and management of culturally-significant and threatened resources within its treaty territory, including on the Forest. The mission of the Tribe's Department of Fisheries Resources Management ("DFRM") is to protect and restore aquatic resources and habitats. DFRM's mission will be accomplished consistent with the Nimiipuu way of life and beliefs, which have the utmost respect for the Creator, for all species, and for past, present, and future generations to come. DFRM assists the Tribe's leadership in protecting the rights and resources the Tribe reserved in the 1855 Treaty by conducting research and informing the development of federal, state, and tribal projects and policies. Importantly, these departments also preserve, restore, expand, and manage wildlife populations and their habitat and have completed the following work on the Forest and in the Project area.		
Samuel Penney (Chairman)	19396	12	<p>The Project is located just downstream of the headwaters of the East Fork South Fork Salmon River ("EFSFSR"). The EFSFSR and its tributaries (including Meadow Creek and Johnson Creek) flow through the Project area and across much of the Forest, eventually joining the South Fork Salmon River ("SFSR"). The SFSR eventually joins the Salmon River, which merges with the Snake River at the Idaho-Oregon border on the Wallowa-Whitman National Forest. The Snake River, in turn, flows into the Columbia River just downstream of Pasco, Washington. The Columbia River reaches the Pacific Ocean near Astoria, Oregon.</p> <p>In the 1940s, spring/summer Chinook salmon in the upper EFSFSR were extirpated by mining operations. Populations of Chinook salmon, steelhead, and bull trout in the EFSFSR are threatened; Snake River spring/summer Chinook were listed as threatened under the Endangered Species Act ("ESA") in 1992, Snake River basin steelhead were listed as threatened under the ESA in 1997, and Columbia River bull trout were listed as threatened under the ESA in 1998. Westslope cutthroat trout are listed by the U.S. Forest Service as a Intermountain Region Sensitive Species. Pacific lamprey are critically imperiled in the Snake River Basin and considered endangered by the state of Idaho and an Intermountain Region Sensitive Species by the U.S. Forest Service. The designated critical habitat for Snake River spring/summer Chinook salmon consists of river reaches in the Salmon River and all tributaries presently or historically accessible, including the EFSFSR up to the Stibnite Glory Hole within the Project area. Steelhead critical habitat also occurs throughout the EFSFSR, including up to the Stibnite Glory Hole and in tributaries to the EFSFSR such as Sugar Creek. Historically, fish could volitionally return to areas upstream of the Stibnite Glory Hole. The current exclusion from a critical habitat designation is due to a barrier created by previous mining activities. Streams proposed as critical habitat within the Project area for Columbia River bull trout include the EFSFSR downstream and upstream of the Stibnite Glory Hole at Stibnite as well as its tributaries: Meadow Creek, West End Creek, and Fiddle Creek that are located within the Project area.</p>	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	13	<p>The decimation of fisheries has seriously impacted the tribal economy. Tribal harvest in the SFSR and its tributaries (including the Secesh River, Johnson Creek, and the EFSFSR) typically occurs from mid-June through August. Because the Tribe manages its harvest in a manner protective of ESA-listed fish returns, it closes these fisheries when either fish population numbers are low or the shared harvest allocation (between the state of Idaho and the Tribe) is met. Consequently, the Tribe has taken an active role in restoring Chinook salmon runs in the EFSFSR and the SFSR for over 20 years, with financial support from the Bonneville Power Administration.</p> <p>The Tribe's DFRM spends conservatively \$2.5 million annually restoring Chinook salmon runs in the EFSFSR and SFSR. The Tribe's DFRM restoration activities include hatchery supplementation, fishery research, and watershed restoration. The Tribe's DFRM started an office in McCall, Idaho in the mid-1990s to focus on issues in the SFSR watershed; primarily the EFSFSR and Johnson Creek.</p> <p>The Tribe's DFRM vision¹⁷ needs to be considered in order to understand the following fishery concerns regarding the Project:</p> <ul style="list-style-type: none"> • All species and populations of anadromous and resident fish and their habitats will be healthy and harvestable within Nez Perce Usual and Accustomed areas. 	FIS	No further response required. General in nature or position statement.

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			<ul style="list-style-type: none"> ● Sound fisheries and habitat management actions will be implemented to improve survival, production, recovery, and restoration of all populations of native anadromous and resident fish species and their habitats within Nez Perce usual and accustomed areas. ● The DFRM shall be proactive in an ever-changing ecological and management environment. ● Tribal members' use of and access to all treaty rights and resources guaranteed under the Treaty of 1855 will be respected and promoted by the DFRM, our co-managers, and the public. 		
Samuel Penney (Chairman)	19396	136	<p>3.12 Fish Resources and Fish Habitat</p> <p>The Tribe has worked to restore Pacific lamprey in the SFSR watershed, including the EFSFSR, as an important cultural and treaty resource since 2012, through releasing adult lamprey to naturally spawn. The SDEIS recognizes that Pacific lamprey are one of the native fish species within the analysis area, but fails to mention the effects of this project on the fish, recovery efforts being made to restore these unique fish to the SFSR ecosystem and fails to analyze how this proposed project would threaten restoration success.</p>	FIS	The following text has been added to Section 3.12 of the Final EIS and Fisheries and Aquatic Habitat Specialist Report - "It is important to note that while Pacific lamprey may occur in the vicinity of the Project, no observations of these fish have been made in snorkel surveys and electrofishing surveys, and eDNA studies conducted did not detect any lamprey DNA within or downstream from the Project area."
Samuel Penney (Chairman)	19396	137	For the Columbia River tribes and the Nez Perce Tribe, Pacific lamprey are a cornerstone species on par with salmon for their cultural and nutritional significance. Like salmon, they migrate as juveniles to the ocean and return to spawn in freshwater streams. Lamprey have distinctive habitat requirements for their various life stages from larval ammocoetes, macrophthalmia to returning anadromous adults. Successful spawning of translocated lamprey in the SFSR watershed has been verified by parentage analysis for all translocation streams. Parentage analyses has also provided valuable life history data, such as lengths at age, ages of ammocoetes and macrophthalmia, and age at emigration from the natal stream.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	138	The Tribe has shared data on adult lamprey releases in the SFSR with the Forest Service in the past and is disappointed that this information has not been presented in the SDEIS, especially after it was identified as a gap in the DEIS comments by the Tribe.	FIS	Text added to Section 3.12 of the Final EIS and Fisheries and Aquatic Habitat Specialist Report - "It is important to note that while Pacific lamprey may occur in the vicinity of the Project, no observations of these fish have been made in snorkel surveys and electrofishing surveys, and eDNA studies conducted did not detect any lamprey DNA within or downstream from the Project area."
Samuel Penney (Chairman)	19396	261	<p>4.12 Fish Resources and Fish Habitat</p> <p>Affected Environment</p> <p>In the SDEIS, it is noted that Sugar Creek is left out of the environmental consequences analysis due to West End Creek not being a fish bearing stream and contributing relatively minor flow volumes to Sugar Creek. The Tribe strongly disagrees with excluding Sugar Creek out of the environmental consequences analysis and encourages that it be included in the FEIS based on the following:</p> <ul style="list-style-type: none"> ● West End Creek contains Endangered Species Act (ESA) listed bull trout, this is confirmed through environmental Deoxyribonucleic Acid ("eDNA") samples collected in 2014 and 2019.448 This eDNA data was shared with Perpetua and the U.S. Forest Service, but was not used to adequately characterize fish presence in the Project area. The Tribe strongly recommends not relying solely on Perpetua's data but rather using all available fishery data to better characterize presence and absence of fish at the Project site. ● Sugar Creek is hydrologically connected to the Project through West End Creek. West End Creek currently delivers mine-influenced water with arsenic, antimony and mercury to Sugar Creek and has the potential to impact ESA listed chinook, steelhead, bull trout as well as cutthroat trout which are listed as a sensitive species. ● Sugar Creek contains some of the highest quality and currently accessible spawning and juvenile rearing habitat in the EFSFSR for the three ESA listed fish species. Within the EFSFSR watershed, Sugar Creek supports the highest densities of spring/summer Chinook salmon and represents the only documented bull trout spawning habitat utilized by both fluvial and resident forms. Excluding Sugar Creek from the environmental consequences analysis resulted in this stream not being evaluated in numerous tables illustrating impacts to fish in the Environmental Consequences section in the SDEIS. 	FIS	<p>As described in Section 4.12.2.2 (Chemical Contaminants) in the SDEIS and Section 7.2.3.2 (Chemical Contaminants) in the Fisheries and Aquatic Habitat Specialist Report, aluminum, copper, and antimony would be lower during operations in both Sugar Creek and West End than under baseline conditions. Sugar Creek may have nearly the same concentration of arsenic than baseline conditions, though West End Creek would not have any exceedances of arsenic during operations. Concentrations of mercury in both West End Creek and Sugar Creek would be higher than baseline conditions (at its potential highest concentration, mercury may see a slight (1ng/L) increase above baseline conditions.</p> <p>Under post-closure conditions, Sugar Creek may see arsenic concentrations as much as 0.001 mg/L higher than baseline conditions, and mercury would be the same as baseline conditions. West End Creek would experience slightly higher than baseline conditions for antimony, arsenic and mercury (See Table 4.12-4 in the SDEIS and Table 7-7 in the Fisheries and Aquatic Habitat Specialist Report).</p> <p>Spawning upstream from West End Creek would not be affected, and effects downstream from the West End confluence would experience conditions similar to baseline conditions.</p>

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			<ul style="list-style-type: none"> • Sugar Creek is 303(d) listed as impaired by the State of Idaho because of arsenic exceedance for Idaho's human health criterion and mercury exceedance for aquatic life criterion. • The SDEIS predicts an increase over baseline conditions for mercury, arsenic and antimony concentrations in West End Creek. 		
Samuel Penney (Chairman)	19396	262	<p>The Tribe's Fishery Restoration Efforts Disrupted by the Project</p> <p>Project actions will not only negatively impact ESA fish species in the immediate mine site area, but will impede the Tribes ongoing restoration, research, and fish production activities throughout the entire SFSR watershed. The Tribe's DFRM has an estimated 200 employees, has an annual operating budget in excess of \$22 million, and works in the Nez Perce ancestral homeland, in what is now north-central Idaho, northeastern Oregon, and southeastern Washington. The Tribe's DFRM program is one of the largest and most successful tribal fisheries programs in the United States.</p> <p>The Tribe began this program in the early 1980s after federal courts acknowledged the Tribe's role as a co-manager of its fisheries. The program is funded primarily through Bonneville Power Administration as part of its implementation of the Northwest Power Act's required mitigation for the effects of the Columbia River hydropower system. The Tribe's DFRM started an office in McCall, Idaho in the mid-1990s to focus on issues in the SFSR watershed; originally the EFSFSR and Johnson Creek. The DFRM spends approximately \$2.5 million annually restoring Chinook salmon populations and habitat in the EFSFSR and SFSR. The Tribe's DFRM restoration activities within the SFSR watershed include: hatchery supplementation, fishery research, and watershed restoration.</p>	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	263	<p>The Project would negatively impact the Tribe's hatchery supplementation project, as discussed below. During the 1940's, mining operations at the Stibnite site resulted in the extirpation of a genetically distinct subpopulation of summer Chinook salmon in the EFSFSR. Historic mining operations continue to impact Chinook salmon in the EFSFSR, through elevated water temperatures, lack of riparian vegetation, excess sedimentation, fish passage barriers, water quality degradation, and stream channel alterations.</p>	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	264	<p>Further, the Yellow Pine Pit still blocks Chinook from accessing historic spawning grounds in Meadow Creek and other headwater reaches of the EFSFSR. In an effort to supplement salmon returns in the EFSFSR, the Tribe and Idaho Fish and Game have outplanted adult Chinook salmon in Meadow Creek since 2009. During the proposed 20-year mine operation plan, the Tribe would be unable to outplant Chinook salmon in Meadow Creek and supplement the EFSFSR population. The SDEIS states that the Tribe's ability to harvest and manage its traditional fish resources in the Project area will be impacted. However, the SDEIS does not analyze how the Tribe's ability to continue to release Chinook in Meadow Creek will be affected, or the extent of harvest impacts within the EFSFSR. The Project used Chinook salmon numbers in the project area in numerous estimates, such as predictions of fish in the Yellow Pine Pit, based largely on the number of progeny from outplanted Chinook. The SDEIS does not examine production loss (i.e., juvenile recruits per spawner) resulting from the discontinuation of Chinook outplants in the Project area, nor does it address the effects of these losses on Chinook salmon recovery efforts in the EFSFSR during the mine life.</p>	FIS	It is unclear how the Project would impact the Chinook salmon translocations. It is assumed that these translocations would continue during operations until Chinook salmon are able to reestablish naturally.
Samuel Penney (Chairman)	19396	265	<p>Similarly, the Tribe's research projects will be negatively impacted by the proposed Project. In particular, the Johnson Creek Artificial Propagation and Enhancement ("JCAPE") project's daily operations will be negatively impacted by the heavy Project traffic for the first two years (construction phase of the modified mine plan and 20+ years under the Johnson Creek route alternative) of the mine utilizing the Johnson Creek road for access to the mine site. JCAPE is a small-scale supplementation (production) project that is designed to increase production of the summer Chinook salmon spawning population in the EFSFSR and Johnson Creek. The JCAPE project produces up to 150,000 Chinook salmon smolts annually for direct release into Johnson Creek and oversees monitoring and evaluation of adult and juvenile spring/summer Chinook throughout the South Fork Salmon subbasin. The JCAPE project conducts activities at several locations, including adult trapping on Johnson Creek, juvenile migrant trapping on Johnson Creek and on the Secesh River, adult brood stock holding and spawning at</p>	FIS	The Final EIS has been revised to provide additional detail regarding the effects of traffic-related sedimentation on Johnson Creek.

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			the SFSR adult salmon trap, and egg incubation and juvenile fish rearing at the McCall Fish Hatchery. The disruption of JCAPE production and research activities and the potential for increased road-related sediment into Johnson Creek resulting from Project activities should be discussed in more detail in the FEIS.		
Samuel Penney (Chairman)	19396	266	<p>The proposed Project would disrupt the Tribe's watershed restoration efforts in the EFSFSR due to restricted access from mining operations. The Tribe has been actively working on watershed restoration in the EFSFSR watershed since 2007. The Tribe submitted a project during the 2007-2009 Northwest Power and Conservation Council Fish and Wildlife Provincial Review⁴⁵² for the EFSFSR, to address fish passage at the legacy Yellow Pine Pit in the Stibnite Gold Project area. The Tribe originally intended to reestablish fish passage there through a 30-foot tall cascade and rehabilitate one mile of fish habitat above the Glory Hole through a degraded reach of the upper mainstem EFSFSR. Before the Tribe could implement the project, however, the private landowner of the Glory Hole river reach, entered into a lease-to-purchase option with Midas Gold.</p> <p>Consequently, the reach was inaccessible to the Tribe for fishery habitat enhancement projects, and the Tribe's restoration efforts were directed elsewhere within the SFSR and EFSFSR watersheds. The Tribe also participated in a collaborative group that specifically identified restoration projects in the EFSFSR watershed to improve fisheries. These projects include decommissioning Mule Hill road and Sugar Creek road spurs. The proposed Project will severely hamper the Tribe's ability to perform watershed restoration due to restricted access during the Project mine life.</p>	FIS	There could be periods of day closures during construction. Perpetua would coordinate with the Tribe to ensure there is no blockage to research areas on the EFSFSR or Johnson Creek.
Samuel Penney (Chairman)	19396	267	The FEIS needs to adequately address/analyze the impacts of Project disruptions to the Tribes' efforts in hatchery supplementation, fishery research, and watershed restoration in the EFSFSR. The FEIS needs to recognize that Project models and estimates based on empirical Chinook salmon data will change when the Tribes outplanting efforts are hindered by the Project.	FIS	<p>The Final EIS has been revised to provide additional detail regarding the effects of traffic-related sedimentation on Johnson Creek.</p> <p>There could be periods of day closures during construction. Perpetua would coordinate with the Tribe to ensure there is no blockage to research areas on the EFSFSR or Johnson Creek.</p> <p>The SGP is not anticipated to hinder outplanting efforts by the Tribe.</p>
Samuel Penney (Chairman)	19396	268	The Chinook salmon redd count data in the SDEIS cites the Nez Perce Tribe's unpublished data incorrectly. Twelve redd counts are misrepresented in Table 3.12-2 and the Tribe's data is portrayed incorrectly. The SDEIS cites an older annual report but provides data through 2021. The data also consolidates redd numbers from Sugar Creek to Quartz Creek which is downstream of the project area.	FIS	Text revised in the Final EIS to include the corrected reference and years in Table 3.12-2 and Table 6-12 in the Fisheries and Aquatic Habitat Specialist Report.
Samuel Penney (Chairman)	19396	270	The South Fork Salmon River Major Population Group, which includes the EFSFSR and Johnson Creek spring/summer Chinook spawning aggregates (collectively referred to as the East Fork South Fork Salmon River population) are at a high risk rating for abundance and productivity and a low risk for spatial structure and diversity. Habitat concerns in the EFSFSR exist and would be exacerbated by Project activities. Sediment remains a concern for the fish populations due to landslides and wildfires, which have been documented to have delivered excessive sediment to streams in these populations in the last 5 years. High stream temperatures are a limiting factor in these populations. Recommended future actions by National Marine Fisheries for reducing limiting factors that impede the recovery of Chinook salmon include reducing and preventing sediment delivery, improving riparian function and improving water quality - which this Project jeopardizes both in the short term and questionable long-term plans.	FIS	The Forest Service agrees that EFSFSR Chinook salmon are a high-risk population, often affected by wildfires and landslides. Within the mine site area, steps are being taken to substantially reduce sediment input, most of which comes from East Fork Meadow Creek (aka Blowout Creek). Sediment input directly from mining activities is anticipated to be low due to most activity occurring outside the RCAs where Chinook salmon occur. Additionally, water temperatures currently exceed criteria for the more sensitive life stages (spawning and early incubation). Riparian restoration activities would help reduce water temperatures, particularly in upper Meadow Creek - the creek in which water temperatures are typically the highest.
Samuel Penney (Chairman)	19396	271	<p>The Tribe is concerned with the following impacts to Chinook salmon from this Project:</p> <ul style="list-style-type: none"> • The adult migration and spawning life stages would experience a reduction in habitat due to the thermal requirement for Chinook salmon. There would be a net decrease in thermally suitable spawning habitat both upstream and downstream from the Yellow Pine pit lake cascade barrier during operations and post-closure due to a slightly warmer 7-day average daily maximum water temperatures. And these values would likely be higher if climate change had been factored into the Stream and Pit Lake Network Temperature model. Because Chinook salmon spawn in late August, when stream temperatures are their highest and flows at their lowest, they are particularly susceptible to stream temperature increases from this Project. 	FIS	Comment noted. The Forest Service agrees that EFSFSR Chinook salmon are a high-risk population, often affected by wildfires and landslides. Within the mine site area, steps are being taken to substantially reduce sediment input, most of which comes from East Fork Meadow Creek (aka Blowout Creek). Sediment input directly from mining activities is anticipated to be low due to most activity occurring outside the RCAs where Chinook salmon occur. Additionally, water temperatures currently exceed criteria for the more sensitive life stages (spawning and early incubation). Riparian restoration activities would help reduce water temperatures, particularly in upper Meadow Creek - the creek in which water temperatures are typically the highest.

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Samuel Penney (Chairman)	19396	272	<ul style="list-style-type: none"> Changes to water chemistry from this Project have the potential to impact juvenile life history stages of Chinook salmon, and particularly those present in Sugar Creek, a key EFSFSR tributary known to support spring/summer Chinook spawning and rearing. The SDEIS predicts that concentrations for key constituents are comparable or lower than existing conditions. Sugar Creek is currently 303(d) listed as impaired because of arsenic exceedance for Idaho's human health criterion and mercury exceedance for aquatic life criterion. West End Creek which flows into Sugar Creek is predicted to have an increase over baseline conditions for mercury, arsenic and antimony concentrations in West End Creek. 	FIS	<p>Comment noted. As described in Section 4.12.2.2 (Chemical Contaminants) in the SDEIS and Section 7.2.3.2 (Chemical Contaminants) in the Fisheries and Aquatic Habitat Specialist Report, aluminum, copper, and antimony would be lower during operations in both Sugar Creek and West End than under baseline conditions. Sugar Creek may have nearly the same concentration of arsenic than baseline conditions, though West End Creek would not have any exceedances of arsenic during operations. Concentrations of mercury in both West End Creek and Sugar Creek would be higher than baseline conditions (at its potential highest concentration, mercury may see a slight (1ng/L) increase above baseline conditions.</p> <p>Under post-closure conditions, Sugar Creek may see arsenic concentrations as much as 0.001 mg/L higher than baseline conditions, and mercury would be the same as baseline conditions. West End Creek would experience slightly higher than baseline conditions for antimony, arsenic and mercury (See Table 4.12-4 in the SDEIS and Table 7-7 in the Fisheries and Aquatic Habitat Specialist Report).</p> <p>Spawning upstream from West End Creek would not be affected, and effects downstream from the West End confluence would experience conditions similar to baseline conditions.</p>
Samuel Penney (Chairman)	19396	273	Alterations to streams and a reduction in flow have the potential to negatively impact Chinook salmon. Steam flow reductions would affect fish productivity during operations but would return to existing conditions post-closure. Post closure time frames on water treatments are indefinite, which is not acceptable when considering the near-term negative impacts to threatened Chinook salmon.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	274	For the first two years of the mine there will be increased Project related traffic along the Johnson Creek increasing the chance of a fuel or chemical spill into streams with Chinook salmon. A fuel or chemical spill into a stream with Chinook salmon could offset the Tribes restoration efforts and ability to harvest treaty resources.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	276	<p>Impacts to Steelhead</p> <p>Similar to Chinook, steelhead trout (Hey-ey) are important treaty resources. The SFSR and its component watersheds comprise one of only four drainages in the Columbia River Basin that support viable populations of wild B-run steelhead. Many of the research and watershed restoration actions taken by the Tribe are implemented to improve steelhead viability. The steelhead Salmon River Major Population Group is not viable with many individual populations remaining uncertain. Updated, population-level abundance estimates of steelhead (last five years) highlight recent sharp declines. The South Fork Salmon distinct population segment has a moderate risk rating for abundance and productivity and a low risk for spatial structure and diversity.</p>	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	277	<p>The Tribe is concerned with the following impacts to steelhead from this Project:</p> <ul style="list-style-type: none"> Changes to water chemistry particularly to those steelhead spawning and rearing in Sugar Creek for the reason cited above for Chinook. Changes to flow would result in a net decrease in productivity between baseline conditions and post-closure conditions. Impacts to steelhead spawning and rearing habitat for the reason cited above for Chinook. 	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	278	<p>Impacts to Bull Trout</p> <p>Out of the three ESA listed fish species in the Project area none are impacted as greatly as bull trout (Islam) due to habitat loss and increased stream temperatures. Bull trout are found throughout the Project area, above and below the Yellow Pine Pit. The EFSFSR and its tributaries are a stronghold for bull trout. The EFSFSR is an important genetic refuge because, unlike other areas in the SFSR watershed, brook trout are not present in the EFSFSR, eliminating the risk of hybridization. Bull trout are mainly found in cold streams; water temperature above 15°C limits bull trout distribution.</p>	FIS	No further response required. General in nature or position statement.

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Samuel Penney (Chairman)	19396	279	The Tribe is concerned with the following impacts to bull trout from this Project: <ul style="list-style-type: none"> Changes to water chemistry particularly to those bull trout spawning and rearing in Sugar Creek for the reason cited above for Chinook and steelhead. 	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	280	There would be a net loss in thermally suitable bull trout habitat due to water temperatures exceeding thermal requirements for spawning and rearing. The SDEIS analysis shows elevated water temperatures past this 15°C threshold which could potentially impact bull trout occupancy, migration, and spawning behavior.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	281	The loss of the Yellow Pine pit lake would result in a net long-term impact to bull trout, but a permanent negligible net change once the Stibnite Lake is obstructed by mine year 11.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	282	It is shortsighted to assume that there will be a metapopulation of bull trout present in the South Fork Subbasin in the next 20-114 years that is sufficiently robust to be able to repopulate the Stibnite Lake, especially considering the likelihood of there being thermal barriers blocking volitional movement in the proposed mine areas.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	283	Impacts to Westslope Cutthroat Trout Westslope cutthroat trout (Wawa Lam) are currently designated as a “Sensitive” species by the Forest Service. After being petitioned, the United States Fish and Wildlife Service determined Westslope cutthroat trout are unwarranted for ESA listing. Westslope cutthroat trout are broadly distributed throughout the SFSR although they currently occupy only 85% of their potential historic range.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	284	The Tribe is concerned with the following impacts to Westslope Cutthroat trout from this Project: <ul style="list-style-type: none"> Cutthroat trout are found throughout Project above and below the Yellow Pine Pit, and similar to bull trout, will suffer habitat loss from mining operations. Resident fish, including cutthroat trout, will have more isolated populations without the ability to move freely between project area streams. In the Meadow Creek drainage where cutthroat are found, there will be a large decrease in available habitat due to the piping of Meadow Creek around the tailing storage facility footprint. In addition, the upper 10 km of Meadow Creek would remain blocked in perpetuity due to the high-gradient stream segments flowing off the TSF. 	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	285	Resolving Impacts to Chinook Salmon, Steelhead, Bull Trout, and Westslope Cutthroat Trout The Project as currently analyzed by the SDEIS has unacceptable impacts to the fish species listed above. This Project should be rejected by the Forest Service due to numerous detrimental impacts to fish species. In relation to impacts to ESA listed and sensitive species fish the FEIS should: <ul style="list-style-type: none"> Revamp the current mine plan to lessen impacts to fish species. Add Sugar Creek back into the environmental consequences analysis. Quantitatively document the direct effects to fisheries (population declines, identify specific reaches that will no longer be usable for fish species). Discuss what elevated stream temperatures mean for bull trout populations as a result of the Project. Incorporate climate change into stream temperature models. Investigate the potential impact of thermal barriers to fish migration above the mine site and below the Sugar Creek reach. Quantify the cumulative impact/share of Project area water temperature increases to downstream water temperature criteria. The Tribe strongly recommends not relying solely on Perpetua’s fishery data but rather using all available data to better characterize presence and absence of fish at the Project site. As an example, the SDEIS says bull trout are absent in West End Creek and Fiddle Creek, however, the Tribe has detected bull trout in both of these streams using eDNA. 	FIS	1) The Forest Service and Perpetua are not developing a new alternative/new mine plan at this time. 2) Regarding the inclusion of Sugar Creek, as described in Section 4.12.2.2 (Chemical Contaminants) in the SDEIS and Section 7.2.3.2 (Chemical Contaminants) in the Fisheries and Aquatic Habitat Specialist Report, aluminum, copper, and antimony would be lower during operations in both Sugar Creek and West End than under baseline conditions. Sugar Creek may have nearly the same concentration of arsenic than baseline conditions, though West End Creek would not have any exceedances of arsenic during operations. Concentrations of mercury in both West End Creek and Sugar Creek would be higher than baseline conditions (at its potential highest concentration, mercury may see a slight (1ng/L) increase above baseline conditions. Under post-closure conditions, Sugar Creek may see arsenic concentrations as much as 0.001 mg/L higher than baseline conditions, and mercury would be the same as baseline conditions. West End Creek would experience slightly higher than baseline conditions for antimony, arsenic and mercury (See Table 4.12-4 in the SDEIS and Table 7-7 in the Fisheries and Aquatic Habitat Specialist Report). Spawning upstream from West End Creek would not be affected, and effects downstream from the West End confluence would experience conditions similar to baseline conditions.

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					<p>3) Regarding qualitative analysis on direct effects to fisheries, Section 4.12 of the SDEIS and Chapter 7 of the Fisheries and Aquatic Habitat Specialist Report show a completed analysis, both quantitative and qualitative on the effects to the fisheries.</p> <p>4) Regarding descriptions of elevated temperatures to bull trout, Section 4.12.2.2 (Bull Trout) of the SDEIS and Section 7.2.3.6 of the Fisheries and Aquatic Habitat Specialist Report describes the effects to bull trout from the Project, including effects from water temperatures.</p> <p>5) Incorporation of climate change effects into quantitative stream temperature models is outside the scope of this EIS.</p> <p>6) Results of the temperature analysis shows that while some areas show a temporary increase in water temperatures, these would not constitute a thermal barrier. Temperatures that substantially exceed the species temperature criteria would occur in the upper reaches of Meadow Creek; however, a barrier would be constructed so fish would not be able to access this area.</p> <p>7) Table 4.12-2 in the SDEIS and Table 7-5 in the Fisheries and Aquatic Habitat Specialist Report provide an overview of the water temperatures by various mine years throughout the watershed, including downstream from Sugar Creek. Impacts to each species specifically are found in Sections 4.12.2.2 (Chinook salmon; Steelhead; Bull Trout; Westslope Cutthroat Trout) of the SDEIS and Sections 7.2.3.2, 7.2.3.5, 7.2.3.6, and 7.2.3.7 of the Fisheries and Aquatic Habitat Specialist Report.</p> <p>8) All data available at the time of SDEIS preparation was included in that analysis.</p>
Samuel Penney (Chairman)	19396	286	Fish salvage will occur during low flow periods, this correlates to periods of elevated stream temperatures during which cold water species such as Chinook salmon, steelhead, bull trout and cutthroat trout are most likely to be thermally stressed. This is one of the reasons the Tribe feels that the SDEIS is incorrect in stating that there will be moderate impacts to fish from fish salvage.	FIS	The SDEIS assumes up to 10% mortality associated with salvage. Salvage would not be conducted during peak water temperature conditions. The 'moderate' impact magnitude represents a significant and measurable impact to a fish species, but an impact that would not cause sustained population-level changes. The 'moderate' impact magnitude is consistent with Forest Service NEPA terminology.
Samuel Penney (Chairman)	19396	287	<ul style="list-style-type: none"> Estimates of carrying capacity of the relocation areas into which salvaged fish are released are not included. Many of the relocation areas are utilized numerous times for fish salvage operations. Resident fish occupying these relocation areas have the potential to be displaced and newly released fish will have to search for new habitat and food resources during a time they are thermally stressed. Smaller fish searching for new habitat will have increased probability for displacement and predation rates. 	FIS	No estimates of carrying capacity were available for the area. The modeling approach was developed through consultation with the Forest Service, USFWS, NMFS, and IDFG as a way to use best available information for effects analysis. Baseline data, including fish occurrence, is further described in MWH 2017 and Stantec 2018, 2019, and 2020.
Samuel Penney (Chairman)	19396	288	As noted above, 17.11 km of stream channel are estimated to be subject to dewatering and fish salvage. This accounts for the activities occurring in the Project area but does not include all Project impacted stream channels along the Burnt Log route and Johnson Creek route during culvert replacements and powerline upgrades. A full account of all dewatering and fish salvage activities should be evaluated in the FEIS.	FIS	There is no anticipated dewatering or a need for fish salvage operations along the road crossings along the Burntlog Route or along the transmission line.
Samuel Penney (Chairman)	19396	289	As noted in the SDEIS, there would be some incidental mortality (generally less than 10 percent) from fish salvage. Table 5-8 in the mitigation plan notes that the Yellow Pine Pit has 216 bull trout, 101 cutthroat, reducing these fish by potentially 10% is significant, especially given that bull trout are a ESA-listed species. Given the disturbance and predicted mortality to these fish species, it is unclear how the SEIS concluded a moderate impact on fish species from fish salvage in the Yellow Pine Pit.	FIS	The 'moderate' impact magnitude represents a significant and measurable impact to a fish species, but an impact that would not cause sustained population-level changes. The 'moderate' impact magnitude is consistent with Forest Service NEPA terminology.
Samuel Penney (Chairman)	19396	290	<p>Noise and Vibration</p> <p>As noted in the SDEIS, explosives detonated near water can produce shock waves that may be lethal or damaging to fish, fish eggs, or other aquatic organisms. Outside of the zone of lethal or harmful shock waves, the vibrations caused by drilling and blasting have the potential to disturb fish causing stress or altering behavior. The SDEIS concludes that because all blasting would be conducted in compliance with applicable regulations and standards there would be negligible impacts to fish from noise and vibrations. The SDEIS further states that there could be areas, such as the Yellow Pine pit lake near the</p>	FIS	The concrete walls of the fishway would result in both reflection of sound off the tunnel, diffraction around the tunnel, and transmission into the concrete. These three factors would lessen the amount of sound transmitted into the tunnel. There would be no difference in impacts to fish in the tunnel resulting from blasting than there would be for fish in the creek channels.

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			East Fork SFSR tunnel and adjacent Hangar Flats pit where Meadow Creek is closest, where reducing setbacks may be required. Looking at images of the proposed 0.9 mile fish tunnel found in the Stibnite Gold Project Story Map it is apparent how close it is to the Hennesey Shear Zone and the Meadow Creek Fault Zone. There will be five years of heavy blasting and disturbance immediately adjacent to this fish tunnel. All of the studies cited in the SDEIS regarding impacts to fish from blasting were examining surface streams and lakes. What are the noise and vibrations impacts in regards to the fish passage tunnel with it being located subsurface and in such close proximity to the blasting zones? The FEIS should take a closer look at impacts to fish utilizing the fish tunnel and calculate sound decibels, duration of blasting, frequency of blasting in relation to this unique subsurface fish tunnel.		
Samuel Penney (Chairman)	19396	292	The SDEIS does not sufficiently analyze the impacts from potential contaminants spilling into aquatic ecosystems. Considering the massive quantities of toxic materials that would be used annually at the site (e.g., 5,800,000 gallons of diesel fuel), the Project poses an implicit risk for spilled contaminants to affect aquatic organisms and persist outside the project area and downstream (> 0.5 mile) from spill locations. In contrast, the SDEIS states that the EFSFSR and associated tributaries, including streams within 0.5 mile of access routes, are the major surface water bodies that could be impacted by potential spills. This assertion falsely suggests that impacts of a contaminant spill (e.g., large diesel spill) would only impact streams within 0.5 mile of the spill location. On the contrary, an example from the Kalamazoo River proves that spilled diesel oil can travel over 30 miles downstream from the spill location. Documentation of previous diesel spills on aquatic ecosystems illustrate how detrimental and long lasting the effects are to aquatic life. A 2,000 gallon diesel spill in California's Hayfork Creek impacted the food web from macroinvertebrates to fish to avian species feeding on the fish. The study concluded that impacts from the diesel fuel would be long lasting in the aquatic ecosystem. ⁴⁸⁹ Analysis of all risks of contaminant spills is necessary, including the full distance downstream that all contaminants could persist from spill locations and how those concentrations would impact aquatic organisms.	FIS	As described in Section 4.12.2.2 (Spill Risk) of the SDEIS and Section 7.2.3.1 of the Fisheries and Aquatic Habitat Specialist Report, spill impact assumptions are based on hazardous materials BMPs and rapid spill response as integral components of the Project. The SDEIS does not assume a spill would or would not occur but assesses spill risk over the active mine life to fish populations at locations where a spill impacting waters could occur. Additionally, the SDEIS and Fisheries and Aquatic Habitat Specialist Report do not include impacts to waterbodies located greater than 0.5 miles from the spill location. The Spill Risk Section discusses potential fuel spills, whereas the Chemical Contaminants Section discusses the potential for metals entering the stream and the potential impacts as a result.
Samuel Penney (Chairman)	19396	298	Altered Physical Stream Structure Mine operations such as open pits, diverting the river into a fish tunnel, diverting Meadow Creek into a channel, stockpiling waste rock and growth media (soil), vegetation removal and construction of a tailings storage facility embankment will alter the physical stream structure and reduce fish habitat complexity and connectivity. Accessing the mine by building haul roads and reconstructing the Burnt Log road and upgrading power transmission lines will alter headwaters of streams, riparian areas, wetlands, and fens all of which is important to fish habitat. It is unacceptable that all Project area streams (minus Sugar Creek) are being placed into a pipe or tunnel so this proposal can proceed. Permanent fish relocation occurs as a result of the tailings storage facility in Meadow Creek. The EFSFSR tunnel is another permanent fish relocation and river alteration. Fiddle Creek, which is fish-bearing with threatened bull trout, would be routed into a culvert under a growth media stockpile. Hennesey Creek would be diverted in a pipe and routed to Fiddle Creek. West End Creek, which is also fish-bearing with threatened bull trout, will be diverted into a clean water diversion for 1.5 miles, meaning a lined ditch, not conducive to quality fish habitat. Garnet Creek would be re-routed in a riprap channel through a culvert during operations. Midnight Creek would be rerouted for 0.3 miles, then piped under roads before it enters the fish tunnel. The EFSFSR would be rerouted into a tunnel nearly a mile long to divert the river away from where the proposed Yellow Pine pit would be dug. This tunnel would allow volitional fish passage upstream at quite an ecological cost, if it actually works. The loss of stream biota, fisheries habitat, impaired riparian and stream function for 20 plus years in exchange for a fishway with artificial lighting, flow control, fish salvage and connectivity to questionable upstream water quality and habitat seems suspect.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	301	Water Temperature Climate change will affect fish habitat through changes in precipitation, temperature, and soil moisture. The Idaho Batholith region will shift from being strongly snow-dominated to a mix of rain and snow. This increased winter rain will create flashier hydrologic peaks. Increased average winter temperatures	FIS	Much of the effects of climate change so far into the future is speculative. Sections 3.12 and 4.12 in the SDEIS and Sections 6 and 7 in the Fisheries and Aquatic Habitat Specialist Report describe the potential future increases in water temperature. For example, climate change is anticipated to increase water temperatures during the mining operations by as much as 2°C. While this is important information, it is speculative, therefore these potential increases were

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			will lead to reduced snowpack and decreased soil moisture in the Northern Rockies. Climate change will also increase stream temperatures, which will reduce the number of tributaries providing cold-water refuge for resident salmonids like bull and cutthroat trout. The SDEIS looked at impacts of water temperature on Chinook, steelhead, bull trout and cutthroat over the life of the mine plan. Certain tables examine water temperature out to Mine Year 112, however climate change was not considered in the Stream and Pit Lake Network Temperature model due to uncertainties such as future restoration and riparian shading. Estimating water temperature out to mine year 112 has inherent uncertainties in its own right, this is not an adequate justification for not including impacts from climate change on stream temperatures.		not included in the analysis. What the species-specific analyses show are that water temperatures ultimately decrease from baseline conditions, which would be particularly beneficial when considering climate change.
Samuel Penney (Chairman)	19396	302	It is noted in the SDEIS that if climate change had been incorporated into the stream temperature models an increase of 0.1° to 2.0° C is forecasted for 2030-2059. This range of expected temperature increase attributed to climate change is based on a forecast period approximately 75 years shorter than the model predictions through Mine Year 112. Stream shading resulting from riparian vegetation could take over a hundred years to fully establish and reduce stream temperatures. There are inherent flaws in the assumption that predicted stream temperatures do not need to be corrected for climate change due to the longevity it takes for riparian vegetation to become established and the rate at which the climate is warming. As noted in the SDEIS on Table 4.12-2, stream temperatures increase over baseline conditions during the first 27 years of the Project with some stream reaches increasing an additional 6.8°C, and this is without considering climate change into the model. Is there any analysis to show that listed fish species will be able to persist until Mine Year 112 when the reductions in stream temperatures are realized? The FEIS must incorporate climate change into stream temperature models and evaluate if fish can persist in stream reaches with elevated temperatures until shading effects are realized. The FEIS needs to include direct and indirect effects of elevated stream temperatures on fish species downstream from the Project area.	FIS	The highest water temperature changes occur in Meadow Creek upstream from the TSF barrier between Mine Year 22 and Mine Year 27. Fish would not be able to access this reach, and therefore would not be affected by these high temperatures. Downstream of the TSF barrier, where there would be salmonid presence, water temperatures would be consistently lower than baseline conditions. Much of the effects of climate change so far into the future is speculative. Sections 3.12 and 4.12 in the SDEIS and Sections 6 and 7 in the Fisheries and Aquatic Habitat Specialist Report describe the potential future increases in water temperature. For example, climate change is anticipated to increase water temperatures during the mining operations by as much as 2°C. While this is important information, it is speculative, therefore these potential increases were not included in the analysis. What the species-specific analyses show are that water temperatures ultimately decrease from baseline conditions, which would be particularly beneficial when considering climate change.
Samuel Penney (Chairman)	19396	303	Meadow Creek upstream from EFMC has decreasing water temperatures during mine operations and closure/reclamation activities (Mine Year 6-18) because this stream is being placed in a pipe shielding it from solar radiation. While placing streams in pipes may help with reducing water temperature it eliminates fish habitat and restricts fish movement. Bull trout and cutthroat trout are documented in the Meadow Creek reach that is scheduled to be placed in a pipe. Any gains to fish from reduced stream temperatures are lost with reduced habitat from streams being placed in pipes.	FIS	The SDEIS and Fisheries and Aquatic Habitat Specialist Report analyses assumes no fish are present in this stretch of Meadow Creek. There would be a salvage operation to remove the fish prior to mining activities. Following operations and through reclamation, this portion of Meadow Creek would be redesigned so that natural flow would pass the new channel; however, a barrier would continue to block fish passage, and given the habitat conditions, including water temperature, this portion would be less suitable.
Samuel Penney (Chairman)	19396	304	The Stream and Pit Lake Network Temperature modeling was based on historic water temperature data without the Stibnite Gold Project (SGP). Using historic water temperature data without the SGP to model future stream temperatures is flawed due to large scale watershed modifications from this Project such as vegetation clearing, stream diversions, and altered stream flows. The FEIS should incorporate and consider Project watershed alterations being proposed in stream temperatures modeling.	FIS	The water temperature modeling is calibrated using temperature data collected over multiple years. The model does include changes to vegetation and stream diversions.
Samuel Penney (Chairman)	19396	305	The Stream and Pit Lake Network Temperature Model relies heavily on riparian shading to moderate stream temperatures. Improving the riparian planting plan by planting wider buffers (7 feet to 18 feet), increasing the percentage of taller tree species, including enhanced reaches, and planting earlier in the mine life increases shade and reduces stream temperatures. The SDEIS stream temperature modeling is largely based on the QUAL2K model. The Washington State Department of Ecology developed a spreadsheet-based model called Shade.xls to predict stream shading by reach as needed by the Qual2K model. The Shade.xls model accounts for latitude, longitude, topography, vegetation (height, density, and overhang) and solar radiation in its calculations. It was noted that modeled shading simulations between 40% and 70% should be run to get a range in shade effects. The 40% shading effectiveness would represent the case of impaired survivability. It is unclear in the SDEIS what shade sensitivity scenario was used to model stream temperatures. Traditional riparian plant growth curves are not adequate for the Stibnite site due to poor soil conditions, high elevation, and short growing season. Current site revegetation efforts at the Stibnite site highlight the difficulties the Forest Service and Perpetua have had trying to grow vegetation at this site over numerous years with impaired survivability. Shading effects should be modeled at a lower plant survivability range to reflect Stibnite growing	FIS	The SPLNT model includes shade density and solar radiation to determine the water temperatures. Additionally, because of the slower growth rate of trees, larger trees would be planted to jump-start the provision of shade to help reduce water temperatures.

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			conditions. The FEIS should include a range of shade sensitivity scenarios with those representing the lower end of plant survivability as being more representative of the Stibnite site growing conditions.		
Samuel Penney (Chairman)	19396	306	<p>Increased water temperatures resulting from the Project pose a significant risk to ESA- listed fish species. Relevant water temperature criteria from the Idaho Department of Environmental Quality is cited in the final Stream and Pit Lake Network Temperature model report at Table 1-2:</p> <ul style="list-style-type: none"> ● Salmonid Spawning Criteria: Maximum daily average temperature - 9°C Maximum daily maximum temperature - 13°C ● Bull Trout Criteria: Maximum daily average temperature - 13°C ● Coldwater Aquatic Life Criteria: Maximum daily average temperature - 19°C 	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	307	Currently, stream temperature at the Project site is Functioning At Risk (“FR”) and out of compliance for the bull trout temperature criteria. Water temperature exceeded the 9°C maximum daily average for temperature criterion for salmonid spawning at least 29 percent of the time and exceeded the 13°C maximum daily maximum temperature criterion for salmonid spawning between 4 and 9 percent of the time. The SDEIS documents an decrease in total available habitat for Chinook salmon and bull trout meeting optimal thermal requirements. Based on modeled results, the effects of the Project on bull trout caused by changes to thermally suitable habitat are expected to be major, permanent, and localized. Bull trout and Chinook salmon would be the most negatively affected species, because they migrate and spawn in the summer and fall, when lower flows and higher air temperatures would amplify the impacts of the project on stream temperatures. The direct effect of elevated stream temperatures on fish numbers in the Project area needs a more robust evaluation. Increased stream temperatures will reduce dissolved oxygen concentrations, reduce juvenile fish and egg survival, further stress fish making them more susceptible to disease and infection.	FIS	The water temperature analysis applies criteria for all life stages that have been approved by the agencies, as well as from peer reviewed reports, accepted by professional biologists.
Samuel Penney (Chairman)	19396	312	The FEIS should model fish tissue levels of antimony based on predicted surface water quality and include a description on what it means for the health of fish species. Modeled water chemistry changes are documented in the DEIS with no explanation to the impacts they could pose to listed fish species and aquatic food webs.	FIS	<p>Section 4.12.2.2 (Chemical Contaminants) of the SDEIS and Section 7.2.3.2 (Chemical Contaminants) of the Fisheries and Aquatic Habitat Specialist Report provide an overview of the key metal constituents that may be affected by the Project, the level to which they either meet or exceed the analysis criteria, and a description of the level of effects to fish.</p> <p>No fish tissue concentration model for antimony applicable to the Project was available. Impacts to fish health were inferred based on modeled increases relative to baseline and modeled exceedances of IDEQ’s strictest potentially applicable surface water quality standards.</p> <p>Fish tissues were sampled for metals in 2016. Results showed that antimony concentrations were well below the EPA threshold (0.49 mg/kg wet weight versus 9 mg/kg wet weight, respectively) (MWH 2017).</p>
Samuel Penney (Chairman)	19396	313	<p>In relation to water chemistry impacts to fish, the FEIS should address the following:</p> <ul style="list-style-type: none"> ● Document and model water chemistry changes in relation to health impacts of fish and aquatic organisms. Model the impacts of heavy metals individually and cumulatively to assess what it means for fish health. 	FIS	Modeled water quality and water chemistry under future proposed Project conditions were assessed relative to baseline conditions and the IDEQ’s strictest potentially applicable surface water quality standards. Impacts were assessed based on sustained increases in pollutants above baseline conditions (See Water Quality Specialist Report, Forest Service 2021). Proposed water quality treatment during mine operations and the eventual suspension of treatment at the end of active mine life were considered in the analysis.
Samuel Penney (Chairman)	19396	315	There has been limited fish tissue sample data collected at Project. With changes to water chemistry, what are project fish tissue concentrations and how does this play into human consumption values?	FIS	Project impacts to fish tissue concentrations and human consumption from Project-related pollutants were not modeled, but data was collected in 2016 (MWH 2017). Results of this study at locations throughout the mine site area (EFSFSR, East Fork Meadow Creek, Fiddle Creek, Meadow Creek) as well as Sugar Creek showed that mercury and arsenic did not exceed EPA or NMFS criteria, and antimony and copper did not exceed EPA criteria.
Samuel Penney (Chairman)	19396	323	The SDEIS insufficiently analyzes potential synergistic impacts of water temperature, water quality and quantity changes from the Project. For instance, coupling decreases in flow with increases in temperature and alterations to water chemistry could alter bull trout occupancy and the ability of Chinook to use critical habitat.	FIS	Section 4.12 of the EIS and the Fisheries and Aquatic Habitat Specialist Report includes a summary of effects, tying the impacts together.

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Samuel Penney (Chairman)	19396	325	<p>Sediment and Turbidity</p> <p>The SDEIS inadequately addressed the potential impacts of Project related sediment and turbidity on fisheries. The geologic formation of the Idaho Batholith is generally mentioned in the SDEIS, however this extremely erodible geology is not highlighted in the sediment and turbidity section as having the potential to greatly impact fisheries. There are numerous publications specific to the SFSR watershed that highlight effects from ground disturbing activities on this unique geology in relation to fish species. With sediment and turbidity being such a known limiting factor to the recovery of Endangered Species Act fish in the SFSR watershed it was surprising that the final conclusion for this section regarding impacts to Chinook salmon, steelhead, bull trout and westslope cutthroat trout would be moderate, permanent and localized.⁵²⁸ This conclusion was not based on sediment modeling analysis but rather on professional judgment regarding the use of future restoration actions as mitigation and Best Management Practices (“BMP”s). More rationale for this unsubstantiated “moderate” judgment call is necessary to be believable.</p>	FIS	The geology of the Project site is considered in the SDEIS. However, the EFSFSR would bypass the majority of the active mine site during the active mine life. The Burntlog Route follows a path largely distant from waterways. Stream flows would not come into contact with reclaimed areas until restoration. BMPs and restoration actions were considered as part of the Project similar to other Project actions. There is a potential for sediment to impact streams, but the impact would be moderate relative to baseline sediment impacts due to mitigation and restoration Project actions.
Samuel Penney (Chairman)	19396	333	The SDEIS does not adequately address the risk to ESA-listed fish related to mass wasting events on roads associated with the Project. Table 3.2-1 in the SDEIS quantifies current numbers of landslides and rockfalls along the Johnson Creek route (45) and Burtlog route (26), however it does not analyze impacts to aquatic ecosystems from sediment delivery from these mass wasting events.	FIS	Table 3.2-1 in the SDEIS shows geohazards to roadways and vehicle traffic under baseline conditions. Information in the table does not represent mass wasting along streambanks or sediment input into streams. Impacts to aquatic ecosystems from sediment delivery is analyzed in Sections 4.9 and 4.12 of the EIS.
Samuel Penney (Chairman)	19396	338	In summary, all stream segments currently analyzed for sediment and turbidity in the Project area are currently Functioning at Unacceptable Risk. The unique geology of this area makes it particularly susceptible to Project related erosion that will impact ESA listed fish species. The SDEIS inadequately analyzes impacts to aquatic ecosystems from sedimentation associated with the Project and relies too heavily on assumptions tied to BMP’s and road standards. Both of the action alternatives would deliver sediment to live water from proposed road construction, maintenance, increased traffic use, removal of vegetation, pit highwalls, mining activity, fugitive dust and Project related mass wasting events. In the FEIS, sediment models for the Burnt Log and Johnson Creek Routes need to incorporate increased vehicle traffic, road widening, and the impacts from blading the road and clearing ditches. In addition, Project related sediment outside of roads needs to be identified, discussed and analyzed in the FEIS.	FIS	Direct and indirect impacts of sediment on fish are discussed in Sections 4.9 and 4.12 of the EIS and in the Fisheries and Aquatic Habitat Specialist Report. Adherence to BMP’s and road construction standards is assumed as part of the SGP. Direct impacts of road construction, maintenance, and use on waters would be limited to areas where roads are in close proximity to stream corridors as described.
Samuel Penney (Chairman)	19396	342	<p>Stream Flow</p> <p>The effects of the 2021 Modified Mine Plan on changes in stream flow would be major, long-term (occurring during operations), and localized at the Meadow Creek, East Fork SFSR at Stibnite, and East Fork SFSR upstream from Sugar Creek sites, but minor, long-term (occurring during operations), and localized at the East Fork SFSR upstream from Meadow Creek. The East Fork SFSR would experience reduced flows during mine operations compared to baseline. The project would utilize stream flow as part of its water supply and project groundwater pumping which has the potential to reduce groundwater discharge to the stream. The Preferred alternative also proposes new surface water intake with fish screens to be installed near the upstream end of the Tunnel fishway to supply raw water for ore processing makeup when necessary. The need for stream water withdrawal is not quantified besides being written as to be limited to lower flows in baseflow months. Leaving enough water in the stream for aquatic biota is essential to threatened fishes and the macroinvertebrate community upon which they depend. This project proposes turning a functioning ecosystem into an industrial site (pipes and lined channels affecting every stream in the project area except Sugar Creek) jeopardizing treaty resources. This reduction in river flows is a direct negative effect on the quantity of fisheries habitat as well as decrease in water quality due to an increase in chemical contaminants, such as arsenic and antimony. These negative impacts could jeopardize the existence of Endangered Species Act-listed fish during the mining operations which may not be able to rebound and repopulate in the longterm due to climate change effects. The largest impact to fish are major, long term, and localized on bull trout habitat and westslope cutthroat trout due to reduction of stream flows (through analysis of relevant PHABSIM modeling). The direct mortality of fish would be an irreversible impact that could occur under the Action Alternatives.</p>	FIS	No further response required. General in nature or position statement.

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Samuel Penney (Chairman)	19396	343	Portions of Meadow Creek upstream of the southern extent of the TSF would be irretrievable and unavailable to downstream fish within Meadow Creek during construction, operations, and postclosure. The presence of the TSF and TSF Buttress would essentially isolate any populations of bull trout and westslope cutthroat trout which are known to inhabit the upper reaches of Meadow Creek. The loss of existing aquatic habitat in the Yellow Pine pit lake may constitute an irretrievable commitment of resources.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	344	The FEIS needs to quantify changes to the key watershed condition indicators, the effects from baseline on peak/base flows are negligible to a decrease in functional index, no positive changes. The effects of the 2021 MMP on changes in stream flow would be major, long-term (occurring during operations), and localized at the Meadow Creek, East Fork SFSR at Stibnite, and East Fork SFSR upstream from Sugar Creek sites, but minor, long-term (occurring during operations), and localized at the East Fork SFSR upstream from Meadow Creek. The significant, long-term impacts on stream flows are another reason to reject this mine proposal.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	345	Mine Impacts to Fish Resources and Fish Habitat The SDEIS notes qualitative changes in Functional Index, but predicted changes are not quantified.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	346	The Fisheries and Aquatic Resources Mitigation Plan, Fishway Operations and Management Plan, Environmental Monitoring and Management Plan, and the Conceptual Stream and Wetland Mitigation Plan do not offer enough mitigation to offset the reduction of essential fish habitat needed for the continued existence of fish in the project area streams and downstream. The FEIS should look to further reduce fishery habitat loss and provide more meaningful mitigation that results in a net gain of habitat for listed fish species or the proposal should be denied.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	347	Returns of wild steelhead and Chinook salmon are severely depressed. Current abundances of Snake River sp/sm Chinook salmon are 0.7% of historical abundances and only 7.1% of the Columbia Basin Partnership's mid-range goal. Current Snake River steelhead returns are 3.1% of historic abundances and 24.9% of the partnership's mid-range goal. NOAA recently determined during their 5-year status reviews that spring/summer Chinook salmon in the three SFSR populations (mainstem SFSR, Secesh River and EFSFSR) were at high risk, 550 and steelhead in the Secesh River and SFSR (includes EFSFSR) were at moderate risk for abundance and productivity metrics. Further, no SFSR Chinook or steelhead population was considered viable. During the review, NOAA identified that the major areas of concern for continued fish survival included fine sediment, low flows, high temperatures, poor water quality and lack of flood plain complexity. Each of these major concerns for continued fish survival and persistence in the SFSR watershed will be directly exacerbated by the SGP. Given the fishes current status, wild anadromous fish in the SFSR cannot afford additional pressures on their spawning and rearing life stages. The Tribe is concerned with all SGP impacts on aquatic species, but are particularly sensitive to mining effects on anadromous fish due to their continued low abundance and cultural importance. Below, we detail our concerns with the existing SDEIS analyses of mining impacts to fisheries resources. Our comments within this section include the general lack of evaluations for aquatic species of special concern (e.g., Pacific Lamprey, Western Pearlshell Mussel), the exclusion of potential impacts to key fish habitat (e.g., migratory corridors and rearing areas downstream of the mine-site, Sugar Creek, and Johnson Creek), and flaws with the tools (e.g., critical habitat, intrinsic potential, occupancy, and flow-productivity models) used to evaluate sp/sm Chinook salmon, steelhead, Cutthroat Trout and Bull Trout habitat within the mine-site area.	FIS	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	348	Fish Analysis Scope We find the SDEIS lacking a complete fisheries effects analysis for the entire project/analysis area. The SDEIS only examines direct mining impacts to tributary reaches located within the immediate mine site, and fails to provide sufficient evidence to why the remaining analysis areas were excluded. Impacts to fish habitat outside the mine-site may occur from indirect mining activities across the entire analysis area	FIS	Section 4.12 of the EIS and the Fisheries and Aquatic Habitat Specialist Report analyzes water temperature and water quality both upstream and downstream from Sugar Creek and found minimal differences for both. While EFSFSR downstream from Sugar Creek would experience a 1.1°C increase in Mine Year 6, temperatures afterwards are the same or similar to baseline conditions in the summer and fall (See Sections 4.12.2.2 - Water Temperature and 7.3.2.3 Water Temperature in the Fisheries and Aquatic Habitat Specialist Report). As shown

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			<p>(e.g., increased sediment delivery from haul roads and transmission lines). The SDEIS states that all watercourses and waterbodies in the analysis area are included because they may be directly or indirectly affected. We expect the FEIS to include potential impacts for all fish resources within the analysis area, or to provide sufficient evidence that impacts will be negligible to fish resources outside the mine-site.</p> <p>The SDEIS only attempts to understand direct mining effects in two sub-watersheds (Sugar Creek and the EFSFSR headwaters) contained within the mine site. The SDEIS incorrectly assumes the majority of direct impacts to fish and habitat disturbance would occur at the mine site. SGP activities will increase temperatures, reduce flows, and change the hydrograph of tributaries within the mine-site, but these changes will also be experienced for all downstream waterways. The waterways directly downstream of the mine-site support the majority of anadromous and resident fish in the SFSR watershed. If these downstream populations are negatively affected by SGP, even minor changes in habitat could proportionally result in a much larger fisheries impact, than large habitat changes for a small group of fish within the mine-site.</p> <p>Additionally, Johnson Creek, mainstem SFSR, and the Secesh River support some of the most abundant sp/sm Chinook salmon and steelhead populations in the Columbia River Basin. Future increases in temperatures due to climate change are expected, and modeling exercises suggest these streams (if left in their current state) will remain below temperature thresholds, and likely become population strongholds with some of the lowest extinction risks in the Snake River Basin. Even small mining impacts that create changes in streamflow, temperatures and water quality in these downstream habitats threaten these abundant and important fish populations. These populations may be needed in the near future to support Snake River sp/sm Chinook salmon and steelhead persistence. Ignoring potential impacts to fish populations downstream of the mine-site is unacceptable and required in the FEIS.</p>		<p>in Section 4.12.2.2 - Chemical Contaminants in the SDEIS Chemical Contaminants and Section 7.2.3.2 Chemical Contaminants in the Fisheries and Aquatic Habitat Specialist Report, Sugar Creek and the lower reaches of the EFSFSR show minimal differences between the 2021 MMP and baseline conditions.</p>
Samuel Penney (Chairman)	19396	349	<p>The SDEIS is flawed by treating habitat degradation in a myopic, segmented fashion, rather than holistically and cumulative, and by ignoring downstream fish rearing and migration corridors. The SDEIS details alterations to available habitat, streamflow and water temperature for specific stream reaches and through the full timeline of mining operations. However, it incorrectly reports these changes for individual stream segments as if they are independent of all connected stream segments, and does not account for additive effects of habitat modifications. Additionally, the SDEIS only examines headwater tributaries containing spawning and early rearing habitat for potential mining impacts, while impacts to major rearing and migration corridors downstream of the mine site are not evaluated. A more comprehensive, holistic approach to analyze degradation to all stream reaches potentially impacted through direct and indirect mining operations needs to be taken. For instance, stream segments downstream of the mine site with decreased streamflow or increased temperatures may preclude adult migration into and use of all habitat upstream, or juvenile survival/timing through the migration corridor downstream. Therefore, there must be consideration of how fish habitat alterations may impact use of all connected habitat.</p>	FIS	<p>Impacts occurring in downstream waters were described as being 'regional' in spatial scope. Cumulative impacts, impacts resulting from multiple project and non-project factors, were also described and assessed relative to existing conditions and established significance criteria. In some cases, long-term or permanent impacts to downstream waters were unknown and quantifying the magnitude of the impact would have been speculative. In these cases, the magnitude of the impact was described as unknown. Impacts of water quality and temperature changes on adult migration were considered relative to baseline conditions.</p>
Samuel Penney (Chairman)	19396	350	<p>Flaws in Fisheries Data used in SDEIS</p> <p>The SDEIS analysis is flawed through the lack of necessary fish data. "Reach-specific fish distribution (i.e. presence/absence) data were not available for all streams potentially affected by the action alternatives, especially outside the mine site." West End Creek is an example of a stream that needs to be surveyed for fish abundance and density. West End Creek is a critical component of the Project but lacks any fisheries surveys in the SDEIS even though eDNA samples confirmed bull trout presence in 2014 and 2019 (NPT data). Similarly in Fiddle Creek eDNA samples confirmed bull trout presence in 2016 (NPT data). Baseline species distribution data are essential to fully understand the potential effects of all alternatives in the SDEIS. The discrepancies between the fish presence data in the SDEIS and NPT data highlight the need for additional fish surveys at the Project site. The FEIS needs to include fish distribution data for all streams that may be impacted directly or indirectly by the Project.</p>	FIS	<p>Fish in West End Creek are assumed to be the same fish as those in Sugar Creek. The only portion of West End Creek that could support rearing juvenile salmonids is between 100 and 200 meters. Beyond that, gradients are not passable by fish. This lower section of West End Creek is identified in the Chemical Contaminants analysis in Section 4.12.2.2 of the SDEIS and Section 7.2.3.2 in the Fisheries and Aquatic Habitat Specialist Report.</p> <p>Regarding Fiddle Creek, there are minimal impacts expected where mining activity (stream reroute) is expected. In multiple years of snorkel surveys as well as eDNA samples taking in the lower sections of Fiddle Creek, only cutthroat trout were observed/detected. No bull trout were observed, nor DNA detected in the lower mile of Fiddle Creek.</p> <p>Additional details are provided in the Fisheries and Aquatic Habitat Specialist Report. Fish data, which includes locations and number of fish, are provided in Table 6-9 in the Fisheries and Aquatic Habitat Specialist Report. Data comes from MWH 2017, provided in the Administrative Record.</p>

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Samuel Penney (Chairman)	19396	351	The fish effect analyses attempt to broadly classify the likelihood of stream use by fish using coarse geomorphic stream characteristics (e.g., wetted width, bankfull width, stream gradient, floodplain width, discharge, and temperature). Coarse geomorphic characteristics may not be the most applicable or appropriate method for assessing direct mining impacts to fish populations. Fish require more than a specific width or gradient of a stream. Fish also need high quality water, correct spawning substrate, large woody debris, and require a complex food web to support their growth and survival. The SDEIS ignores these ecological needs and incorrectly characterizes fish effects caused from mining using a small subset of related geomorphic variables that are easily manipulated to get desired effects. The FEIS should reevaluate effects to fish using an integrated or life-cycle model which directly ties all habitat conditions with potential fish capacity at all lifestages to accurately assess impacts from mining and related activities.	FIS	No life-cycle model exists for the area. The modeling approach was developed through consultation with the Forest Service, USFWS, NMFS, and IDFG as a way to use best available information for effects analysis. The impact analysis in Section 4.12 of the EIS and Chapter 7 in the Fisheries and Aquatic Habitat Specialist Report evaluates effects caused by geomorphic variables as well as other factors, including water quality.
Samuel Penney (Chairman)	19396	352	The Critical Habitat analysis is unclear, flawed, and does not include all the data available to determine critical SFSR fish habitat. Chinook salmon Critical Habitat was initially designated in 1993 and later updated in 1999 for their listing under ESA. The SDEIS attempts to refine the Critical Habitat by coupling Chinook salmon occurrences (fish observations and spawning redd counts) with the National Hydrograph Dataset560. However, it's unclear how and when the fish observation data was collected and which life-stages were targeted. The redd counts supposedly used are outdated (1985-2011), referenced incorrectly making their validation impossible, and they are not included in Figure 3.12-5 to help reviewers understand the spatial extent of included redds. Anadromous fish utilize different habitat types throughout their life-cycle, identifying Critical Habitat using fish observations of a single life-stage may grossly underestimate the habitat needed for the species survival. The FEIS Critical Habitat analysis needs to be clear on the fish observation methods used, include fish observations from multiple life-stages, and conduct the analysis with the most relevant and accurate information.	FIS	The modeling approach was developed through consultation with the Forest Service, USFWS, NMFS, and IDFG as a way to use best available information for the effects analysis. Baseline data, including fish occurrence, is further described in MWH 2017 and Stantec 2018, 2019, and 2020.
Samuel Penney (Chairman)	19396	353	While the critical habitat modeling of ESA listed species is flawed and lacks validation, the assessments provided in Table 4.12-9 showing comparative loss of habitat by species for each of the alternatives are not linked to population viability.	FIS	The modeling approach was developed through consultation with the Forest Service, USFWS, NMFS, and IDFG as a way to use best available information for effects analysis.
Samuel Penney (Chairman)	19396	354	We commented previously that the Nez Perce Tribe and Idaho Department of Fish & Game have been extensively surveying Chinook salmon redds in the SFSR (including EFSFSR) watershed since 1998. These surveys are a critical tool to discern Chinook salmon occurrence and spawning habitat use. Most notably, the Critical Habitat analysis is still missing the many Chinook salmon redds that have been surveyed in the SFSR, EFSFSR, Sugar Creek, Burnt Log Creek, and Tamarack Creek. Given the incorrect reference to redd data, and the lack of reference to NPT or IDFG it is unclear if the Critical Habitat analysis was actually updated from the earlier DEIS version. Omitting available Chinook salmon redd data skews the critical habitat analysis and may ignore a major component of all the habitat used by Chinook salmon.	FIS	SDEIS Section 3.12 summarizes the survey data available for the analysis area at the time the document was prepared.
Samuel Penney (Chairman)	19396	355	As included in the SDEIS, the Intrinsic Potential analysis is specifically flawed, due to the misuse and lack of model input validation. The Intrinsic Potential model is based on the geomorphic stream characteristics of wetted width, bankfull width, gradient, valley bottom width, and valley width ratio. However, the model was constructed with scant field-derived data, and modeled input data were not validated with field data. To elucidate this fact, less than 5% of the input data for bankfull and wetted width are empirical, field-derived data. A gaping discrepancy exists between the distributions of modeled and field data for bankfull and wetted width used in the model, most notably for the minimum, mean, and median values. For instance, median modeled bankfull width is 1.9 meters, a stark disparity with the median bankfull value of 6.0 meters observed in field data. For this single input, the Intrinsic Potential model seems flawed because 95% of the inputs are mostly modeled with input data that does not match empirical data collected at the site. The other model input data (gradient, valley bottom width, and valley width ratio) are entirely (100%) modeled. The SDEIS includes no indication of accuracy or precision of the modeled data, or comparisons to empirical measurements for the same evaluation points.	FIS	The modeling approach was developed through consultation with the Forest Service, USFWS, NMFS, and IDFG as a way to use best available information for effects analysis.

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			With no validation of the modeled input data, the validity and predictions of the Intrinsic Potential model are questionable.		
Samuel Penney (Chairman)	19396	356	<p>The Occupancy Model is flawed because it misuses the original model that was built for a large geographic scale, and fits with data primarily from disparate river systems and species interactions. The Occupancy Model in the DEIS uses the same model formation and parameter estimates developed by Isaak et al. However, the scale of the Isaak study was 399,000 km² which is completely incongruent with the 43 mi² (111 km²) size of the SDEIS analysis area. The Isaak et al. model broadly applies for bull trout and cutthroat trout in northern Rocky Mountain USA streams, and was not intended for precise predictions in short river reaches as used in the SDEIS. In fact, using the exact occupancy model parameter estimates from Isaak et al. is statistically inappropriate for the new higher resolution and modeled input data used in the SDEIS analysis. To make the analysis more ill-fitting, the Isaak, et al. model formation and parameter estimates were developed with fish occurrence data collected primarily in western Montana, which may not be representative of occupied habitat in SFSR streams with high densities of anadromous fish for prey or competition. Given that the Isaak et al. model only included a paltry amount of data from the SFSR watershed, it is unclear why the occupancy models were not refit to include all the available SFSR data. For instance the Idaho Department of Fish and Game has surveyed over 1,000 bull trout in the SFSR watershed and adjacent Big Creek watershed. Further, the Nez Perce Tribe and Forest have surveyed over 400 sites with bull trout presence in the SFSR watershed and adjacent Big Creek watershed. This plethora of data is missing from the SDEIS Occupancy Model.</p> <p>For these reasons of scale and geographic discrepancy, and missing empirical data, the SDEIS Occupancy Model is fallacious. In the revised FEIS, the Forest should construct new Occupancy Models that are built for the site and scale being analyzed, and fit it primarily with fish survey data from the SFSR or adjacent watersheds.</p>	FIS	The modeling approach was developed through consultation with the Forest Service, USFWS, NMFS, and IDFG as a way to use best available information for effects analysis.
Samuel Penney (Chairman)	19396	357	<p>The analysis of Chinook salmon and steelhead streamflow/productivity in the SDEIS is flawed by misusing observational models developed for different river systems, different conditions, and different geographic scales. The SDEIS followed an approach described in the Big Creek Water Diversion Project where population productivity was regressed on stream flow. Flowproductivity relationships for Chinook salmon were described using the nearby Johnson Creek Chinook salmon population, and steelhead relationships were described using fish returning to the Lemhi River. Neither river system is a good use case for fish residing in the upper EFSFSR due to vastly different stream characteristics, fish habitat, and species interactions. In both cases, the flowproductivity models only describe a basic relationship between fish productivity and streamflow, and ignore confounding variables which more accurately explain the variation in productivity. For instance, anadromous fish travel thousands of miles and spend the majority of their lives away from their natal rearing areas. During this time, they are exposed to multiple bottlenecks (e.g., Lower Snake and Columbia River hydrosystem, ocean rearing, adult migration) that often threaten their survival more than their short period of juvenile rearing in natal reaches. To assume future Chinook salmon and steelhead productivity is predicted by stream flow in natal areas alone is incorrect. Flow is merely acting as a random variable explaining general environmental/climate conditions that affect fish during their entire life cycle (i.e., productivity). Altering stream flows during mining operations will discouple flow from the general environmental variable that productivity is related with. Thus, rendering the SDEIS analysis of SGP effects on fish productivity false, and incapable of truly evaluating impacts to Chinook salmon and steelhead. Additionally, the SDEIS use of the flow-productivity model neglects the many ways in which the mine will impair productivity, such as the cumulative effects of decreased streamflow, elevated water temperatures or higher heavy metal concentrations. Chinook salmon and steelhead productivity needs to be considered with other habitat degradation incorporated into the analysis.</p>	FIS	The modeling approach was developed through consultation with the Forest Service, USFWS, NMFS, and IDFG as a way to use best available information for effects analysis.
Samuel Penney (Chairman)	19396	359	<p>The SDEIS inadequately characterizes changes in habitat conditions and fish potential by disregarding uncertainty that is propagated throughout model inputs and predictions. Many of the models in the SDEIS are flawed due to being fit with a dearth of empirical data; primarily relying on modeled input data that lead to less precise and invalid predictions. For instance, the habitat occupancy models use modeled water temperature and streamflow as input data to predict occupancy probability by bull trout</p>	FIS	The primary purpose of the models is to act as a metric by which to compare baseline to anticipated Project conditions. It is assumed that model error is generally equal between baseline and anticipated Project conditions within the same model. Model results may not be

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			and cutthroat trout. Similarly, the intrinsic potential models use modeled wetted width and bankfull width as input data to predict intrinsic potential for Chinook salmon and steelhead. These modeled input data are not empirical truth and should not be treated as such. A thorough habitat risk assessment under each alternative is impossible when failing to consider the precision and accuracy of model inputs, and accounting for uncertainty in habitat change predictions. To properly assess the SGP impacts to the natural environment and all aquatic species, the FEIS needs to include an analysis of empirical versus modeled data to ascertain what level of accuracy and precision are inherent in the models, model input data needs to include uncertainty to propagate error across models, and it needs to report model predictions with associated error which includes uncertainty from all associated models (e.g., 95% confidence intervals or a range of plus/minus one standard error).		accurate predictors of future conditions and projected future conditions should not be assumed entirely based on model results.
Samuel Penney (Chairman)	19396	360	<p>Fishery Tunnel Concerns</p> <p>The proposed EFSFSR fish tunnel would provide passage for all four ESA threatened and special status fish species. This assumption is based on professional judgment and review of other similar or longer tunnels that have been documented to be fish passable. This assumption of fish passage is not supported by the literature referred to in the SDEIS. The Gowans et al. abstract states that 13 Atlantic salmon in northern Scotland traveled through a 2.5 km long, 3 meter diameter tunnel with proportions of fish passing numerous obstructions ranging from 63 - 100%. The results were that only 4 of the 54 tagged fish reached the spawning areas, not an acceptable percentage for ESA- listed fish in the SFSR watershed.</p> <p>Wollebaek et al. 2011 is a genetic population study of Arctic char in Norway and a subterranean tunnel of 1,300 meters in length, 7.1 m2 with a neutral gradient. "It is an open question to what extent char in our study lakes utilize the spill gates or the tunnel for (upstream) migration." This literature is questionable for use in comparison to the effectiveness of the proposed fishway at Stibnite.</p>	FIS	Little empirical data exists on passage rates in such long fishways. Calculating a projected passage rate would be overly speculative. It is assumed that passage rates may not be high. Relative to existing conditions, which provide no passage above Yellow Pine pit, any upstream passage past Yellow Pine pit is an improvement relative to existing conditions during the period of fishway operation. The benefits of this improvement may be limited during the active mine life. After reclamation and restoration of the EFSFSR at the location of the Yellow Pine pit, passage improvement is permanent.
Samuel Penney (Chairman)	19396	361	The Design Feature has an alternative to the fishway in the EFSFSR tunnel to "provide adult passage by trap and haul if needed". Criteria may be put in place so that if any unusual or unexpected events occur that result in adverse impacts to fish during operations, fish passage through the fishway will be switched to trap and haul operations". More detailed explanation and work plan is necessary to work out the details of when and how to truck adult fish. The SDEIS considers trap and haul to be the primary adaptive management components to the fishway plan as a fall back for upstream and downstream volitional passage. Perpetua has frequently touted Project benefits to fish, focusing on the fish tunnel providing upstream and downstream passage of migratory and anadromous salmonid fish. If trap and haul becomes the primary means to get fish upstream of the Yellow Pine Pit then this is the same as the no-action alternative.	FIS	Little empirical data exists on passage rates in such long fishways. Trap and haul would be used as a backup if fishway passage rates were unexpectedly low. Trap and haul under this scenario would largely resemble current trap and haul operations for Chinook salmon and the passage benefits would largely resemble the No Action Alternative for the duration of trap and haul operations.
Samuel Penney (Chairman)	19396	362	<p>Additional Aquatic Organisms that Need to be Analyzed</p> <p>The Tribe considers it an egregious oversight to omit analysis on impacts to Pacific lamprey (<i>Entosphenus tridentatus</i>) in the SDEIS. The Tribe has worked to restore this important cultural and treaty resource since 2012, through releasing adult lamprey in the SFSR and Johnson Creek. The SDEIS recognizes that Pacific lamprey are one of the native fish species within the analysis area. Nonetheless, the SDEIS does not include any survey or analysis on impacts to the populations present. The FEIS needs to explicitly address the Project impacts to Pacific lamprey</p>	FIS	The following text has been added to Section 3.12 of the Final EIS and Fisheries and Aquatic Habitat Specialist Report - "It is important to note that while Pacific lamprey may occur in the vicinity of the Project, no observations of these fish have been made in snorkel surveys and electrofishing surveys, and eDNA studies conducted did not detect any lamprey DNA within or downstream from the Project area."
Samuel Penney (Chairman)	19396	363	The SDEIS omits analysis on impacts to Idaho giant salamanders (<i>Dicamptodon aterrimus</i>), which have been documented in the SFSR watershed. The Project may degrade important Idaho giant salamander habitat, through construction and increased use of roads, as well as grounddisturbing activities. Indeed, occurrence of Idaho giant salamander is negatively correlated to road density. Nonetheless, the SDEIS does not mention Idaho giant salamanders or potential impacts from the Project. The Forest needs to remedy this omission in the FEIS with an analysis of effects on Idaho giant salamanders from the Project.	FIS	No text revisions made. Idaho giant salamanders are not part of the PNF TESP species list and therefore, not included in the analysis.

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Samuel Penney (Chairman)	19396	364	<p>The SDEIS similarly lacks any analysis on Western pearlshell mussels (<i>Margaritifera falcata</i>). These native freshwater mussels exist throughout Nez Perce territory, including the SFSR and EFSFSR watersheds. The Idaho Department of Fish and Game detected Western pearlshell mussels in 2008 in the EFSFSR, upstream of the Johnson Creek confluence. These mussels are particularly susceptible to degraded water quality from mining, as their life span may reach as high as 100 years. The SDEIS did not include any targeted surveys to detect whether Western pearlshell mussels are present in or near the Project site. The SDEIS also omitted any analysis on freshwater mussel populations that may be affected through impaired water quality. For the FEIS, the Forest needs to conduct targeted surveys for freshwater mussels in and near the Project mine site.</p> <p>Similarly, the FEIS needs to include an analysis on impacts to freshwater mussels from increased sedimentation, altered streamflow, altered water temperatures, and the potential risk of toxic contaminants from spills.</p> <p>Freshwater mussel embryos develop into larvae called glochidia, which are released into the water and must encounter and attach to a host fish's fins or gill filaments. Glochidia must encounter and attach to a suitable host fish soon after being released into the water. When ready, the glochidia release from the fish, burrow into the sediment, and begin their free-living existence. The chances of glochidia finding a host fish, landing in a suitable environment and reaching adulthood are incredibly slim. This relationship to salmonid fishes like cutthroat trout, salmon and steelhead highlights the importance of supportive habitat conditions for all stages of the mussel's life cycle. Aquatic macroinvertebrates were surveyed for baseline studies in 2012-2014 and in 2016 generally indicate assemblages of high water quality and relatively stable habitat. More recent inventories should be done for the FEIS, with monitoring during and after mining operations. Aquatic insects are the basis of the food web and can be sensitive to changes in water quality and quantity as are predicted in the SDEIS in several different sections in chapter 4.</p>	FIS	Impacts to <i>Margaritifera falcata</i> were not analyzed in the SDEIS due to lack of federal listing status for the species and this species have not been observed in the mine site area or immediately downstream from the mine site area.
Samuel Penney (Chairman)	19396	365	<p>Summary of Fisheries Concerns</p> <p>Reduced access for the Tribe to perform fishery restoration, elevated stream temperatures, reduced water quality and quantity, habitat destruction, passage barrier impacts and direct mortality to the existing fisheries from the Project would limit future continued existence of native fish in the project area. Most of these impacts are irreversible; such as lethal summer stream temperatures for fish, thermal barriers restricting fish migration, degraded water quality making the waters and habitat unlivable for aquatic organisms, literally burying stream channel habitat under waste rock, geomorphic barriers to fish passage and direct killing of fish by dewatering habitat. The headwaters of the EFSFSR is an important cold water refuge for threatened salmonids and this proposal would alter the stream temperature regime for fisheries. Downstream effects to the fisheries below the mine site have not been analyzed sufficiently.</p>	FIS	Comment noted. No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	413	<p>5.12 Fish Resources and Fish Habitat</p> <p>Inadequate subwatersheds are used in the cumulative effects analysis because the proposed Burntlog Route could affect the headwaters of Indian Creek in the Middle Fork Salmon River subwatershed. Also, downstream effects could be detected in the main SFSR, the main Salmon and possibly even the Snake and Columbia Rivers from a hazardous material spill. Therefore, the subwatersheds should be expanded to cover these areas in the Middle Fork Salmon and SFSR in the cumulative effects analysis area.</p>	FIS	A discussion of the Indian Creek headwaters has been added to the Final EIS.
Samuel Penney (Chairman)	19396	415	<p>Impacts to fish were modeled against baseline; how are these models connected? For example, was water chemistry modeled in coordination to the reduction in stream flow? Heavy metals, such as arsenic and antimony, have the potential to concentrate as flows decrease. Stressors to these fish should be looked at independently but also cumulatively. Stressors to bull trout due to increased temperature, sediment, heavy metal concentrations and a reduction in flow should be looked at in a cumulative fashion to better understand impacts to fish. The flaws in the original hydrologic model are compounded by all the other models used to predict effects, such as the Stream and Pit Lake Network Temperature Model.</p>	FIS	Water quality impacts to fish were based on the total range of modeled variation at the confluence of Sugar Creek with the EFSFSR, the site that best represented cumulative conditions throughout the Project area. The models do demonstrate annual variation in water quality with discharge. Modeled heavy metal concentrations were measured against the IDEQ's strictest potentially applicable surface water quality standard for each constituent. These standards were not temperature dependent.

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Samuel Penney (Chairman)	19396	416	The SDEIS is flawed by treating habitat degradation in a myopic, segmented fashion, rather than holistically and cumulatively, and by ignoring downstream fish rearing and migration corridors. The SDEIS details alterations to available habitat, streamflow and water temperature for specific stream reaches and through the full timeline of mining operations. However, the SDEIS fallaciously reports these changes for individual stream segments as if they are independent of all connected stream segments, and does not account for additive effects of habitat modifications. Additionally, the SDEIS only examines headwater tributaries containing spawning and early rearing habitat for potential mining impacts, while impacts to major rearing and migration corridors downstream of the mine site are not evaluated. A more comprehensive, holistic approach to analyze degradation to all stream reaches potentially impacted through direct and indirect mining operations needs to be taken. For instance, stream segments downstream of the mine site with decreased streamflow or increased temperatures may preclude adult migration into and use of all habitat upstream, or juvenile survival through the migration corridor downstream. Therefore, there must be consideration of how fish habitat alterations may impact use of all connected habitat.	FIS	Impacts occurring in downstream waters were described as being 'regional' in spatial scope. Cumulative impacts, impacts resulting from multiple project and non-project factors, were also described and assessed relative to existing conditions and established significance criteria. In some cases, long-term or permanent impacts to downstream waters were unknown and quantifying the magnitude of the impact would have been speculative. In these cases, the magnitude of the impact was described as unknown. Impacts of water quality and temperature changes on adult migration were considered relative to existing conditions.
PRII		1	Passage beginning: "As a result, stream flows in the watershed..." - These are modeling results and should not be included in a description of baseline conditions. Please remove. As to the content of this passage, the cited 6.6C increase appears in the description of the analysis area in other chapters as well. The paragraph introduction is with respect to the entire analysis area and includes all streams upstream of Sugar Creek. This 6.6 increase refers only to the restored stream channels on the MTS, a small part of Meadow Creek. As a general comment to the inclusion of results in Chapter 3: We recommend results from the SPLNT modeling not be included in the existing environment section but rather in Chapter 4. In addition, the spatial scale of these predicted stream temperatures needs to be described so it is clear that these temperatures changes are not sitewide.	FIS	The modeling approach was developed through consultation with the Forest Service, USFWS, NMFS, and IDFG as a way to use best available information for effects analysis.
PRII		2	Passage beginning: "Predicted flow reductions in Sugar Creek attributable to the SGP..." - These are modeling results and should not be included in a description of baseline conditions. Please remove. We recommend results from surface water flow modeling and the SPLNT modeling not be included in the existing environment section but rather in Chapter 4.	FIS	The modeling approach was developed through consultation with the Forest Service, USFWS, NMFS, and IDFG as a way to use best available information for effects analysis.
PRII		3	[Cell with 12-19 values] - This 12C minimum is resulting in a decrease in thermally suitable migration habitat in the effects analysis because it was determined that temperatures were too cold (i.e. fall below 12C) for the migration period under proposed conditions. In reviewing the EPA 2019a reference, there doesn't appear to be a minimum threshold. Suggest removing the minimum value.	FIS	The comment is regarding the range of optimal temperatures in Tables 3.12-1 and 3.12-4 in the SDEIS and Tables 6-11 and 6-15 in the Fisheries and Aquatic Habitat Specialist Report. The 12°C minimum is based on EPA 2003, where it indicates that 12-13°C (constant) minimizes disease risk for adults.
PRII		4	"...the length of proposed mine site streams within these temperature thresholds was estimated (Table 3.12-1)." - We recommend results from the SPLNT modeling not be included in the existing environment section but rather in Chapter 4. Also, Table 3.12-1 does not mention that the lengths include the proposed streams.	FIS	It is important to show modeled results for baseline conditions so that the temperatures for the Action Alternatives can be accurately compared. If different data were used for the two conditions (with and without the Project), then the comparisons would not be valid. Regarding the stream lengths, the table note indicates that for Chinook salmon and steelhead (Tables 3.12-1 and 3.12-4) the percent of stream length is based on potential Intrinsic Potential habitat both upstream and downstream from the Yellow Pine pit.
PRII		5	"The entire 12.93 km of potential habitat ..." - From the previous paragraph, IP and Critical Habitat were used to define the spatial extent from which temperature was evaluated. This report also identifies 26.5 km of Chinook salmon critical habitat upstream of the YPP barrier. Please clarify how there is only 12.93 km of potential habitat evaluated (roughly half of what is available for juvenile rearing). It appears only the IP stream segments were evaluated. Also, please provide an explanation why all DCH was not considered as potential habitat.	FIS	While DCH extends farther than the usable habitat determined by the IP model, early life stages would not survive or have access to portions of the DCH. DCH was used to quantify habitat for juvenile rearing.
PRII		6	"The flow productivity analysis predicts changes in productivity based solely on streamflow changes and it does not factor in additional habitat changes that would also occur in the analysis area (e.g., direct loss of habitat, water temperature changes, etc.)" - It is recommended that also habitat gain be considered from restoration and enhancement of streams at the SGP.	FIS	The modeling approach was developed through consultation with the Forest Service, USFWS, NMFS, and IDFG as a way to use best available information for effects analysis.

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PRII		7	"The IP model was used to estimate the potential for spawning and rearing habitat in the headwaters of the East Fork SFSR ..." - Incorrect. IP was used for spawning, incubation, and early rearing, but critical habitat was used for all other juvenile rearing. Please clarify.	FIS	Text has been revised.
PRII		8	"The IP model was used to evaluate over 51 km of stream habitat." - Please note/clarify here that IP does not evaluate habitat. It evaluates stream width, valley width, and stream gradient. IP and other models (OM, PHABSIM, Critical Habitat, Temperature, and Flow/Productivity) are being used as proxy data to evaluate habitat despite readily available habitat data (See comments below regarding omission of Habitat WCI metrics; page 3-315).	FIS	IP measures a form of habitat, which does include wetted channel and gradient. While IP, OM, and PHABSIM do not measure all factors of fish habitat, they do provide a basis for alternative comparison. Additionally, the SDEIS and Fisheries and Aquatic Habitat Specialist Report state that the 51 km of stream habitat are being evaluated. Stream habitat is a general term, indicating it has perennial flow. The SDEIS and Fisheries and Aquatic Habitat Specialist Report do not indicate that it is 51 km of fish habitat.
PRII		9	"...the length of proposed mine site streams..." - We recommend results from modeling not be included in the existing environment section but rather in Chapter 4. Also, Table 3.12-1 does not mention that the lengths include the proposed streams.	FIS	It is important to show modeled results for baseline conditions so that the temperatures for the Action Alternatives can be accurately compared. If different data were used for the two conditions (with and without the Project), then the comparisons would not be valid. Regarding the stream lengths, the table note indicates that for Chinook salmon and steelhead (Tables 3.12-1 and 3.12-4) the percent of stream length is based on potential Intrinsic Potential habitat both upstream and downstream from the Yellow Pine pit.
PRII		10	"...thermally suitable habitat for all life stages ." - Stream segments were not evaluated for thermally suitable conditions at all life stages. See Table 3.12-4 below: Adult migration and spawning were both omitted because there were no SPLNT temperature data for those times. The reason there are no SPLNT data is because temperatures do not approach critical ranges in the spring. Rather than omitting the temperature analysis for these two life stages, they should be included with the caveat that temperatures were not modeled for these time periods but expected to be will within optimal temperature ranges based on the time of year.	FIS	In Table 3.12-4, there is a note indicating that Adult Migration and Adult Spawning are not applicable for comparison to the SPLNT model results.
PRII		11	Column "Total Stream Length Above YPP/ Below YPP " - No analysis was conducted upstream of the YPP because there is no designated critical habitat upstream of the YPP. This gives the impression that there is no available habitat upstream, which is not correct. There is IP upstream, and the Fisheries Specialist Report states in Section 7.2.3.5 for Integrated Effects for Steelhead that "Following the establishment of passage into the upper watershed, NMFS may designate Critical Habitat in the upper watershed." Please evaluate the temperature suitability of the IP stream segments.	FIS	In Table 3.12-4, the values above the Yellow Pine pit are zero, not because there is no critical habitat, but that, under baseline conditions, these fish cannot access the upstream habitat, and therefore, the length of habitat available for them under baseline conditions is 0 km.
PRII		12	12-19 value - There should not be a minimum temperature for migration; no such threshold is reported in the EPA 2003 reference.	FIS	The comment is regarding the range of optimal temperatures in Tables 3.12-1 and 3.12-4 in the SDEIS and Tables 6-11 and 6-15 in the Fisheries and Aquatic Habitat Specialist Report. The 12°C minimum is based on EPA 2003, where it indicates that 12-13°C (constant) minimizes disease risk for adults.
PRII		13	Incorrect "Johnson Creek" reference. Should be Lemhi River.	FIS	Text has been revised.
PRII		14	"...the length of proposed mine site streams..." - We recommend results from modeling not be included in the existing environment section but rather in Chapter 4. Also, Table 3.12-1 does not mention that the lengths include the proposed streams.	FIS	It is important to show modeled results for baseline conditions so that the temperatures for the Action Alternatives can be accurately compared. If different data were used for the two conditions (with and without the Project), then the comparisons would not be valid. Regarding the stream lengths, the table note indicates that for Chinook salmon and steelhead (Tables 3.12-1 and 3.12-4) the percent of stream length is based on potential Intrinsic Potential habitat both upstream and downstream from the Yellow Pine pit.
PRII		15	"Overall, there are 26.21 km of available habitat, none of it is within optimal thresholds for incubation/emergence, almost half of it is optimal for juvenile rearing, approximately 6 percent is within the thresholds for adult spawning ." - Recommend including acknowledgement that bull trout occurrence is widespread across the project area, which shows that when temperatures are not always optimal, fish can survive and even thrive.	FIS	The following text has been revised and added to Section 3.12.4.1 and Section 6.3.3.4 of the Fisheries and Aquatic Habitat Specialist Report: "Currently, bull trout do not occupy the entire 26.21 km, but they do inhabit sections of stream (spawning, incubating, and rearing) in which water temperatures are often outside the optimal thresholds."
PRII		16	In addition to Low, Medium Low, Medium High, and High, a 5th and new category was added called "Unavailable OM Stream Habitat" as shown in Figure 6-10 of the Fisheries Specialist Report. There needs to be discussion of this new category and its parameters and how a stream segment falls into this category. Please revise.	FIS	The EIS summarized the information from the Fisheries and Aquatic Habitat Specialist Report and cites to the report as applicable for more detail. This level of detail is addressed in the Fisheries and Aquatic Habitat Specialist Report, but not in the Final EIS.

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PRII		17	"...the PHABSIM study compared representative streams that contained similar hydrological and geographical characteristics to the stream characteristics at the proposed mine site. " - The language used by ESS 2019g who conducted the model is "It should be noted that the differences in the site parameters influence habitat values. The PHABSIM data are approximately 30 years old and were performed for another project. They represent available data that provide reference information and should not be viewed as directly transferable to the project site." Yet, these PHABSIM data are being directly transferred to the project site. Please revise the discussion of PHABSIM to include its limitations in inference.	FIS	Section 3.12.4.1 of the SDEIS and the Fisheries and Aquatic Habitat Specialist Report (Section 6.3.3.5) describes the PHABSIM limitations, including that the data are from the 1980s and 1990s, that the mine sites streams were compared to representative streams in which PHABSIM data were collected, and that PHABSIM model results are based on weighted usable area data collected from the index, or representative streams that do not exactly represent the physical and biological conditions of the mine site stream reaches.
PRII		18	Adult Migration - Same comment as Chinook. There should not a be a minimum value to the migration life stage based on EPA 2003.	FIS	The comment is regarding the range of optimal temperatures in Tables 3.12-1 and 3.12-4 in the SDEIS and Tables 6-11 and 6-15 in the Fisheries and Aquatic Habitat Specialist Report. The 12°C minimum is based on EPA 2003, where it indicates that 12-13°C (constant) minimizes disease risk for adults.
PRII		19	Adult Spawning - Same comment as above for Steelhead. No analysis was conducted for Adult Migration and Spawning because there are not SPLNT Temp data for the spring time period, because no temperature concerns are expected to occur in the spring. Please complete the evaluation for these additional life stages with the caveat that no temperature data were available, but it is expected temperature thresholds will be optimal in the spring.	FIS	In Table 3.12-4, there is a note indicating that Adult Migration and Adult Spawning are not applicable for comparison to the SPLNT model results.
PRII		20	Same comment as bull trout (Comment 16). There is a 5th category shown on Figure 6-12 in the Fisheries Specialist Report called "Unavailable OM Stream Habitat." The parameters of this new category need to be explained.	FIS	The EIS summarized the information from the Fisheries and Aquatic Habitat Specialist Report and cites to the report as applicable for more detail. This level of detail is addressed in the Fisheries and Aquatic Habitat Specialist Report, but not in the Final EIS.
PRII		21	Habitat Access - Please clarify/validate as to why Sugar Creek gets a FUR score here but FA score for barriers in Table 3.12-17.	FIS	Table 3.12-16 of the SDEIS and Table 6-2 of the Fisheries and Aquatic Habitat Specialist Report have revised.
PRII		22	"The lake also displays thermal stratification (i.e., order), but resuspension of sediments due to turnover is not expected. The bottom velocities necessary for turnover ..." - These statements from IDEQ 2002 are inaccurate. The lake does not display thermal stratification or "turnover" which is precisely why it buffers max and min temperatures so well. See the Brown and Caldwell SPLNT model report. It is correct that the lake captures sediment. We recommend revising this paragraph or deleting it.	FIS	The text reflects temperature data supplied by the SPLNT Model Report, Appendix A.
PRII		23	"This reach has a short section with a 9 percent gradient, shallow depths, and few pools, which may be a partial fish migration barrier at low flows ". Please reference the fish barrier memo completed by Bioanalysts. This is considered a partial barrier, and even though spawning adults have been transplanted in close proximity downstream to this partial barrier, no redds have been documented upstream.	FIS	Text has been revised.
PRII		24	Habitat Access - Please clarify/correct: How does the EF South Fork Salmon River get a FA score for physical barriers when there is a complete barrier to all migratory fish just 3km downstream?	FIS	Table 3.12-16 in the SDEIS shows that the EFSFSR headwaters are FUR due to the passage barrier, and lower EFSFSR is FR. In Table 3.12-17 in the SDEIS, the habitat access is FA because this is the habitat upstream from the Yellow Pine pit.
PRII		25	Reported Baseline Temperatures - Please review these numbers; see notes on Table 6-4 in the fisheries report. Also, the footnote indicates that the Meadow Creek upstream of EFMC confluence uses a distance weighted statistic while there is similar footnote for other reaches; this is not called out on Table 6-4 in the fisheries report but it is footnoted later on Table 7-5 of the fisheries report. Please clarify what methods were used.	FIS	Footnotes have been added to describe the calculation.
PRII		26	"Meadow Creek upstream of EFMC confluence" - Reporting 14C for baseline summer max in Meadow Creek upstream of Blowout Creek is misleading. Only a very small portion of this stream segment is reported at 14C with the vast majority of the stream segment reporting higher temperatures ranging from 14C to 19C.	FIS	Under baseline conditions, as shown in Table 3.12-18 in the SDEIS and Table 6-4 of the Fisheries and Aquatic Habitat Specialist Report, Meadow Creek water temperatures upstream from East Fork Meadow Creek do not exceed 17.9°C, with the higher temperatures closer to East Fork Meadow Creek. Meadow Creek water temperatures downstream from East Fork Meadow Creek range between 13.4°C and 19.8°C. Tables 3.12-18 of the SDEIS and 6-4 of the Specialist Report present the correct information.
PRII		27	"The SPLNT model did not account for changes to stream temperatures caused by changing climate conditions. " - As we provided to USFS in April 2022, for clarity, we request that this sentence be changed to "The SPLNT model did not account for changes to stream temperatures caused by changing	FIS	Revision not accepted. SPLNT Model sensitivity results are discussed in SDEIS Section 4.9.3.

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			climate conditions in the comparative modeling; however, the models were developed using the warmest, driest periods in the summer and fall. During model development, sensitivity analyses were conducted to test the effects of changing air temperature. Increasing air temperature every hour of the day by 5C had the effect of raising water temperatures by 0.5C."		
PRII		28	"The NorWeST model ..." - Please clarify this paragraph for the reader considering the following information: The NorWEST models rely on percent canopy derived from the NLCD 2011 USFS Tree Canopy Cartographic land use data to estimate percent canopy for stream reaches; the percent canopy was then reduced based on U.S. Forest Service burn severity data to account for wildfires that occurred between 2001 and 2008. The NorWest models predicting out to 2099 do not account for natural or human-assisted regrowth and revegetation along streams and rather assume that percent canopy remains at current conditions. In areas recently affected by wildfires, the NorWest models may overpredict stream temperatures due to rising air temperatures if percent canopy under current conditions is low. The SGP includes planting of trees along enhanced and restored channels that would increase stream shading over time. The SPLNT model did account for climate change in the sensitivity analyses conducted using the existing conditions model. Considering the site-specific data on diffuse flow temperatures, stream flows, and canopy cover at a much more refined scale than the NorWest models, increasing air temperature every hour of the day by 5C had the effect of raising water temperatures by 0.5C for the baseline condition.	FIS	Revision not accepted. SPLNT Model sensitivity results are discussed in SDEIS Section 4.9.3.
PRII		29	YPP Lake Headwater - We are unclear/unsure of the spatial designation for this reach; recommend providing explanation in the text or as a table footnote. Also, please clarify these baseline modeled values; are they averages of the entire Creek, specific points, etc.? And does the spatial extent of the NorWest Model conform to the SPLNT locations selected for this table?	FIS	Text was revised to clarify the description of the reach.
PRII		30	"...climate change may have important biological impacts that were not considered in the SPLNT modeling." - Please provide additional information around this statement: as presented it is not correct. We did simulate a 5C increase every hour of the day which generated a 0.5C increase in streams. The streams can only get so warm given the stream flow, air temperatures, and solar inputs; assuming a consistent increase across all reaches is not appropriate. In general, where climate change text is presented in the SDEIS and specialist report, it does not consider or include the extensive restoration plantings and mitigation measures associated with the SGP. The NorWest models may provide a good assessment of a No Action temperature increase, but it is not a good approximation without considering these project design features.	FIS	Revision not accepted. SPLNT Model sensitivity results are discussed in SDEIS Section 4.9.3.
PRII		31	"The chemical contaminants WCI, the analysis area is "functioning at risk or unacceptable risk" (Table 3.12-17) due to existing levels of legacy mining contamination. No stream on the SGP mine site is considered within acceptable risk levels for chemical contaminants." - Please provide additional explanation for the WCI methodology. [i.e. FA = No chemical contaminants exceed thresholds; FR = 1 exceeds thresholds; FUR = 2 or more exceed thresholds.] This is important because even if several chemical contaminants are fixed and/or concentrations lowered, the stream/reach WCI score may not change because the threshold for change is so high. That is generally the case with this WCI Category as the WCI Chemical Contaminants score only changes over the course of the mine life for 2 reaches (and none of the sDEIS stream segments) despite huge reductions in some chemical contaminants.	FIS	The FR and FUR status are based on the constituent concentrations.
PRII		32	"Change in amount of total useable Chinook salmon IP habitat." - Please clarify what is "useable" habitat vs just IP habitat, which is already divided up into levels of suitability/useability, and whether it connotes accessibility. Same for steelhead.	FIS	Text has been revised.
PRII		33	"Loss of Chinook salmon Critical Habitat." - Evaluating loss rather than change implies any potential benefit has not been evaluated. Please update "Loss" to "Change" here and for bull trout in same bullet list.	FIS	The analysis calculated length of Critical Habitat. Quality or type of Critical Habitat was not evaluated. "Loss" is used purely in the quantitative sense. "Change" would be inappropriate because the word implies a qualitative difference, and the analysis is quantitative, not qualitative.

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PRII		34	"The impacts definitions for intensity, duration (FSH 1909.15, 152b), and context are provided in Table 4.1-1. " - Resource area specific Impact Definitions were developed for some resources and not others, e.g. not done for Fish Resources and Fish Habitat. We recommend that Resource area specific Impact Definition should be developed for Fish Resources and Fish Habitat, as the more generic ones in 4.1-1 are not tailored enough.	FIS	Revision not accepted. The predicted Project impacts are described in SDEIS Section 4.12.2.2 and the definitions from Table 4.1-1 are applied to allow for standardized comparison between impacts duration and intensity.
PRII		35	"There is a lack of a site-specific, two- dimensional hydraulic-based habitat suitability model. " - Recommend this be clarified to state that habitat suitability models are not widely available in riverine systems and the best scientifically available data were used to support the impact analyses. Also, please relate this to the Weighted Usable Area (PHABSIM) section for bull trout on PHABSIM habitat modeling, and include mention that some of these streams ARE used in the analysis as "surrogate" sites (Summit, Sugar). The reader may not understand the "hydraulic-based habitat suitability model" statements here are related to PHABSIM, which is THE hydraulic-based habitat suitability model being referenced.	FIS	This text is not intended to be model-specific. The statement made in this section is technically correct - there is no site-specific two-dimensional hydraulic-based habitat suitability model. PHABSIM is a one-dimensional habitat suitability model.
PRII		36	No Action Alternative - Recommend updating the description of the No Action Alternative to be more complete for the reader only reviewing the fish section and not other sections where the description is more complete.	FIS	The No Action Alternative is fully described in Chapter 2.
PRII		37	"...the effects described are expected to be similar for all fish species in the analysis area ." - There is no rationale for this statement provided that informs the reader that all fish are impacted equally. This should either be clarified or edited to reflect that only T&E or sensitive species were analyzed for potential impacts and all other species are either not affected, at least to the degree the targeted species could potentially be.	FIS	Text has been revised in Section 4.12.2.2 of the Final EIS and Section 7.2.3.1 of the Fisheries and Aquatic Habitat Specialist Report.
PRII		38	"Fish salvage would be required for dewatering and all in- water work at stream crossings in all fish-bearing water bodies and fish impacts would be limited to minor (less than 10 percent) ..." - This statement infers that 10% of all fish die but yet the effects are considered "negligible, temporary and localized" from dewatering, fish salvage and relocation. Recommend providing additional context what the 10% percent represents.	FIS	The statement says that less than 10% incidental mortality associated with fish salvage would be anticipated.
PRII		39	"Salvage and relocation of fish from the Yellow Pine pit lake (19,267 square meters) would require a larger and longer effort than fish salvage in dewatered stream reaches ." - We disagree with this assertion and suggest it would take about the same length of time as diversion and dewatering of a longer stream segment. Note that later in this document it states: "In other respects, dewatering and fish salvage in the Yellow Pine pit lake would be similar to other areas of the SGP ..." Please revise.	FIS	The Forest Service disagrees that it would take a similar length of time between salvaging fish in the Yellow Pine pit lake compared to a smaller area of a stream channel, even if it is a longer length. The confines of a stream are easier to contain for fish salvage than lake habitat.
PRII		40	"This would result in a major, long-term, localized impact to bull trout. " - According to the Impact Definitions, this would mean that the "change would affect the majority of a resource or population...significant modification of the overall population." Please verify that this is supportable for bull trout due to temporary loss of the YPP. No quantitative analysis or numbers are provided.	FIS	The text has been clarified that the removal of the Yellow Pine pit lake would be a major effect to the adfluvial bull trout population.
PRII		41	"Stream enhancements in the East Fork SFSR and lower Meadow Creek ..." - These enhancements are acknowledged, but it is not apparent if or where are they incorporated into the Effects Analysis. Please verify whether these enhancements are habitat elements that have been excluded from the effects analysis.	FIS	The activities associated with the Project including stream enhancements were incorporated into the SDEIS effects analysis per descriptions and model outputs that included the effects of those enhancements.
PRII		42	"This would result in a major, long-term, localized impact to bull trout trap and truck alternatives". - According to the Impact Definitions, this would mean that the "change would affect the majority of a resource or population...significant modification of the overall population." Please verify that this is supportable for bull trout due to temporary loss of the YPP. No quantitative analysis or numbers are provided.	FIS	The impact definition does not require a mortality estimate, rather a 'significant modification' to the overall population. Under baseline conditions there is a bull trout population habituated to rearing and feeding in the Yellow Pine pit lake. Loss of this lake, and the lack of volitional passage upstream, would qualify as a 'significant modification' to the behavior and life history of the population in that local area. It would be 'long term' because the impact would occur for more than 5 years.
PRII		43	"The restoration activities , particularly providing volitional passage in the East Fork SFSR, would result in a major, permanent, regional, and beneficial effect on Chinook salmon, steelhead, bull trout,	FIS	Beneficial impacts should not be used to negate, offset, or mitigate other detrimental impacts. Beneficial and detrimental impacts to a species must be described and evaluated separately.

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			and westslope cutthroat trout within the vicinity of the mine." -This is a positive thing for BT and is not adequately incorporated into the overall effects to the species.		
PRII		44	<p>Portions of West End are shown as fish-bearing (blue) but should be non-fish-bearing (gray).</p> <p>Also, it is unclear why the map shows mostly restored streams, but includes some diversions (West End) and some baseline streams that are moved (lower Garnet Creek).</p> <p>Also, please clarify why lower Garnet Creek would be considered fish-bearing at baseline, but not after restoration (blue line vs gray line).</p> <p>This map is missing restoration of Garnet Creek, Hennessy Creek, and Midnight Creek, and it does not appear these streams were included in any of the analyses supporting the effects analysis.</p> <p>Hennessy and Midnight Creeks especially need to be included as significant effort was undertaken in the design to create usable habitat in the lower portion of both of these streams. Please revise.</p>	FIS	<p>Figures 5-4 and 7-1 in the Fisheries and Aquatic Habitat Specialist Report show West End Creek and Garnet Creek as non-fish bearing streams, in both baseline and project conditions.</p> <p>The modifications of Garnet, Midnight and Hennessy creeks represents physical adjustments to the stream channels to route them around Project activities. Therefore, they are not incremental habitat effects compared to baseline conditions.</p>
PRII		45	"In the East Fork SFSR upstream from Meadow Creek, water temperatures tend to be cooler than the downstream reaches because this consists of the headwaters ". - When considering temperatures for fish, accessibility to cold-water refugia is an important consideration that has been left out of this discussion. If portions of Meadow Creek end up warmer, but huge portions of the upper EFSFSR become accessible, we suggest there is a net benefit to fish seeking cold water refugia. Also, temperatures tend to be cooler downstream because they are well-vegetated reaches...not because they are headwaters.	FIS	<p>Comment noted. Regardless of whether additional habitat opens up in the EFSFSR, the loss of Meadow Creek due to unsuitable temperatures still must be considered an impact.</p> <p>The conclusions of SDEIS Section 4.12.2.2 summarize the individual effects of temperature, accessibility, and other factors. These effects are examined individually then evaluated in an overall context.</p>
PRII		46	"EFMC experiences an increase in summer and fall maximum water temperatures during mine operations and closure/reclamation activities (Mine Year 6 through 18) and post-closure until Mine Year 52,... " - Please verify this statement. Our documents indicate that the cited increase is up to 0.3C in Mine Year 6 based on SPLNT model results comparing the maximum temperatures in the area...and temperatures are lower by EOY12 due to the rock drain.	FIS	Text has been revised. Lower temperatures are predicted during mine operations.
PRII		47	"By Mine Year 112, summer maximum water temperatures in the East Fork SFSR between Yellow Pine pit and Sugar Creek are about 0.4°C higher than baseline conditions,... " - The values in Table 4.12-2 are not correct and therefore the last sentence in paragraph is wrong. The baseline warmest temp downstream of YPP and above Sugar Creek is 14.5 simulated and 14.8 observed. For EOY 6 the simulated warmest temp is 16.1 (correct in the table) but by EOY 12 it is 14.4. The sentence should read: 'By Mine Year 12, summer and fall maximum temperatures in the East Fork SFSR between YPP and Sugar Creek are within 0.3C warmer than baseline temperatures. '	FIS	Text has been revised.
PRII		48	"The effects of the SGP on fish caused by changes to water temperature... " - Recommend this statement reflect those changes including both increases and decreases.	FIS	The statement is a general statement of impacts or benefits. The actual changes are shown in Table 4.12-2 of the SDEIS, so it is not necessary to repeat this information in the text as well.
PRII		49	"...and East Fork SFSR downstream from Yellow Pine pit... " - EFSFSR downstream of YPP should be grouped with the beneficial reaches. By EOY12 temperatures are at baseline and further out they continuously decline to be cooler than baseline - see table 4.9-24.	FIS	The EFSFSR downstream from the Yellow Pine pit has temperatures that increase initially and then reduces to a temperature similar to baseline conditions.
PRII		50	"Sediment and Turbidity " - There is no quantitative analysis of sediment. This entire section is speculation and assumption. The Kuzis 1997 report has an entire appendix on sediment production based on the BOISED model that was developed for use in the Boise and Payette National Forests. At a minimum, the Kuzis data should be referenced, and we recommend that the BOISED model be used to evaluate and quantify potential sediment production.	FIS	The SDEIS analysis incorporates the Project's design features to minimize sedimentation to levels typical for roads adhering to Forest Service requirements.

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PRII		51	<p>"The effects of the SGP construction of temporary roads and transmission lines on sedimentation on fish and aquatic habitat are expected to be moderate, short-term, and localized ". - Recommend providing context as to how this conclusion was determined. All of the information provided above is generic and speculative (i.e. these actions could increase sediment, but no analysis to evaluate or quantify how much if at all). This comment is applicable throughout this section. Moreover, there is only 1 sentence mentioning "substantial decrease in sediment input" from Blowout Creek</p> <p>and lots of speculation about the "potential" for increased sediment from other operations. Please clarify what analysis was done to show that the speculative increases to sediment would exceed the known decreases in sediment from Blowout. The Kuzis (1997) report used the BOISED model developed for the Boise and Payette National Forests to predict and quantify sediment inputs both from roads and hillslopes. Kuzis (1997) calculated roughly 47.56 tons/year of sediment from Blowout Creek = the largest single source in the entire EFSFSR watershed. Notably, this calculation used a conservative erosion rate of 30 tons/acre for the steep chute, where as most other areas (including the Blowout meadow incision) used a 60 tons/acre estimate. If the 60 tons/acre were used for the Blowout chute, the total would be 78.8 tons/year. With all the BMPS and other sediment control measures going into place as part of the project, please clarify how the analysis predicts that the increased sediment produced from the mine/roads would exceed the 47.56 T/yr conservative (or 78.8 T/yr less conservative) saved from Blowout Creek resulting in a "moderate, permanent, and localized" effect.</p>	FIS	SDEIS Section 4.9.2.2 describes the potential for sediment generation during construction of temporary roads and transmission lines. The fish analysis in Section 4.12.2.2 utilizes that effect.
PRII		52	" During the construction of the Burntlog Route or of temporary roads, culverts would be constructed or replaced. Surveys were conducted to identify fish bearing streams along the Burntlog Route (Rio ASE 2021). " Inaccurate citation. Rio ASE measured conditions at crossings but did not make any kind of determination regarding fish presence/absence or passage.	FIS	Text has been revised. Reference to RioASE was replaced with references for Stantec 2019 and 2020 in both the SDEIS and the Fisheries and Aquatic Habitat Specialist Report.
PRII		53	"The potential re-establishment of access upstream of these culverts could affect the composition of the aquatic community... ." - This conclusion does not provide rationale for a speculative assumption. Recommend providing additional context for rationale.	FIS	Re-establishment of access would allow for volitional passage of additional fish species that could affect composition of the aquatic community.
PRII		54	"The effects of the SGP on fish access during construction of temporary roads are expected to be negligible, short-term, and localized. " - This effects conclusion contradicts with the Fisheries Specialist Report, which indicates "minor". Recommend assessing and editing to be consistent.	FIS	Text has been revised and the Final EIS was changed to be consistent with the Fisheries and Aquatic Habitat Specialist Report.
PRII		55	Fiddle Creek (04) - This barrier would not be removed. Also, please clarify how removal of the barrier would result in -0.72km of habitat for bull trout and cutthroat occupancy potential.	FIS	The description of the change in habitat associated with the Fiddle Creek barrier has been revised in the Final EIS.
PRII		56	East Fork Meadow Creek: Artificial - Gradient - This is incorrect. Surface flow and passage equal to baseline would be restored during reclamation. Recommend adding a footnote or relevant text stating that surface flow and passage are equal with the No Action Alternative and would be restored during reclamation (i.e. rock drain barrier removed; not a new barrier).	FIS	The SDEIS appropriately describes the effect on East Fork Meadow Creek and notes that the results are based on the Occupancy Model even if the habitat is not always accessible.
PRII		57	"...impacts of spills ..." - Recommend providing rationale for this impact assessment	FIS	SDEIS Section 4.7.2.2 describes the potential impacts on environmental resources and the fish analysis in Section 4.12.2.2 utilizes those potential impacts.
PRII		58	"The West End pit lake would not be reclaimed or restored and would therefore have impacts on fish in perpetuity. " - West End Creek is non-fish-bearing. The West End pit lake is not expected to fill and spill, therefore would not contribute surface water to fish-bearing reaches downstream. It is unclear how therefore it would have "impacts on fish in perpetuity." It would be more accurate to say that "West End Creek is non-fish-bearing, therefore impacts on fish are expected to be minor despite changing conditions from non-perennial stream channel to open pit lake." Please revise.	FIS	The SPLNT model assumed a 'small headwater connection' for the purposes of the model. However, both the SPLNT and Water Chemistry reports confirm no direct discharge from the West End pit is anticipated and any hydrologic connection downstream would be indirect through groundwater. Text has been revised to clarify West End Creek/pit waters have no <i>direct</i> connection downstream.
PRII		59	"...impacts to fish would be minor, long-term, and localized. " - Please clarify the rationale or evidence for this impact via an explanation or reference.	FIS	Changes in water chemistry at the discharge location would be measurable but would have little effect on water chemistry or fish species, as the effluent constituents do not exceed the aquatic life criteria.

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PRII		60	The criteria provided in this table appear to not take into account duration and frequency components altogether as well as not accounting for the magnitude of streamflows.	FIS	The table does represent the duration and frequency of exceedances by noting that conditions are either seasonal or consistent throughout the monitoring. Greater streamflows are represented in the seasonal peaks.
PRII		61	"Section 4.8 and the SGP Water Quantity Specialist Report (Forest Service 2022e) provides additional descriptions of how much streamflow changes as a function of mine operations, including locations without gaging data (i.e., downstream of Sugar Creek)." - Similar impacts to streamflows are provided in Table 4.8-4 but uses "predicted reductions" versus " percent change". Recommend editing to show comparable and consistent presentation of the results to avoid potential misinterpretation of the results in regards to streamflow. [This comment also applicable to Table 4.12-5].	FIS	The paragraph referenced in the comment does not describe stream flows. The streamflow information reported in Table 4.12-5 reflects the predicted flows utilized in the productivity modeling based on inputs from the site hydrologic model.
PRII		62	"Table 4.12-5 shows predicted (simulated) monthly stream flows during the August to March low flow period at five USGS gaging stations " - The table only includes 3 USGS stations. Please revise.	FIS	Text has been revised.
PRII		63	"...average baseline low flow period stream flows ..." - The "average baseline" appears to be the "No Action" scenario. Please clarify what "baseline" means, especially when referencing USGS stations. This suggests that "average baseline" could be observed data when it appears to be the No Action scenario at SFA reaches.	FIS	Text has been revised.
PRII		64	Figure 4.12-3 on the previous page shows the greatest flow reduction is around 22.5%, but this shows 36.4%. Please verify the correct value. Also we recommend evaluating the duration of this reduction in flow and the increase back towards baseline well before post-closure.	FIS	The Table 4.12-3 in the SDEIS has been revised to correct for an error in a calculation of the average change in flow in mine year 7 and the Specialist Report has also been revised. The text describes the reduction and increase in flows approaching baseline conditions. The effects of the duration in changes in flow are provided in the species impact analyses for flow productivity.
PRII		65	"Not all WCI indicators summarized for baseline conditions are of equal value in determining the potential impacts ..." - Recommend extrapolating what is not equaled and how incorporated into the evaluation, as it is unclear what WCIs are not considered equal compared to other WCIs	FIS	Both the Affected Environment sections (Section 3.12 in the SDEIS and 6.0 in the Fisheries and Aquatic Habitat Specialist Report), as well as the impact assessment focuses on the WCIs of the greatest importance.
PRII		66	Sediment and Turbidity - Summary changes for sediment are mostly positive or negligible and should be reflected in the incremental change between the No Action and the MMP. Please revise.	FIS	No revisions made. The table does indicate improvement in the sediment and turbidity conditions for stream segments downstream of the East Fork Meadow Creek repairs, as the segments improve from FUR to FR.
PRII		67	Physical barriers: MC and EFMC - Physical Barriers WCI represents a tradeoff: Greatly improved access to most areas with reduced access to upper Meadow Creek. Result is a large net benefit, which is not recognized. Please revise.	FIS	No revisions made. The table does indicate improvement in the access due to barrier removals as the stream segments improve from FUR to FA.
PRII		68	Chemical Contaminants - Chemical Contaminants WCI changes are mostly positive with some negligible. Please revise.	FIS	No revisions made. The table does indicate improvement in the water quality, by reducing from baseline conditions, but some constituents still exceed the analysis criteria.
PRII		69	"There would be a decrease in habitat conditions for migrating adults upstream from the Yellow Pine pit lake cascade barrier that meet the temperature criteria because water temperatures are lower than the thermal requirements." - This statement contradicts the EPA 2013 reference for migration and the Fisheries Specialist Report (p. 135) and this document on page 4-366 states that "While there is a modeled loss of thermally suitable habitat for adult migration of Chinook salmon, this is primarily caused by water temperatures below the temperature criteria, which would not result in impaired movement." Recommend clarifying why there is a decrease in habitat, similarly reported Table 4.12-7.	FIS	Both the SDEIS and Fisheries and Aquatic Habitat Specialist Report state in both the text and the table that the loss of thermally suitable habitat for migrating adults is due to temperatures that are below the criteria.
PRII		70	Row: Adult Migration2 - This reported reduction is due to temperatures being too low, which were concluded in the Fisheries Specialist Report and this document on page 4-366 to "not result in impaired movement" and therefore should not represent a reduction in reported thermally suitable habitat. Please correct these values accordingly.	FIS	The text in both the SDEIS and Fisheries and Aquatic Habitat Specialist Report indicate why there is a loss of thermally suitable habitat. No adjustment to the numbers in the table were made.
PRII		71	Meadow Creek and EFMC: 'High' row - Notably roughly 1/2 of the all IP (and roughly half of the "High" IP) in Meadow Creek is above a partial barrier located just upstream of the Blowout Creek confluence. No Chinook salmon redds have been reported in that area. This portion of the IP should be qualified as inaccessible at baseline. Please revise.	FIS	In Section 4.12.2.2 of the SDEIS (Impacts to Chinook Salmon, Intrinsic Potential) and Section 7.2.3.4 (Intrinsic Potential) of the Fisheries and Aquatic Habitat Specialist Report, there is an explanation that IP habitat does not mean the species are present, and the two

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					documents have text indicating that the 'high' IP habitat in Meadow Creek is blocked by a barrier.
PRII		72	"Notably, most of the medium IP that remains in Meadow Creek at Mine Year 23 is also blocked by a physical barrier to Chinook salmon so is not accessible ." - This statement appears to not match with the data presented in Figure 7-6 of the Fisheries Specialist Report. Recommend revised and updating accordingly. Additionally, no redds have been documented above that barrier.	FIS	In Section 4.12.2.2 of the SDEIS (Impacts to Chinook Salmon, Intrinsic Potential) and Section 7.2.3.4 (Intrinsic Potential) of the Fisheries and Aquatic Habitat Specialist Report, there is an explanation that IP habitat does not mean the species are present, and the two documents have text indicating that the 'high' IP habitat in Meadow Creek is blocked by a barrier.
PRII		73	Critical Habitat subheader - The specialist report does at one point explain this is modeled habitat and not designed critical habitat. This should be explained and footnoted/referenced. Also, re: paragraph 5 on 3-365; this is assumed DCH based on the FR narrative because modeled habitat was not determined downstream of the mine footprint.	FIS	NMFS considers the habitat upstream from Yellow Pine pit as designated critical habitat.
PRII		74	"While there is a modeled loss of thermally-suitable habitat for adult migration of Chinook, this is primarily caused by water temperatures below the temperature criteria, which would not result in impaired movement ." - Recommend amending results to address low temperatures and how this directly (or indirectly) impacts Chinook salmon and their associated movements.	FIS	Both the SDEIS and Fisheries and Aquatic Habitat Specialist Report state in both the text and the table that the loss of thermally suitable habitat for migrating adults is due to temperatures that are below the criteria and why there is a loss of thermally suitable habitat. No adjustment to the numbers in the table were made.
PRII		75	"Activities during mine operations would result in major reductions ..." - Recommend providing context for this conclusion.	FIS	Text revised to replace 'major reductions' with 'reductions as described in Table 4.12-5' in the SDEIS and Table 7-11 in the Fisheries and Aquatic Habitat Specialist Report.
PRII		76	"At the Meadow Creek, East Fork SFSR at Stibnite, and East Fork SFSR above Sugar Creek sites, the effects of the 2021 MMP on steelhead productivity ..." - This is misleading. Current productivity is zero, because there are no steelhead upstream of YPP; therefore the reduction in productivity should be described as a reduction in potential productivity that would be gained, still resulting in a vast (mathematically infinite) improvement above the YPP barrier. In other words, it should be described as a reduced benefit, but still a significant benefit rather than a reduction compared to baseline.	FIS	The SDEIS discusses the application of productivity model results to areas that are currently inaccessible. These conditions are considered in the summary of effects in the conclusion of SDEIS Section 4.12.2.2.
PRII		77	"Overall, the effects of the 2021 MMP are expected to result in minor, long-term, and localized impacts to the steelhead Critical Habitat. " - Recommend providing explanation of the impact assessment while the resulting analyses presented show a net benefit.	FIS	While there are net benefits to steelhead, mostly due to increased access, there are minor effects to steelhead designated critical habitat, as described in the steelhead Critical Habitat section of 4.12.2.2 of the SDEIS and Section 7.2.3.4 in the Fisheries and Aquatic Habitat Specialist Report, due to construction and operation activities.
PRII		78	"Table 4.12-13 presents the length of streams that have positive bull trout occupancy probability that fall within the temperature threshold categories for bull trout life stages ." - Recommend amending this statement that it is potentially misleading to suggest fish wouldn't be in the reaches that exhibit max temperatures outside of those thresholds, especially considering that is already the case for many reaches at baseline.	FIS	Text has been added to both the SDEIS and Fisheries and Aquatic Habitat Specialist Report: "It is important to note that bull trout do not necessarily currently occur in areas that are considered lost habitat due to thermal conditions. However, based on modeled results, the effects of the SGP on bull trout caused by changes to thermally suitable habitat are expected to be major, permanent, and localized."
PRII		79	"For Meadow Creek, the impacts on bull trout habitat are major, long-term, and localized ." - Only 2 flow reductions were used from Summit Creek (87% reduction and 44% reduction) to extrapolate reductions to habitat in Summit Creek, which was then directly applied to Meadow Creek. Two points is a limited dataset from which to build a regression, and there are potentially many differences between Summit and Meadow Creeks. Finally, there is no discussion of improving habitat conditions in Meadow Creek through restoration (LWD, pools, floodplain connection, off- channel habitat, etc.). These improvements would offset some of the potential losses from reduced flow. This should at least be mentioned. Same comment applies to next two paragraphs (p. 376). For East Fork SFSR above Sugar Creek; only 2 data points representing 90% and 44% flow reductions; no discussion of improved habitat offsetting some of the calculated loss from reduced flow. For the EFSFSR, only 2 data points representing 60% and 45% flow reductions; no discussion of improved habitat offsetting some of the calculated loss from reduced flow.	FIS	This is a misinterpretation of the use of PHABSIM. The data are not directly applied to the mine site creeks but are used to compare the results to the index or reference streams. PHABSIM is used to assume potential results based on changes in flow.

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PRII		80	"The East Fork SFSR upstream of the Yellow Pine pit lake and the Meadow Creek drainage all have increased occupancy probabilities for bull trout over time ." - We understand this to mean that baseline is the lowest occupancy probability, and the probability generally increases through the course of the project with the maximum occupancy probability occurring after closure (for all 4 stream segments evaluated (see Table 4.12-15 below). Please clarify.	FIS	Table 4.12-14 in the SDEIS (Table 7-7 in the Fisheries and Aquatic Habitat Specialist Report) clearly shows the increase in occupancy probability from baseline conditions throughout the mine life, with only the EFSFSR between the Yellow Pine pit and Sugar Creek decreasing in Mine Years 6, 12, 18, and 27, but increasing to over baseline conditions after Mine Year 27. Table 4.12-15 in the SDEIS (Table 7-8 in the Fisheries and Aquatic Habitat Specialist Report) shows the length of habitat available for bull trout occupancy, indicating that some systems (Meadow Creek and EFSFSR between the Yellow Pine pit and Sugar Creek) show declines (until Mine Year 27 for Meadow Creek). These differences are explained in the text.
PRII		81	Here, baseline (km)equal 33.9km total. In the DEIS Appendix J, there was 41.7km of occupancy potential at baseline for bull trout. Please clarify the difference (7.8km) and the changes that occurred in the analysis between the DEIS and sDEIS.	FIS	The difference in baseline habitat quantities has been clarified in the Final EIS.
PRII		82	"Post-closure, a net decrease in quality and quantity of bull trout habitat would occur despite removal of passage barriers and an increase of lake habitat for bull trout including: ..." - The Critical Habitat paragraph describes large benefits to Critical Habitat by removing the YPP barrier (opening 20km of habitat) and impacts by creating a new barrier in upper Meadow Creek (blocking less than 10km of habitat). On the balance it would seem the benefit of the much larger barrier removal would outweigh the impact of the much smaller barrier addition (i.e. 20>10), but the conclusion here is a "major" impact. Please clarify how this conclusion was reached. Another way of looking at it is an impact to the currently small, isolated subpopulation of bull trout above the YPP, and a benefit to the much larger watershed population by providing access above the YPP. Providing a larger amount of access to the much larger population would seem to outweigh the impact of blocking a smaller amount of access to a much smaller population.	FIS	Any loss of critical habitat is considered a major loss. The loss of upper Meadow Creek through a barrier, risks extirpation within upper Meadow Creek. This is considered a major impact.
PRII		83	"The other life stages are outside the summer – fall modeled parameters, and therefore are not included in the analysis." - Relevant to all species, it is recommended that the EIS recognize that winter/fall temperatures will be comparable to baseline and not impacting various fish species. Conditions will be thermally suitable.	FIS	While this is likely true, there are no modeled results to verify this statement.
PRII		84	Below Yellow Pine Pit: Total Available Habitat - Please demonstrate where the loss of 0.35km comes from; it does not appear to be temperature related, but reduction of "available" habitat. Please clarify what "available" habitat means and how these values are calculated.	FIS	The 0.35 km of lost habitat is the 2.01 km under baseline conditions minus the 1.66 km in Mine Year 112. As described in the text, available habitat is habitat that is the length of IP habitat that falls within the temperature threshold categories for the species life stages.
PRII		85	Above YPP: Total Available Habitat - It is demonstrated here that gains in thermally suitable habitat for Incubation/emergence and for juvenile rearing are indicated, but equate to a loss in total available habitat. Please clarify where is the loss in "available" habitat derives. Table 4.12-18 shows a net increase in occupancy potential, and as stated for bull trout, the removal of the YPP barrier creates net positive access compared to the addition of the new barrier at the TSF buttress.	FIS	Text has been revised with a note to the table stating: "Results based on usable habitat for occupancy potential."
PRII		86	"Based on modeled results, the effects of the SGP on westslope cutthroat trout caused by changes to thermally suitable habitat are expected to be minor, permanent, and localized ." - From the bullets above, there would be decreases in thermal suitability for several years, but a net increase for both life stages evaluated after closure. Please clarify the rationale for permanent, minor impact. If anything there would a long-term impact (between 3 and 20 yrs) followed by a permanent benefit, certainly not a permanent impact.	FIS	It is important to note that while there are some increases in usable habitat, there are also decreases which are considered impacts.
PRII		87	"For the East Fork SFSR at Stibnite site, the impacts on cutthroat trout habitat are moderate, long-term and localized. " - Appears to be inconsistent with the Fisheries Specialist Report; recommend reconciling and address flows rebounding near baseline	FIS	Text has been revised.
PRII		88	"Based on the current known extent westslope cutthroat trout occupancy, fish in the upper headwaters of Meadow Creek would remain isolated. " - Cutthroat trout population would persist, isolated above the TSF buttress, but earlier in this document it was assumed bull trout would be extirpated. Both need explanation as to why one species would persist but the other would not. Please revise.	FIS	The population size of cutthroat trout is larger in the upper Meadow Creek than bull trout, which improves the chances of survival of westslope cutthroat trout and increases the risk of extirpation for bull trout.

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PRII		89	"Following reclamation, the net effect would be a minor loss of both quantity and quality of habitat for westslope cutthroat trout including:" - Please clarify the post-closure (following reclamation) conclusion that there would be a loss of quantity and quality of habitat given the outcomes of each analysis. As with similar comments, the methods of "integration" needs to be explained. It is difficult to understand the summary of effects as reported: Water Chem = unknown benefit Habitat = benefit Temp = benefit Flow Change = negligible Barriers = negligible Occupancy = benefit	FIS	Details for each impact assessment are provided in each impact category. While there are benefits, there are impacts (flow, habitat loss, barriers).
PRII		90	"The primarily net reduction in water temperatures in the East Fork SFSR and Meadow Creek... " - Here it is stated there would be a net reduction in water temperature, but for bull trout it was stated there would be a net increase. Please clarify the difference.	FIS	For bull trout, there is a shift from 'functioning at unacceptable risk' to 'functioning at risk'. In the impact assessment for water temperature for bull trout, the determination is a net decrease in thermally suitable habitat, not a net increase.
PRII		91	"The potential for surface water quality impacts from accidental fuel or chemical spills along the mine access roads would be comparable between the action alternatives ." - This is not the case, as is stated later in the paragraph. Please revise.	FIS	Text later in the paragraph does not contradict this statement. The statement identified in the comment differs from other statements which indicate that specific locations and extent would differ, but not the potential impacts.
PRII		92	"Under the No Action Alternative there would be no irreversible or irretrievable commitment of fish and aquatic habitat resources. " - This summary of "no action" does not appear consistent with the other action alternatives. The YPP barrier would still continue to block roughly 35 miles of perennial streams and associated habitat. Below, for the Modified Mine Plan, the TSF buttress barrier is considered an irretrievable commitment because it blocks fish access to upper Meadow Creek.	FIS	The text has been revised to identify the Yellow Pine pit barrier as an irreversible and irretrievable impact associated with the No Action Alternative.
PRII		93	"The direct mortality of fish would be an irreversible impact that could occur under the Action Alternatives. " - No rationale for this statement. Some fish dying would not limit the future options for use of the "resource" which I assume would be defined as populations of fish. Fish populations would still be maintained and there would still be options for their use in the future. Please revise.	FIS	No revision made. Fish mortality represents an irreversible impact regardless of the extent of effect on the use of the resource.
PRII		94	"During construction and operations, some sections of aquatic habitat would be removed ..." - Recommend rewording to recognize the improvements to streams rather than suggesting they would be removed.	FIS	The text has been revised to remove the sentence. The surrounding sentences accurately describe the planned stream diversions.
PRII		95	"In the long-term restoring fish passage upstream of the Yellow Pine pit would result in an increase in available habitat for anadromous and resident fish in the analysis area. " - This statement summarizes that "restoring fish passage upstream of the Yellow Pine pit would result in an increase in available habitat for anadromous and resident fish" but for both bull trout and cutthroat trout thermally suitable habitat analyses above there is a reported reduction in "available" habitat. Please clarify which conclusion is correct.	FIS	Both statements are correct, just at a different scale.
PRII		96	"Short-term changes to aquatic habitat in Meadow Creek include diverting a portion of the creek just south of the proposed Hangar Flats open pit, and the loss of habitat where the TSF and TSF Buttress would be located ". - Recommend rewording such that it is not concluded that actual stream reaches are removed, which is inaccurate.	FIS	Revision not made. The restoration of the short-term loss of habitat is described in the next sentence in the text.

Wildlife and Wildlife Habitat including Threatened, Endangered, Proposed, and Sensitive Species

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Lynn Lewinski		1	<p>My concerns are for the wolverine and the fact of its survival, which I do not feel are adequately addressed for its protection by proceeding with this proposed mine project.</p> <p>The wolverine is a unique and hard to study creature by its very nature. Preferring isolated and undisturbed habitat, the wolverine defends a large territory for itself and its den. This creature has a diminished population that will be further placed at risk by the disruptive activities and intrusions of this proposed mine and its development. The DEIS states: Hundreds of thousands of acres of directly and indirectly impacted wolverine habitat would result from mine activities (Chapter 4.13.2.1.3.2). Wolverines are specially designated ...</p>	WIL	Comment noted. Statement of position.
Lynn Lewinski		2	<p>The constant noise of drilling and blasting to create, move, and haul rock are beyond the scope of tolerance.</p> <p>The extreme lighting for night shifts is completely unnatural.</p> <p>How can a sensitive creature cope with these intrusions? What action is able to mitigate these horrific upsets of peace and quiet? Continued for 10 years, the wolverine will be annihilated. How is this acceptable?</p>	WIL	Project effects on wolverines are described in SDEIS Section 4.13.2.2. This effects analysis results in a not likely to jeopardize determination.
Lynn Lewinski		3	<p>The proposal of building the Burnt Log road and access to the wildness creates extremely disruptive effects that will diminish all environmental habitats.</p> <p>Any consideration for public use should not be allowed. The detrimental consequences will be abhorrent to all Nature. Have the impacts of public use been considered? The wolverine population will diminish; wildness will be lost. How with the exploitation of these lands for a few for short term benefi the future of wildness for purpituity.</p>	WIL	The EIS has been revised to include a public use restriction for the Burntlog Route.
John Lewinski	17003	3	<p>I have seen both Mountain goats and Bighorn sheep within five miles of the project boundary. Bighorn sheep are at least mentioned in the DEIS but Mountain Goats are not mentioned at all. This is a premiere big game species in Idaho and it is not analyzed even though the population of these goats is in decline throughout the state. The number of goat hunting permits has gone down precipitously in our state over the last thirty years as the state Fish and Game Department has done their surveys and found less and less goats yet this huge project does not even think that it is important to analyze it's effect on that population when it is so close to where they live; an incredibly bad oversight.</p>	WIL	Mountain goats are not a TEPC, sensitive or other special status species under the PNF Forest Plan. However, due to nearby occupied habitat, a statement regarding the potential use in the Project vicinity has been added to Section 3.14. However, no impacts are anticipated to occur to this species as a result of the Project.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	29	<p>On December 15, 2022, toward the end of the SDEIS comment period, the U.S. Fish and Wildlife Service listed whitebark pine (<i>Pinus albicaulis</i>) as threatened under the Endangered Species Act (ESA). This rule is to become effective starting January 17, 2023. Threatened species are likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Due to the listing, there are now additional restrictions regarding the removal of whitebark pine: "The protections for whitebark pine also make it illegal to remove, possess, or damage the tree on federal lands." Federal actions that may impact whitebark pine must now go through section 7 consultation with the U.S. Fish and Wildlife Service to make sure that project activities will not jeopardize this species.</p> <p>NEPA requires informed public comment "on proposed actions and any choices or alternatives that might be pursued with less environmental harm." The Forest Service must, therefore, account for these changed circumstances in a new supplemental or revised SDEIS and issue it to the public for review. The Forest Service must not only include updated baseline information and effects analysis, but must also include appropriate project modifications and additional mitigation measures.</p>	WIL	Text has been revised per the comment to update the status of the whitebark pine per the listing on December 15, 2022. This status has been changed throughout the Final EIS and Vegetation Specialist Report. Additionally, the analysis and required protection measures as well as mitigation measures required by the Forest Service have been added to the Final EIS, specifically in Sections 3.10, 4.10, and 5.10, as appropriate. As part of the ESA Section 7 consultation process, this species is also included in the Project's BA.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	44	<p>The Forest Service abdicated its responsibility to identify "species of conservation concern" (SCC), and determine how substantive requirements of the 2012 Planning Rule apply with respect to those identified SCCs. For any "amendment to a plan that was developed or revised under a prior planning rule," such as the Payette and Boise Forest Plans, "if species of conservation concern (SCC) have not been identified for the plan area and if scoping or NEPA effects analysis for the proposed amendment reveals substantial adverse impacts to a specific species, or if the proposed amendment would substantially lessen</p>	WIL	<p>The Forest Service developed its sensitive species list and list of management indicator species (MIS) and analyzed effects to these species in Section 4.13 of the EIS.</p> <p>Species such as SCC are managed at the Forest Plan level and not the site specific, project level.</p>

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			<p>protections for a specific species, the [Forest Service] must determine whether such species is a potential SCC, and if so, apply section 219.9(b) with respect to that species as if it were an SCC.” 36 C.F.R. § 219.13(b)(6).</p> <p>First, the SDEIS, as mentioned above, does not undertake a “NEPA effects analysis for the proposed amendment,” as required under the Planning Rule. 36 C.F.R. § 219.13(b)(6).</p> <p>Second, even if the Forest Service considered the effects analysis of the proposed project the same as the effects analysis for the proposed amendment, which it cannot, the NEPA effects analysis of the proposed project (SDEIS Chapter 4) “reveals substantial adverse impacts to a specific species” and “substantially lessens protection for a specific species.” 36 C.F.R. § 219.13(b)(6). Instead, Appendix A of the SDEIS simply states that “[t]here are no [SCC] species known to occur within the proposed Stibnite Gold Project area with a substantial concern about the species capability to persist over the long-term in the Forest Plan area.” SDEIS Appx. A. It is apparent from the SDEIS and Appendix A that the determination of whether SCCs exist in the plan area was not made. A SCC is a Forest-Service specific classification defined by the 2012 Planning Rule as a species for which the best available science indicates there is a substantial concern about the species’ capability to persist over the long-term in the plan area. Sensitive species (SDEIS Table 13-1) are selected by the Regional Forester because population viability may be a concern, as evidenced by a current or predicted downward trend in population numbers or density, or a current or predicted downward trend in habitat capability that would reduce a species’ existing distribution. Although every Forest sensitive species may not qualify as a SCC because of the different criteria for identification, there are species that may not be on the Forest sensitive species list that may be a SCC. Analysis of the Regional Forester’s list of sensitive species cannot therefore compensate for the failure to identify potential SCCs. See SDEIS section 4.13.2.1. (analyzing impacts to sensitive species). It is therefore critical that the Forest Service identify SCCs prior to amending the Forest Plans. The SDEIS states that the project “may cause changes in wildlife habitat in the analysis area that may affect wildlife species including special-status species (threatened, endangered, Management Indicator Species, and sensitive species).” SDEIS at 4.13-1. Other species of concern include Idaho Species of Greatest Conservation Need (SGCN) identified in Idaho’s State Wildlife Action Plan (SWAP; IDFG 2017). The Wildlife analysis in the SDEIS discloses effects to wildlife SGCN. Best available science also shows concern for other SGCN species, such as the Pacific lamprey and Western pearlshell mussel. The western pearlshell mussel, Margaritifera falcata, is designated as an imperiled species (S2) in Idaho. They depend especially heavily on westslope cutthroat trout and anadromous salmonids (Montana study) as their vector for the glochidia (mussel larvae) “infestation” and dispersal. Declines in distribution and abundance of cutthroat trout and other salmonids may logically also start the loss of the mussel. All ESA-listed, MIS, sensitive, special status, and Forest Watch species as well as Idaho SGCN, have concern about capability to persist over the long-term in the project area (SDEIS 3.13.4.2), and need to be evaluated as potential SCCs. None of them were. This is both a violation of NFMA and NEPA.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	148	Another key concern in assessing indirect impacts upon wildlife is habitat fragmentation from the roads and the mine features, which can be especially harmful for wetland dependent wildlife. Habitat fragmentation can create movement barriers for less mobile wildlife, e.g., amphibians, some reptiles, and many mammals. It also can isolate populations of less mobile wildlife and harm long-term survivability.	WIL	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	173	<p>The SDEIS fails to address any effects on wildlife and vegetation resulting from avalanche mitigation that “would be implemented” during mining operations</p> <p>In the 2020 DEIS comment letter, we asked that impacts to wildlife and other sensitive species, including whitebark pine, be addressed. However, the SDEIS is silent on these impacts despite several recent and similar environmental analyses contemplating avalanche control programs, ranging from ski area programs, railroad corridors, and highway protection programs. A body of scientific literature examines impacts that explosives used for avalanche hazard mitigation have on various ecosystems. Even the USGS has recently studied explosives residue from avalanche control work that may pose risks to human health. In fact, DAC (2021) states that an evaluation of impacts to, among other things,</p>	WIL	<p>No text revisions made. Avalanche control would occur in areas that are already in locations where avalanches occur naturally, and the Project is not creating new avalanche areas.</p> <p>In addition, noise impacts to wildlife resources has also been provided in Section 4.13.</p>

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			<p>“wildlife and habitat disruption; and the potential for pollution” was outside the scope of the report. DAC (2021) did, however, provide “some specific guidance in relation to explosive noise levels” that the SDEIS relied upon to “evaluate[] only SGP noise impacts to humans; [and did not address] noise impacts to . . . wildlife” from avalanche control work. This is an error, and impacts to wildlife must be addressed.</p> <p>With respect to wolverine, the SDEIS expects “noise due to operations and helicopter flights to assist with exploratory drilling . . . to contribute to increased levels of displacement of individual wolverines in the wildlife analysis area.” SDEIS 4-400. The SDEIS acknowledges that wolverine denning habitat is mostly located “in areas with the highest consistent snow coverage.” SDEIS 4-399. This seems to correspond closely with locations in the analysis area that are at highest elevation, such as 40 miles of the Burntlog Route between Landmark and the mine site. Along the Burntlog Route, most avalanche control work would be concentrated on high frequency paths located in the Black Lake cirque and along the ridge heading toward the old Thunder Mountain Road—all at elevations above 7500 feet. Notably, Black Lake cirque is modeled as the highest class of wolverine habitat with persistent spring snow cover for 7 of 7 years (SGP Wildlife Specialist Report 2022, at Figure 5-4).</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	179	The most significant impact the transmission lines, associated ROWs, access roads, and additional utility infrastructure will have on the natural resources within the SGP physical Area of Potential Effect (APE) is the permanent loss and/or fragmentation of wildlife habitats and ecosystems. The upgrades to existing transmission lines and the construction of the additional proposed lines will disrupt migratory corridors, displace resident ungulates and potentially other species of conservation concern such as wolves, wolverines, lynx and their potential habitats, white-headed woodpeckers, and a variety of owl species, to name a few. Our specific concerns, comments, and recommendations regarding utility impacts to wildlife are found in our Wildlife comments section.	WIL	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	182	Furthermore, wildlife habitat within proposed ROWs, utility, and facility locations will also be reduced within five IRAs in the APE. This is most significantly observed through direct loss of habitat due to construction activities and habitat fragmentation attributed to transmission lines and access roads.	WIL	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	185	<p>3. The SDEIS failed to sufficiently consider impacts from increased unauthorized motor vehicle use</p> <p>New roads for construction and maintenance of transmission lines will provide more access for motorized recreation in areas without a current road system and more opportunities for illegal off-road riding. For example, Forest Trail (FT 233) will be upgraded for use as a transmission line route. The SDEIS states that trail improvements would make the trail passable for a wider range of vehicles and potentially new recreation opportunities. The problem is that FT 233 dead ends at the top of the ridge. With additional use and more capable vehicles in that location, there is a concern that drivers are going to travel cross-country along the Powerline ROW to the Stibnite site or along the ridgeline to the Meadow Creek lookout (the same route mentioned above).</p> <p>The negative impacts of irresponsible use of off-road vehicles (ORV) on terrestrial ecosystems are well established. Irresponsible ORV use degrades water quality, spreads noxious weeds, fragments habitat, disturbs wildlife, increases fire starts, and displaces non-motorized recreationists. The IRAs affected by the SGP were purposely set aside and are managed to fulfill goals and objectives in the Forest Plan that directly tie to each of these potentially affected resources. The SDEIS fails to analyze the impacts of ORV use within transmission corridors and neglects to describe the ability for the Forest Service to monitor and control ORV use as permitted by land management agencies. The creation of the transmission line ROW is also likely to lead to the establishment of an unofficial over-snow vehicle (OSV) route along this ROW with potential impacts to wildlife. Please see our related comments on OSVs. We recommend the Forest Service/Perpetua complete an analysis of OHV potential impacts and the measures needed to effectively manage them.</p>	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in Section 4.13.2.

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			While the Forest Service/Perpetua are not designing the transmission line or other utility ROWs as trails for public motorized use, recreational motorized vehicle use will likely dramatically increase compared to the current administrative access. We are concerned that additional, unregulated motorized use could further impact wildlife such as elk, wolverines, deer, and migratory bird species, to name a few, and significantly degrade the experience and opportunities for hunters and outfitters in the area. We are also concerned about increased sedimentation to streams, increased litter, loss of snags from firewood collectors, and spread additional noxious weeds. We point out that while Idaho Power has an enforceable requirement to clean vehicles of noxious weeds and seeds, the general public does not. Further, the increased unauthorized use of the ROW by the public following transmission line upgrades or new construction is directly related to the SGP. Therefore, Perpetua needs to incorporate a more thorough analysis of potential incidental impacts to wildlife and plant habitats and habitat fragmentation that resulted from increased ROW use. In addition, we are concerned about the proliferation of illegal motorized trails in inappropriate areas as a result of this conversion.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	195	<p>Increased traffic along the Burntlog Route will impact wildlife, roadless, and wilderness values</p> <p>The SDEIS analysis of traffic patterns and impacts indicate that traffic volumes along a reconstructed and newly constructed Burntlog Route will increase traffic volumes by over 71 percent under the 2021 MMP, “with 27.5 percent of the traffic comprised of heavy vehicles,” (SDEIS, p. ES-23). This increase will result in significant impacts to wildlife through habitat fragmentation, interrupted wildlife migratory corridors, and loss of animal security. The SDEIS fails to analyze or report the potential impacts associated with the most common vehicle/wildlife collisions, which consists of vehicle strikes of ungulate species. The Wildlife Specialists Report does define “incidental take” as it relates to ESA-listed, proposed, or candidate species (p. 102), and rightfully attributes traffic collisions as a factor contributing to “incidental take.” Furthermore, without defining migratory corridors within the SGP, the Forest Service cannot ascertain the true impacts the proposed Burntlog Route would have on wildlife, and specifically migratory ungulates.</p> <p>The Wildlife Specialist Report does acknowledge that, “An increase in big or small game collision mortality along roadways would be likely as the Burntlog Route segment would be new to the area and would be plowed throughout the winter,” (p. 114). However, this statement directly relates to the potential impacts and impacts regarding wolverine. The document fails to determine or report how much of an increase is expected, how those increases would affect populations, nor offer mitigation or Design Features beyond, “All staff and contractors would be trained to reduce wildlife collisions,” (p. 114). Please see our wildlife comments section for more information on the impacts of the Burntlog Route on wolverine.</p>	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in Section 4.13.2.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	219	<p>These routes will also impact wildlife. The SDEIS raises the possibility that both routes will impact wolverines, with the Cabin Creek route bringing additional use and impact above the existing condition. Please see wildlife comments. Section 4.13 of the SDEIS also states that this route may disrupt a number of bird species, fishers, bighorn sheep, and other wildlife due to increased noise or vehicle collisions. However, the SDEIS does not delve into these impacts in any detail, nor does it explain how the Forest Service intends to minimize these impacts, or if it is even possible to do so. The SDEIS does not address other impacts this route may bring to wildlife – such as increasing human activity during the time of year when many species are most vulnerable to disturbance. It is important that the Forest Service fully analyze potential impacts associated with the new Cabin Creek Road OSV route, as this route would increase use into an area that currently does not see much, if any, recreation use in winter due to lack of access.</p>	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in Section 4.13.2.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	242	<p>Effects on plants and animals in the Wilderness are not thoroughly examined The Forest Service notes that wildlife and plants may be affected, but then fails to provide a meaningful analysis of these impacts or ways to mitigate them:</p> <p>In the long-term, vehicles on Burntlog Route would likely change the distribution of species in the FCRNRW. and Depending upon the magnitude, there could be long-term local changes in ecological processes within the FCRNRW and recommended wilderness areas. The natural quality of wilderness</p>	WIL	There is no planned disturbance in the wilderness areas and therefore, no direct effects to vegetation and wildlife would occur. The potential for indirect effects on vegetation and wildlife resources are described in Sections 4.10 and 4.13, respectively.

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			character could be impacted where there are changes in ecological processes. SDEIS 4-632 to 4-633. However, The extent within the FCRNRW where wildlife could be disturbed or areas where wildlife would avoid is unknown.281 The Forest Service should look at how other species of wildlife around other mining projects have either been displaced or become habituated. Please see additional wildlife comments.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	306	<p>The FS incorrectly refers to state and county agencies as cooperating agencies; the definition of which pertains only to federal agencies (see 40 CFR sec. 1501.6 Cooperating agencies). The FS does not include important federal agencies such as the NOAA - Fisheries and the US Fish and Wildlife Service (USFWS) in its list of cooperating agencies</p> <p>As stated in the SDEIS Executive Summary (ES-1):</p> <p>The Forest Service, specifically the Payette National Forest, is the lead agency in the preparation of this SDEIS (40 CFR 1501.5). The Boise National Forest is participating, as well as cooperating agencies including the U.S. Army Corps of Engineers (USACE), U.S. Environmental Protection Agency (EPA), Idaho Governor’s Office of Energy and Mineral Resources (OEMR), Idaho Department of Lands (IDL), Idaho Department of Environmental Quality (IDEQ), and Valley County, Idaho. (ES-1)”</p> <p>In addition to listing state and local agencies as “cooperating agencies,” which is incorrect under 40 CFR sec. 1501.6, the SDEIS discusses how these agencies played a role in the development of alternatives (pp. 1-18, 2-1, 2-127). Unfortunately, despite the assertion that this project is designed to benefit threatened fish species, the FS does not include the federal agencies responsible for threatened and endangered fish and wildlife (NOAA - Fisheries and USFWS) as cooperating agencies.</p>	WIL	The list of Cooperating Agencies for the EIS is provided in the document, see 40 CFR 1508.5 which states “A state or local agency of similar qualifications or, when the effects are on a reservation, an Indian tribe, may by agreement with the lead agency become a cooperating agency.” The description of consultation efforts with other agencies such as the Section 7 consultation with the USFWS and NOAA-Fisheries is described in EIS Chapter 6.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	307	<p>The FS provides little information on the important role of consultation with the U.S. Fish and Wildlife Service (USFWS) and the NOAA - Fisheries, despite the anticipated effects to ESA-listed wildlife (and fish and plant) species</p> <p>The FS makes little mention of Endangered Species Act (ESA) consultation with NOAA - Fisheries and the USFWS. Consultation is an essential element in the analysis of effects to species listed under the ESA. In the project area, the wolverine is proposed for listing, lynx and the northern Idaho ground squirrel (NIDGS) are listed as threatened. The monarch butterfly is a candidate species. There are also threatened fish and plant species as described above. On page 3-263, the SDEIS describes the requirements of consultation.</p> <p>Chapter 6.2.2 6.2.2 Endangered Species Act Section 7 Consultation, makes reference to a “collaboration memo in the Administrative Record”. This memo was requested and received, and showed that no documented consultation had occurred on the project since 2020.</p> <p>6.2.2.2 Informal Consultation History</p> <p>Informal consultation on the Project began in 2017 and is ongoing. The pertinent letters, emails, meetings, and conference calls are summarized in a collaboration memo in the Administrative Record. Formal consultation will commence once the final BA is deemed complete and accepted by USFWS and NOAA/NMFS.</p>	WIL	The description of consultation efforts with other agencies such as the Section 7 consultation with the USFWS and NOAA-Fisheries is described in EIS Chapter 6.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	308	<p>Effects to wildlife were not identified as a significant issue even though some project activities (such as new access routes) may have significant effects to listed wildlife species, as described in section 4.13.2.2 2021 MMP (p. 4-393):</p> <p>The analysis of direct effects includes the potential take of ESA-listed species. Pursuant to the ESA, take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” (16 USC 35.1531 et seq.). Take of an individual or population could occur for various reasons such as traffic collisions, change in an individual or population’s habitat use due to noise, other disturbance, or contamination of food or water sources. Direct effects also would include loss of habitat or the encroachments into wildlife migration or travel areas, although no defined corridors have been identified. For all species, habitat loss could be temporary (0 to 3 years); short-term (3 to 15</p>	WIL	The EIS analysis considered all resources along with the Project impacts to these resources. The resources that most affect the Forest Service decision on the Project were called out as significant.

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			<p>years); long-term (more than 15 years); or permanent for land use changes (i.e., pit lakes, TSF, TSF buttress, transmission line upgrades). The analysis of potential indirect effects on threatened, endangered, proposed, and candidate species includes fragmentation of habitat; increased competition for resources or habitat due to displacement of individuals from the affected area into the territory of other animals; or other effects, such as increased human presence in the species-specific analysis areas (e.g., hunters, trappers, and recreationists) that can cause mortality (i.e., illegal hunting or trapping) or reduced breeding and recruitment in the future population.</p> <p>Canada Lynx (p. 4-395)</p> <p>Therefore, based on the impact analysis for the Canada lynx and its habitat, the 2021 MMP would result primarily in localized, long-term, and permanent, minor impacts to the Canada lynx.</p> <p>...Disturbance impacts to Canada lynx along roadways due to noise and light would be long-term.</p> <p>Wolverine (p. 4-399)</p> <p>...Therefore, based on the impact analysis for the wolverine and its habitat, the 2021 MMP would result in localized and long-term impacts to the wolverine, particularly the local population (part of larger Central Idaho sub-populations). ... The SGP would have impacts on many wildlife species. While the primary difference between the effects of the two action alternatives (2021 MMP and Johnson Creek) on wildlife are the access roads, there are other impacts to key habitats and species at specific time periods. The SDEIS admits that effects will be “long-term and permanent” to many species. Impacts to wildlife are not adequately analyzed based on the metric of “acres disturbed.” In addition, impacts to mountain goats were not analyzed</p> <p>a. The SDEIS compares acres of habitat disturbed under each alternative for a number of species (p. ES-19). However, many other impacts also are described in the SDEIS but not fully analyzed. These effects are summarized in pages ES-19 through ES-20:</p> <p>2021 MMP and Johnson Creek Route Alternative would remove an estimated 3,266 acres and 3,096 acres, respectively, of wildlife habitat, including habitat for Canada lynx (194 and 175 acres, respectively), wolverine (2,342 and 2,005 acres, respectively), northern Idaho ground squirrel (63 acres), Monarch butterfly, Region 4 sensitive species and management indicator species, Idaho species of greatest conservation concern, general wildlife species, big game species, and migratory bird species and bald and golden eagles.</p> <p>However, many other impacts also are described in the SDEIS but not fully analyzed. These effects are summarized in pages ES-19 through ES-20:</p> <p>Direct impacts to wildlife species may include direct mortality (i.e., wildlife-vehicle collisions, removal of nest or roost trees, etc.) or loss of habitat due to land clearing activities and land use changes. Indirect impacts could include reduced use of foraging or breeding habitat or reduced prey resources in the analysis area.</p> <p>....Light, noise, and fugitive dust impacts associated with mine site activities are likely to disturb or displace wildlife species.</p> <p>As a result of new access roads, direct effects on wildlife species would primarily be due to loss and fragmentation of habitat; direct mortality through vehicle-wildlife collisions; and disturbance from light, noise, fugitive dust, and increased human activity. Construction of 15 miles of new road for the Burntlog Route would likely fragment habitat for general wildlife species and may act as a barrier to movement for some species. The intensity of this impact could range from minor displacement to mortality.....</p> <p>The important differences among the alternatives lie in the acres of habitat loss, the amount and location of the disturbance from noise and human activity, new access roads, and the location of the facilities. The Johnson Creek Route Alternative would have 170 fewer acres than the 2021 MMP due to the elimination of the Burntlog Route which also would reduce the magnitude and extent of impacts on most wildlife, especially wolverine, big game, and migratory birds. However, under both alternatives, greater impacts would occur for several groups of wildlife (e.g., big game [moderate impacts] and wolverine</p>		

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			[major impacts]) due the species' known occurrences and location and amount of habitat disturbance associated with the SGP. (ES 19-20) (Emphasis added.)		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	309	b. The SDEIS admits that effects to many wildlife species will be "long-term and permanent." Impacts to wildlife are not adequately analyzed based on the metric of "acres disturbed." The SDEIS admits that effects to some wildlife species will be "long-term and permanent". As examples, the following species all had a determination of "localized, long-term, and permanent, minor impacts": Canada lynx (SDEIS p. 4-395), wolverine (p. 4-399), dusky grouse (p. 4-410), boreal owl (p. 4-412), fisher (p. 4-415), flammulated owl (p. 4-417), northern goshawk (p. 4-422), pileated woodpecker (p. 4-425), peregrine falcon (4-431), bighorn sheep (4-432), Townsend's big-eared bat (p. 4-434), and bald eagle (p. 4-435). See also the following excerpts.	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in Section 4.13.2.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	310	Fisher (p. 4-415) The 2021 MMP may directly and indirectly impact fisher individuals and habitat but would not likely contribute to a trend towards ESA listing or loss of viability of the species within the planning area. Therefore, based on the impact analysis for the fisher and its habitat, the 2021 MMP would result primarily in localized, long-term and permanent, minor impacts to the fisher.	WIL	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	311	Northern Goshawk (p. 4-422) The 2021 MMP may directly and indirectly impact northern goshawk individuals and habitat but would not likely contribute to a trend towards ESA listing or loss of viability of the species within the planning area. Based on the impact analysis for the northern goshawk and its habitat, the 2021 MMP would result primarily in localized, long-term and permanent, minor impacts to the northern goshawk.	WIL	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	312	In addition, the impact of roads is not adequately analyzed or displayed based on "acres disturbed." Canada Lynx Access Roads (pp. 4-395, 4-396) Construction and the year-round operation (and plowing in winter) of the Burntlog Route could be a potential source of mortality for transient Canada lynx. Indirect impacts could occur in the form of increased competition for resources, including the competition created by plowing the Burntlog Route, which is currently not plowed for winter use. Currently, access in this area during the winter is limited to predators suited for over-snow travel (i.e., lynx and wolverine). Construction and operation of the Burntlog Route would open new corridors for predators and recreational activities. This could increase the predation on snowshoe hares by other predators (e.g., coyotes) or become a source of mortality for prey species (e.g., snowshoe hare, squirrels, etc.), which could affect food availability for transient Canada lynx. The increased human access and potential increase in hunting and trapping pressure for lynx and prey species in previously undisturbed areas also would be indirect effects.	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for transient Canada lynx that may occur in the Canada lynx analysis area as discussed in Section 4.13.2.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	313	Northern Idaho Ground Squirrel (NIDGS) Off-site Facilities (p. 4-398) Vehicle traffic associated with the proposed off-site facilities could impact individual NIDGS where the 2021 MMP components cross modeled habitat known to support populations. Surveys of modeled habitat would be required before construction activities occur. All staff and contractors would be trained to reduce wildlife collisions.	WIL	No further response required. General in nature or position statement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	314	We note that these surveys were not listed as an Environmental Design Feature (see also #9,ii). Idaho Species of Greatest Conservation Concern Access Roads (p. 4-441)	WIL	Text has been revised per the comment. "Long-term and permanent" inserted in place of "short-term and permanent".

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			<p>Direct effects on general habitat for SGCN would primarily be due to loss and fragmentation of habitat, and disturbance from light, noise, fugitive dust, and increased human activity under the 2021 MMP. Construction of 15 miles of new road for the Burntlog Route would likely fragment habitat for SGCN and may act as a barrier to movement for some species. The new 15-mile-long section of Burntlog Route would be constructed and plowed year-round and have an AADT level of 50 during operations, which could disturb the bird and bat SGCN. The intensity of this impact could range from minor displacement to mortality. The duration ranges from temporary road construction to short-term. It is not expected that the increased risk of injury or mortality would become permanent, because the new segment of the Burntlog Route would be reclaimed upon closure, and traffic levels on the existing roads would return to current levels. The geographic extent of these impacts would be limited to the vicinity of the access road. Restricting public access on the Burntlog Route would likely reduce impacts due to mortality.</p> <p>We note that the group of species above is technically called “Species of Greatest Conservation Need” (SGCN) (emphasis added). The summary of effects to this group from the Burntlog Route is inconsistent with the “long-term and permanent” effects from roads described for other wildlife species.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	315	<p>c. Impacts to mountain goats were not analyzed</p> <p>Impacts to mountain goats were not analyzed. The FS’s omission of mountain goats is a significant oversight, as the species has been observed in IDFG’s “Upper South Fork” Population Management Unit (PMU) as recently as 2016 on Big Baldy Ridge, Murphy Peak, Red Peak, and Red Ridge in Game Management Unit (GMU) 27 - all adjacent to or within the SGP wildlife analysis area. Murphy Peak, in particular, lies on the easternmost side of the area of analysis.</p> <p>Mountain goats are listed in Idaho’s State Wildlife Action Plan as SGCN (Tier 3). SWAP is the “guiding document for managing and conserving species before they become too rare and costly to protect.” IDFG’s 2022 Draft SWAP indicates that mountain goats are a high-profile Alpine Tundra and Forest & Woodland species potentially impacted by outdoor recreation, forestry management, development, invasive species and climate-related stressors.</p> <p>IDFG’s SWAP notes that “conservation of existing quality mountain goat habitat should be one of the highest priorities for managers. Specifically, proactively managing access and travel will be critical to protecting mountain goat populations.” Likewise, IDFG’s management plan for mountain goat identifies a number of considerations for proposed activities, including avoidance of activities that can pose direct or indirect threats affecting the use of habitat such as “road construction, timber harvest, mining, power infrastructure, oil and gas extraction, climate change, wildfires, and fire suppression”. Those threats could also disrupt mountain goat behavior by triggering alarm responses, lowering foraging and resting rates, and reducing productivity. For example, Joslin determined kid production and survival were negatively correlated with seismic surveys in Montana.</p> <p>Some of the most negative human-induced effects on mountain goats originate from mechanized devices. The impacts of helicopters, in particular, are well documented. The potential for disturbance to mountain goats, within and adjacent to the Upper South Fork PMU, would come from not just avalanche control activities, but from construction, operations and closure actions associated with SGP. In addition, a new source of human-caused disturbances would be introduced by increased road access — possibly during all four seasons of the mountain goat’s life cycle. The Forest Service must account for these activities in the wildlife impacts analysis.</p>	WIL	Mountain goats are not a TEPC, sensitive or other special status species under the PNF Forest Plan. However, due to nearby occupied habitat, a statement regarding the potential use in the Project vicinity has been added to Section 3.14. However, no impacts are anticipated to occur to this species as a result of the Project.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	316	<p>6. The analysis of effects to migratory bird species admits the project could include direct mortality of migratory birds, and does not meet the requirements of the Migratory Bird Treaty Act</p> <p>The analysis of Migratory Bird Species and Bald and Golden Eagles (p. 4-448) shows the project fails to meet the requirements of the MBTA:</p> <p>Direct impacts on migratory bird species and bald and golden eagles could include direct mortality (i.e., collisions with vehicles, structures, removal of nest trees, etc.) or loss of habitat due to land clearing activities and land use changes. Indirect impacts on these species could include reduced use of foraging</p>	WIL	Project impacts on migratory birds would be minimized through the application of Forest Service requirements to conduct migratory bird surveys prior to engaging in ground disturbing activities. Activities would not proceed in areas with identified nests. Further, Project infrastructure would follow design criteria for bird species.

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			<p>or nesting habitat; reduced prey resources (insects and pollinators) in the analysis areas; or disturbance from noise, light, and emissions Effects on migratory birds under the 2021 MMP are similar in nature to the effects discussed for general wildlife. Therefore, this section focuses only on the differences for migratory bird species.</p> <p>The 2021 MMP may directly and indirectly impact migratory bird species, individuals and habitat. Therefore, based on the impact analysis for migratory bird species and their habitat, the 2021 MMP would result primarily in localized, short-term, long-term, and permanent, minor impacts to migratory bird species.</p> <p>Cutting of trees for 2021 MMP activities and removal of snags would avoid avian tree nests, where feasible; and a Forest Service wildlife biologist would be notified of any occupied sensitive species nests or dens encountered. Although design features would reduce impacts, there would still be a decrease in habitat.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	317	<p>7. The SDEIS further admits that some effects to wildlife will be Irreversible and Irrecoverable Commitments Irreversible and Irrecoverable Commitments for wildlife include habitats that require long time periods to reestablish, recovery of species such as Canada lynx or wolverine that occur in low numbers, or direct mortality. The SDEIS describes these commitments on p. 4-459 to 4-460:</p> <p>4.13.4 Irreversible and Irrecoverable Commitments of Public Resources 4.13.4.2 Action Alternatives</p> <p>Although most wildlife species are considered renewable, certain biological resources that would be affected by the 2021 MMP and Johnson Creek Route Alternative are renewable only over long-time spans,... Loss of these resources would be considered irreversible. Reclamation of high-value habitats for wildlife species such as Canada lynx, wolverines and migratory bird species may require long periods of time (decades). Impacts to populations of threatened or endangered species, or species with low populations, such as Canada lynx or wolverine, would be considered irreversible, because recovery may take a long period of time or not occur at all. The direct mortality of wildlife also would be an irreversible impact.</p> <p>Irrecoverable commitments include biological resources that are renewable over a short time such as vegetation, wetlands, and streams. Although the loss of the resource itself is reversible, the temporal loss of the use of the resource is irretrievable. The 2021 MMP and Johnson Creek Route Alternative activities would cause a temporal loss of habitat for a number of species; both from direct removal of vegetation, and indirectly through avoidance due to human presence. Some species sensitive to human presence, such as Canada lynx and wolverine, may not return to the area for years after the mine is closed.</p> <p>Injury or mortality of individuals, such as burrow-dwelling species and slow-moving species that are unable to relocate when ground-disturbance activities begin, or through vehicle or transmission line collisions, would result in an irretrievable commitment of these resources. Although most animals displaced from the affected areas are expected to survive relocation, some displaced animals may not survive due to the associated dangers of migration and competition for resources; their loss also would be irretrievable.</p> <p>Any reduction in habitat functions also would be irretrievable. Once the habitat is reclaimed to its full function, the irretrievable loss would only be the temporal loss of habitat during the period before it was reclaimed. Some vegetation and soil habitats would be lost for future use by wildlife until reclamation could be successfully implemented. Wildlife displaced from the affected habitat may relocate throughout the region, changing the availability of game for hunters and predators. The change could increase or decrease hunting success, but any reduction in game availability would represent an irretrievable loss of opportunity.</p>	WIL	No further response required. General in nature or position statement.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	318	<p>The NEPA requires that an EIS describes the environmental baseline of the areas to be analyzed (40 C.F.R. § 1502.15), noting that an accurate baseline is “essential” to an informed analysis (40 C.F.R. § 1502.22). The current condition of wildlife habitat was not updated with the effects of recent fires, hence the analysis is inaccurate. Further, an agency cannot rely on post-approval surveys, studies, or mitigation as a substitute for suitable baseline information</p> <p>In our comment letter on the 2020 DEIS, we repeatedly noted areas where wildlife data should be updated. The 2022 SDEIS made little effort to address these concerns. For example, the habitat layer for lynx was not updated to reflect changes from recent fires. As identified in our wolverine comments (below) the Forest Service did not utilize adequate baseline data. The Environmental Design Features (EDFs) for the project include EDFs that commit to future survey work, hence important wildlife data would not be obtained or available to inform the current analysis in the SDEIS.</p>	WIL	Where appropriate (e.g., change in protection status, significant update in available data or understanding of the species’ known range/habitat requirements), additional data has been added to the Final EIS. However, for most species a data cutoff date for the EIS was 2017/2018.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	319	<p>The Wildlife Environmental Design Features (EDFs) are not consistent between the analyses in the wildlife specialist report and the SDEIS. For example, the analysis is predicated on certain surveys to be conducted; but these surveys are not included in the EDFs</p> <p>a. Wildlife EDFs are not consistent between the analyses in the wildlife specialist report and the SDEIS</p> <p>The Wildlife Specialist Report (WSR) lists design features to address regulatory and Forest Plan requirements, see WSR, Table 2-2 Prominent Regulatory and Forest Plan Requirements for Wildlife and Wildlife Habitat. Some of the EDFs are worded differently and so might cancel one another (see below, specifically bolded text). Following each EDF listed below, we identify if the EDF was included in the SDEIS.</p> <p>Some measures would be designed during project implementation. As noted in our comment #8, this is a violation of the NEPA: an agency cannot rely on post-approval surveys, studies, or mitigation as a substitute for suitable baseline information.</p> <p>Impacts to known nests, denning sites, winter roosting sites, and hibernacula (bats) of TEPC and Sensitive wildlife species will be avoided during the nesting or denning period whenever possible. If impacts cannot be avoided, specific mitigation measures would be developed to minimize impacts, maintain key features of habitat, or to avoid disruption on a case-by-case basis through coordination with Forest Service wildlife biologists. BNF and PNF: TEST12, WIST03 (not in SDEIS)</p> <p>The Forest Service wildlife biologist would be notified of any sightings of TEPC or Sensitive wildlife species, including occupied sensitive species nests or dens encountered during implementation. If necessary to maintain key features of nesting/denning habitat or to avoid disruption of nesting/denning activities, prescribed activities would be modified in accordance with the Forest Service wildlife biologist. Design Feature developed for compliance with BNF and PNF: WIST03, TEST12 (same in SDEIS)</p> <p>Mitigate management actions within known winter roosting sites or hibernacula (bats) of Sensitive species if those actions would measurably reduce the survival of wintering or roosting populations. Sites, periods, and mitigation measures will be determined during project planning. FP Component BNF and PNF: WIST04 (same in SDEIS)</p> <p>The proponent will coordinate with Forest biologists to consider TEPC habitat needs when designing and implementing facilities and management activities that may affect TEPC species and their habitats BNF and PNF: Developed in response to BTGU02, BTGU05, TEGU06, TEGU07, TEST09, TEST10, TEST13, BTST01, BTST02, WIST03 (not in SDEIS)</p> <p>To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than two feet deep will be covered with tarp, plywood, or similar materials at the close of each working day to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary. Before such holes or trenches are backfilled, they would be thoroughly inspected for trapped</p>	WIL	The requirements for wildlife surveys have been added to the Forest Service requirements described in Chapter 2 of the EIS.

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			<p>animals. If trapped wildlife are observed, escape ramps or structures will be installed immediately to allow escape. WIST06 (not in SDEIS)</p> <p>To mitigate impacts to known nesting or denning sites of MIS or Sensitive species, land clearing activities in areas where complete vegetation removal is necessary greater than 0.5 acres would not occur, to the extent possible, until after the bird breeding season (April 1 through July 30th) for migratory and resident birds. This design feature does not apply to the mine site, road construction or maintenance, hazard tree felling, or the power line upgrades and construction. Design Feature developed for compliance with BNF and PNF: WIST03. (same in SDEIS)</p> <p>The last EDF listed above, is one of the most problematic, as it removes timing restrictions for most of the major activities and impacts associated with the project. Timing restrictions are one of the most commonly used methods (through EDFs or project design) to mitigate impacts to species during key time periods, such as nesting and calving. This not only limits the ability to meet the other EDFs listed above, but was found inconsistent with text in the SDEIS. One example is provided here (emphasis added):</p> <p>Boreal Owl</p> <p>Access Roads (p. 4-414)</p> <p>The 2021 MMP could disturb individual boreal owls in the wildlife analysis area through direct habitat loss (9 acres) due to tree clearing, road construction, and increased human activity along the access roads (Table 4.13-8). Direct take of adult birds due to these activities is possible, but unlikely, because most individuals are expected to avoid areas of activity. However, it is possible that nests, eggs, and young could be directly disturbed by vegetation removal, including cutting of trees if it occurs during the nesting season. Timing restrictions described for the mine site would be used to reduce impacts.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	320	<p>The analysis is predicated on certain surveys to be conducted; but these surveys are not included in the EDFs.</p> <p>As an example, the SDEIS states that, for the preferred alternative, site checks and formal surveys would be conducted for the federally threatened northern Idaho ground squirrel (NIDGS hereafter), as needed, prior to ground-disturbing activities in suitable habitat (SDEIS at p. 3-343 and 4-398). It also states that surveys would be required before construction activities occur at off-site facilities (SDEIS at p. 4-398). However, there is no survey-related item listed in either Table 2.4-12 (regulatory and Forest Plan requirements) or in Table 2.4-13 (proponent proposed design features). In addition, no mitigation measures were identified for any wildlife species or wildlife habitat (SDEIS at p. 4-459). Given that the SDEIS said such surveys would be conducted, surveys must either be formally recognized as a design feature or identified as mitigation.</p> <p>The NIDGS is not known to occur currently in the project area, but there are two historical, assumed extirpated, locations adjacent to the project area. NIDGS are dynamic on the landscape and have reappeared in or near places presumed to be extirpated (IDFG data). The most extensive modeled habitat in the project area is along the east side of Cascade Reservoir, including the transmission line corridor that will be upgraded from Lake Fork to Cascade (Figure 3.13-3). As described in the SDEIS, contractors conducting surveys for NIDGS in 2018 and 2019 also identified suitable habitat around, east of, and north of, the proposed Cascade switching station and near the Scott Valley Substation (SDEIS at p. 3-343). Surveys are important prior to ground-disturbing and excavating activities because these activities have the potential to destroy burrows, remove vegetation needed for food, and cause direct mortality from large machinery. Appropriate survey methods are detailed in the Terrestrial Wildlife Technical Report submitted as a reference document with this letter.</p>	WIL	The requirements for wildlife surveys have been added to the Forest Service requirements described in Chapter 2 of the EIS.
Bonnie Gestring (Northwest Program Director,	17634	321	<p>10. The analysis of effects to Canada lynx is insufficient</p> <p>The Canada lynx is a mid-sized forest carnivore that occurs across mountainous areas of northern North America. The lynx is highly adapted to hunting its primary prey, the snowshoe hare, in deep, powdery snow. Canada lynx were listed as threatened under the Endangered Species Act (ESA) for the contiguous</p>	WIL	No text revisions made as it was determined that a cutoff date for data for the EIS was 2017/2018 and that the analysis in the EIS is sufficient for the species; however, the Canada lynx is a federally threatened species and therefore included in the Project's BA as part of the

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Earthworks) and seven others			<p>U.S. in March of 2000. The USFWS designated critical habitat for Canada lynx in 2006, revising the designation in 2009, and finalizing critical habitat designations and what constitutes the range in which lynx are protected by the ESA in 2014. None of the designated critical habitat is located in the SGP analysis area. The Forest Service modeled lynx habitat across 656,493 acres of the Boise and Payette National Forests, subdividing the area into seven Lynx Analysis Units (LAUs). No critical habitat has been designated on the forests, with project area lands described as secondary habitat. The SDEIS states that, "Although there is suitable habitat for the Canada lynx...there have been no verified sightings since 1978." The SDEIS further states that, "wildfires account for the majority of unsuitable habitat in these LAUs." We recommend the Forest Service provide a current (2022) map of fire activity in the SGP area that includes an overlay of suitable lynx habitat. This is necessary for the Forest Service to disclose the most likely areas for transient lynx movements to help avoid unintentional and indirect impacts to this threatened species. As some habitats are made temporarily unsuitable for lynx, the importance of remaining habitat increases. While a broad swath of marginal habitat for lynx may see lynx utilizing any portion of it as transitional habitat, if this habitat is reduced, lynx may restrict their travels to the remaining corridor of functional habitat, such as the ridgeline that would be impacted by construction and use of the Burntlog Route. As forest succession proceeds, some areas will become suitable foraging habitat for snowshoe hare and subsequently suitable denning habitat for lynx. Because of the long duration of mining activities, the Forest Service needs to describe how habitat within the LAUs is expected to change over time.</p> <p>Access roads threaten remaining suitable habitat for lynx in the SGP analysis area. The mine site and associated infrastructure may displace transient Canada lynx as they move between occupied habitats. Based on the Forest Service's assessment that wildfire accounts for the majority of unsuitable habitat in the LAUs, any remaining intact habitat becomes even more important to lynx for movement across the landscape. Access roads stand out as the primary threat to Canada lynx and the remaining intact suitable habitat in the analysis area.</p> <p>The Burntlog Route is a potential source of mortality for transient lynx, as well as fragmenting habitat and acting as a barrier to movement. Further, increased traffic on Warm Lake Road, Johnson Creek Road, and the Stibnite portion of the McCall-Stibnite Road would also discourage lynx from crossing or using these areas. The Forest Service needs to examine the cumulative impacts to Canada lynx by providing map overlays of habitat in the Stibnite and Burntlog LAUs with impact overlays to determine the full impacts mine development and infrastructure will have on fragmenting transient and migration corridors. Adverse effects to these areas would reduce the chances of Canada lynx reestablishment or migration/movement.</p> <p>Because Canada lynx depend on snowshoe hares as their primary prey, additional impacts to transient habitat will stem from winter snow plowing, particularly along the 38-mile Burntlog Route and from the proposed construction of a new 10.4-mile groomed OSV trail. Winter recreation is known to impact the effectiveness and success rate of Canada lynx hunting strategies, based on their ability to travel in deep snows with large paws. The proposed new OSV trail to offset recreation impacts will introduce additional sources of snow compaction, reducing hunting success rates and potentially allowing for other apex predators to take advantage of the fragmented and compacted snow conditions.</p> <p>It is due to the potential effects of winter recreation on lynx that the Lynx Conservation Strategy (LCAS) and Forest Plan direction (TEST34) state:</p> <p>Allow no net increase in groomed or designated over-the-snow routes or play areas, outside of baseline areas of consistent snow compaction, by LAU or in combination with immediately adjacent LAUs unless the Biological Assessment demonstrates the grooming or designation serves to consolidate use and improve lynx habitat. This does not apply within permitted ski area boundaries, to winter logging, and access to private inholdings. Permits, authorizations, or agreements could expand into baseline routes or areas of existing snow compaction, and grooming could expand to routes of existing snow compaction and routes that have been designated but not groomed in the past and still comply with this standard.</p>		consultation process with the USFWS. Additional details for this species are provided in the BA.

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			The Forest Service needs to examine the full impacts of winter recreation to Canada lynx, comparing the existing conditions to those anticipated and potential conditions and how winter recreation and access potentially affects any transitory and migrating lynx. The FS also needs to address consistency with FP direction, or provide rationale for not meeting that direction (see SDEIS, App. A).		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	323	<p>11. The analysis of effects to wolverine is insufficient</p> <p>The Forest Service used the most current ruling on the wolverine’s status under ESA (U.S. District Court May 2022) to appropriately analyze this species as “proposed threatened”. As such, the FS has direction to prioritize conservation and recovery of endangered, threatened, and proposed species and their habitats (Forest Service Manual 2670.31).</p> <p>The SDEIS recognized that the wolverine naturally occurs at low densities on the landscape due to low reproductive rates and large home ranges that exclude other individuals of the same sex. However, the SDEIS failed to connect that the spatial separation and low fecundity determined by life history, combined with specialized habitat requirements (persistent snow cover, cool temperatures), magnify this species’ vulnerability to threats such as climate change, habitat fragmentation, backcountry winter recreation, and other factors. Thus, the SDEIS did not fully capture the importance of the project area for wolverine or the difference between alternatives using acres of habitat as the metric. We detail these shortcomings as follows.</p>	WIL	No text revisions made as it was determined that a cutoff date for data for the EIS was 2017/2018 and that the analysis in the EIS is sufficient for the species; however, the wolverine is a federally proposed (as threatened) species and therefore included in the Project's BA as part of the consultation process with the USFWS. Additional details for this species are provided in the BA.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	324	<p>a. Summary of wolverine occurrence is not complete</p> <p>The SDEIS carried forward, from the DEIS, a summary of wolverine occurrence in and near the wolverine analysis area (SDEIS Table 3.13-3). These data are (1) incomplete and (2) fail to integrate the relationships among the occurrences listed in Table 3.13-3. In total, 14 individuals were identified during the life of the wolverine–winter recreation study from the Payette and northern Boise study areas.³⁴⁷ In addition, the wolverines documented from Midas Gold’s (now Perpetua Resources) remote camera study, listed in Table 3.13-3 from surveys conducted by Garcia and Associates 2013 and 2014, were identified as only male or female, when in fact genetics data and physical characteristics observable in remote camera photos of those individuals identified at least two different males and one female. One of the males was known from the winter recreation study. Thus, at least 16 individual wolverines were identified in or adjacent to the SDEIS wolverine analysis area during 2010–2015. More importantly, four of these were documented within the Stibnite Gold Project area, including a resident reproductive female.</p> <p>In addition, the Forest Service did not take the opportunity in the interval between DEIS and SDEIS to update occurrences beyond 2014, despite subsequent data available to them within a reasonable time frame. A four-state camera survey conducted in the winter of 2016–17 included the Stibnite Gold Project area. Notable results from this survey were (1) the continued documentation of a male and female wolverine from the winter recreation study within and adjacent to the SDEIS wolverine analysis area, and (2) detection of a female offspring of that resident male.</p> <p>A complete and accurate synthesis of sightings is important to establish a baseline for analysis. Resident, reproductive individuals maintain established territories and exhibit high fidelity to their territories. Venturing outside a territory boundary incurs some level of risk due to neighboring territorial wolverines. The SDEIS recognized this:</p> <p>This is important because territoriality constraints define how wolverines can react to changes in habitat quality or displacement from occupied habitat.(SDEIS p. 3-345).</p> <p>Thus, analysis of the potential impacts of new roads and increased human-related activities should be put in the context of potential loss of quality habitat within individuals’ home ranges, yet the Forest Service failed to do so.</p>	WIL	Due to the species recent reinstatement as a federally proposed species, updated species occurrence information has been added to Section 3.14 and 4.14 in the Final EIS.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	325	<p>Importance of wolverine habitat is not adequately portrayed and the potential for habitat fragmentation and barriers to movement is not adequately addressed</p> <p>The project area supports high-quality wolverine habitat that is part of an interconnected landscape across south-central Idaho, which is also near the southern extent of wolverine occurrence in the continental U.S. Wolverines at the southern extent of their range, specifically the Rocky Mountains, exist as small and semi-isolated subpopulations within a larger metapopulation. Research has demonstrated the importance of habitat connectivity to demographic connectivity of wolverines, and that wolverine persistence depends on regular dispersal of individuals among blocks of habitat.</p> <p>The habitat in the project analysis area provides a stepping stone between important breeding concentrations of wolverine to the north (Salmon River Mountains north and east of McCall) and to the south (Sawtooth Mountains). In fact, two long-distance wolverine dispersal events have been documented between the Sawtooth and White Cloud Mountains, respectively, to the Salmon River Mountains. Habitat within and surrounding the Stibnite Gold project area could have provided a corridor for dispersal. In addition, a male wolverine resident in the project analysis area is linked genetically (parent-offspring relationship) to the McCall area, demonstrating demographic connectivity.</p> <p>Thus, although the SDEIS noted that the Stibnite Gold Project area supports resident wolverines that are part of a subpopulation occupying Central Idaho (SDEIS p. 4-399), the SDEIS did not emphasize the depth or significance of this connection and makes no assessment of the importance of habitat in the project area to wolverine persistence in Idaho.</p> <p>The SDEIS did not adequately address the potential impact of habitat fragmentation and potential barriers to movement that proposed roads and other activities could pose to forest carnivores in general and the wolverine in particular. The proposed increase in infrastructure, new travel corridors in both summer and winter, increased road widths, higher traffic volumes, and increased frequency and duration of use could impede wolverine movement, resulting in a functional loss of habitat and potential reduction in genetic exchange. The Forest Service should analyze the two action alternatives in terms of how much wolverine habitat remains connected and contiguous rather than simply a count of acres affected. Specifically, the preferred alternative changes the character of the existing Burnt Log Road (FR #447) and the adjacent unroaded area, by creating the Burntlog Route; a corridor of year-round traffic and access that bisects wolverine habitat adjacent to the FCRNRW. In contrast, the Johnson Creek Road Alternative, by concentrating activity west of the Burntlog drainage, keeps more habitat intact and does not impinge on the refugia represented by the FCRNR Wilderness.</p>	WIL	No text revisions made as it was determined that a cutoff date for data for the EIS was 2017/2018 and that the analysis in the EIS is sufficient for the species; however, the wolverine is a federally proposed (as threatened) species and therefore included in the BA as part of the consultation process with the USFWS. Additional details for this species are provided in the BA.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	326	<p>The proposed Burntlog Route is of particular concern for wolverines because it is adjacent to, and occasionally directly crosses, some of the highest-quality habitat in the analysis area based on the number of years with persistent snow cover (SDEIS Figure 3.13-4). The SDEIS attempts to downplay the impact the Burntlog Route would have on wolverines by implying that any road with ROW less than 328 feet (citing Luensmann 2008) and traffic volumes less than 100 vehicles per day (citing Scrafford et al. 2018) is a non-issue for wolverines. However, we found different conclusions from these same publications, suggesting that wolverines avoided areas within 330 feet of some roads, actively preferred being at least 3,600 feet away from a road, and that wolverine avoidance of roads was constant regardless of traffic volume. In particular, Scrafford et al. (2018) stated:</p> <p>“Although we found that wolverines were displaced by higher traffic roads, our models also indicated that roads scarcely used by vehicles were deleterious to wolverine habitat suitability. This finding aligns with the prediction that wildlife species with low density and fecundity, such as wolverines, would be sensitive to roads even with low traffic volumes (Jacobson et al. 2016).”</p> <p>We note that the Forest Service did not adjust their narrative of road impacts to wolverine in the SDEIS, despite having these inconsistencies pointed out in our comment letter submitted in 2020 on the DEIS. The Forest Service must correct these errors, accurately disclose impacts to wolverine posed by access roads and other infrastructure, and develop design features to avoid, minimize, and mitigate impacts to wolverine.</p>	WIL	No text revisions made as it has been determined that the analysis in the EIS is sufficient for the wolverine. Since it is a proposed species and therefore included in the BA, it will be included as part of the consultation process with the USFWS. Additional details for these species are provided in the BA.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	327	<p>SDEIS does not adequately address the potential for increased non-target trapping</p> <p>The SDEIS does not adequately address the potential for increased non-target trapping incidents that could result from the anticipated increase in year-round access. While there is no legal hunting or trapping season for wolverine in Idaho, the species' propensity for scavenging, particularly in winter, increases risk of injury or mortality in traps set legally for other species. Trapping contributed to the widespread decline and range contraction of wolverine in the lower 48 states in the 1900s. IDFG collects information on non-target trapping incidents that are voluntarily reported to the Department, and Wildlife Services reports to the Forest Service incidents of non-target captures during their control actions on FS-managed land. These numbers were not disclosed in the SDEIS.</p> <p>The SDEIS acknowledged indirect effects from trapping for listed species in general (SDEIS p. 4-393) and for two forest carnivore species specifically: Canada lynx (SDEIS p. 4-395), and fisher (SDEIS p. 4-416). In each case, the statement was similar to this for Canada lynx:</p> <p>The increased human access and potential increase in hunting and trapping pressure for lynx and prey species in previously undisturbed areas also would be indirect effects.”</p> <p>Such statements are not an analysis and totally insufficient.</p> <p>Notably, there was no mention in the SDEIS of direct or indirect impacts to wolverine from trapping, despite the fact that the wolverine is relatively more numerous than lynx or fisher in the project area and that there are documented cases of wolverine incidentally trapped in the project area.</p> <p>While it may be difficult to demonstrate a population effect of non-target trapping on wolverine in Idaho, the loss of a breeding-aged female from a small, semi-isolated subpopulation could be an additional factor that suppresses population stability or growth. The Forest Service should conduct a more thorough analysis of potential effects from non-target trapping.</p>	WIL	No text revisions made and it has been determined that the analysis in the EIS is sufficient for these species; however, the Canada lynx and the wolverine are listed species and therefore included in the BA as part of the consultation process with the USFWS. Additional details for these species are provided in the BA.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	328	<p>d. SDEIS does not adequately address the likely increase in winter travel and associated impacts</p> <p>The SDEIS gave a vague and inconsistent description of how the Burntlog Route would be managed for public access. Thus, it is unclear how the FS could have completed a thorough analysis of impacts to any wildlife species, including wolverine, with regard to public access. Under either proposed alternative, there would be a change (increase) in winter travel for a 20+ year time frame. As described below under #12, “ motorized vehicle routes in winter”, the proposed new groomed permanent snow machine trail along Cabin Creek, although described as a replacement for the current groomed route along Warm Lake Rd, would in fact be additive, because it would operate contemporaneously with proposed year-round travel on Warm Lake Road and proposed year-round travel on Burntlog Route (which currently is groomed for only a portion of its length and gets limited winter recreation use). For wolverine, the concern is the increased opportunity for over-snow recreational activity that the project directly and indirectly would provide. The proposed Cabin Creek OSV groomed route would give new, direct access to over-snow recreation in wolverine habitat. The Burntlog Route, if selected, would provide access to additional areas by virtue of a newly plowed road in winter. The SDEIS made no attempt to quantify the public's use of plowed roads for backcountry access in winter, and was unclear as to how far along the entire Burntlog Route access would be allowed. In addition, the Forest Service Recreation Specialist Report acknowledged the potential for unauthorized motorized use of the FCRNR Wilderness from the Burntlog Route (Stibnite Gold Project, Recreation Resource Specialist Report p. 67).</p> <p>The SDEIS gives only a qualitative recognition that over-snow recreation can impact wolverines. Thus, the SDEIS does not adequately address the potential impact to wolverine from increased recreation resulting from increased access, particularly in winter. The potential effects of winter recreation on wolverine behavior and habitat use were the focus of a six-year research project in central Idaho and the western Yellowstone region during 2010–2015. Findings from that rigorous study were that wolverines avoided areas of both motorized and non-motorized winter recreation, and off-road recreation elicited a stronger response than road-based recreation. Female wolverines exhibited strong avoidance of off-road motorized recreation and experienced higher indirect habitat loss than male wolverines. For example, on</p>	WIL	The EIS has been revised to include a mitigation measure that restricts public use of the Burntlog Route.

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			<p>average 14% of habitat within female home ranges was reduced in quality due to winter recreation, with at least one individual experiencing a 70% degradation of habitat. Similarly, wolverines used areas of recreation less as intensity of recreation increased. The research conclusions suggest indirect habitat loss, particularly to females, could be of concern in areas with higher recreation levels.</p> <p>Results from Heinemeyer et al. (2019) were supported by a study in British Columbia that found that density of forestry roads was a strong negative predictor of wolverine distribution in winter, particularly of females. They hypothesized that the negative relationship with roads was related to a high level of snow machine operation in their study area and reflected anthropogenic disturbance. Their model also found a positive relationship between wolverines and protected areas. The authors proposed a reduction in road density or mechanized use of roads in winter as a conservation tool for wolverine.</p> <p>The Idaho Department of Fish and Game also recognized the importance of managing winter recreation to benefit wolverine in their draft management plan for Canada lynx, wolverine, and fisher. The plan establishes a wolverine-specific priority action of “providing technical assistance for land managers and recreation planners related to intensity and distribution of winter recreation, and considerations for wolverine habitat or connectivity.”</p> <p>The SDEIS states, in the context of roads and increased recreational activity in winter, that wolverines would “avoid the areas by moving away from the activities...” (SDEIS at p. 4-401). This statement is overly simplistic and fails to consider wolverine social structure. As described above, resident wolverines, such as occur in the project area, maintain and defend territories. Both adult and subadult wolverines are killed by other wolverines in some instances. As a consequence, venturing beyond one’s territory has associated risk. For a wolverine to “avoid” activity, it would have to do so temporally or spatially, either of which could equate to a loss of access to resources within its territory and effectively reduce territory size.</p> <p>In summary, the SDEIS assessment of impacts of winter recreation on wolverine was insufficient.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	329	<p>e. Cumulative impacts were not considered</p> <p>The SDEIS failed to consider the cumulative impacts of the Stibnite Gold Project, increasing winter recreation, and climate change to wolverines. The SGP is not happening in a vacuum; any adverse impacts that this project will have on wolverines and wolverine habitat will be amplified and exacerbated by the pressures the species is already facing with declining spring snow cover and expanding winter recreational use. Access points to groomed trails and winter backcountry routes around McCall have continued to attract increased levels of visitation in the past decade. The wolverine–winter recreation study documented a steady increase of use during 2010–2015. The groomed route along Warm Lake Road also has seen increased use in winter, in both the number of traditional over-snow vehicles and in hybrid users (snow machines carrying backcountry skiers; DEM personal observation). It is only logical to expect that recreationists will welcome the chance to move from the congested McCall area to new territory made available by the proposed Cabin Creek OSV groomed trail and the new and existing roads proposed to be open year-round. This use will almost certainly expand beyond the road/access corridors and infringe on wolverine habitat across the larger accessible landscape. Climate projections identify a change in the type and timing of precipitation in Idaho, creating a potential scenario where recreationists and snow-dependent wildlife become concentrated in a shrinking snowpack. These threats were not addressed in the SDEIS.</p>	WIL	No text revisions made and it has been determined that the analysis in the EIS is sufficient for the species; however, the wolverine is a federally proposed (as threatened) species and therefore included in the BA as part of the consultation process with the USFWS. Additional details for this species are provided in the BA.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	330	<p>The SDEIS states the SGP would result in “localized and long-term impacts to the wolverine.” Many other impacts are recognized, despite the insufficiency of the analysis. It is difficult to see how the FS makes a “not likely to jeopardize determination” for wolverine. In addition, the numerous effects to wolverine do not meet FP direction (TEST04). Given the numerous detrimental effects, additional Environmental Design Features (EDFs) and/or mitigation measures are necessary</p> <p>The SGP area is important to wolverines, both in terms of the number of resident individuals and the amount of high-quality habitat. While wolverines may not be entirely extirpated from the larger area due from the expanded road network, it is likely that their utilization of this landscape and access to other</p>	WIL	<p>The EIS contains the data and analysis to make the not likely to jeopardize determination for the wolverine.</p> <p>Appendix A of the EIS provides the Forest Plan Consistency Review.</p>

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			<p>areas will be diminished and connectivity with surrounding subpopulations will be negatively affected. We base this conclusion on the fact that wolverines occur at low density on the landscape; wolverines have been well-documented in the SGP area, which overlaps with two Tier 1 Wolverine Priority Conservation Areas; wolverines in the project area are linked demographically with breeding concentrations to the north and south; wolverines are already facing significant pressures from climate change, declining snow cover, winter recreation, and existing road networks; and the best available science shows that wolverines are sensitive to roads, regardless of their width or traffic levels, and both motorized and non-motorized winter recreation.</p> <p>The Forest Service determined that the 2021 MMP would result in “localized and long-term impacts to the wolverine, particularly the local population (part of larger Central Idaho sub-populations).” (SDEIS p. 4-399).</p> <p>“The Forest Service has preliminarily determined that the 2021 MMP may directly and indirectly impact wolverine individuals and habitat resulting in adverse impacts but would not jeopardize the continued existence of the species. Informal Section 7 ESA consultation is ongoing with the USFWS. The 2021 MMP would impact the most habitat overall, reduce habitat connectivity, and result in the highest level of displacement (particularly from breeding and winter range), based on direct and indirect impacts. Therefore, based on the impact analysis for the wolverine and its habitat, the 2021 MMP would result in localized and long-term impacts to the wolverine, particularly the local population (part of larger Central Idaho sub-populations...)”</p> <p>In addition, “Direct impacts on wolverines are likely along the access roads due to habitat loss by access road construction, year-round vehicle traffic causing disturbance and potential avoidance behavior, over-snow recreation in the winter and new construction and plowing of the Burntlog Route through potential suitable habitat.” (SDEIS p. 4-400). “Vehicle-wildlife collisions and habitat fragmentation would likely be the largest impact on the wolverine related to the 2021 MMP.” (SDEIS p. 4-401). Given these effects disclosed in the SDEIS, and the many impacts not sufficiently addressed, it is difficult to see how the FS makes a “not likely to jeopardize determination” for wolverine.</p> <p>The FS also provides no rationale for how these effects meet the following Forest Plan direction:</p> <p>Management actions that have adverse effects on Proposed or Candidate species or their habitats, shall not be allowed if the effects of those actions would contribute to listing of the species as Threatened or Endangered under the ESA (TEST04).</p> <p>The FS needs to address consistency with FP direction, or provide justification for not meeting that direction (see SDEIS App. A).</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	331	<p>Despite all of these acknowledged impacts, the only Environmental Design Feature (EDF) included in the SDEIS pertaining directly to wolverine is to monitor high elevation habitats “where practicable” (SDEIS p. 2-105).</p> <p>As written, it is unclear what, if anything, would actually occur for monitoring, so we can not evaluate whether the data would be sufficient to assess impacts from project-related activities. A concerted monitoring effort will be needed for the Forest Service and Perpetua to determine the extent to which the SGP is adversely impacting wolverine.</p> <p>We recommend the following EDFs or mitigation measures for wolverine:</p> <ol style="list-style-type: none"> 1. If the Burntlog Route is approved and built, only mine traffic should be allowed for its entirety in winter. In summer, public use should occur only on the existing Burnt Log Road (FR #447). 2. No new OSV groomed route in Cabin Creek. Any changes to OSV grooming and routes must be informed by an analysis consistent with the Travel Management Rule, Subpart C. This analysis must fully consider the recent research on the effects of winter recreation and travel on wolverines. 3. Remove roadkill as encountered. 	WIL	The EIS has been revised to include a mitigation measure that restricts public use of the Burntlog Route.

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			<p>4. Fund development of a model of winter recreation, such as was completed in Colorado, based on terrain selection of motorized and non motorized winter recreationists. This will enable predictions of areas of potential conflict or disturbance to wildlife. For expediency and economy, coordinate and/or contract with Round River Conservation Studies and partners to use their extensive recreation dataset collected during the wolverine–winter recreation study.</p> <p>5. Fund development of a fine-scale denning habitat model (e.g., talus layer) for wolverine for the two Tier 1 Wolverine Priority Conservation Areas that include the project area. Framework and methods were established during the wolverine–winter recreation study.</p> <p>6. Conduct annual recreation monitoring of winter recreation for the first 5 years, beginning with the construction phase, then on adjusted schedule thereafter. A survey grid and methods were developed for the wolverine–winter recreation study that uses fixed wing aerial surveys and infra-red trail counters. A baseline of recreation intensity and footprint was established for the SGP area from surveys in 2018, hence data analysis should be coordinated and/or contracted with Round River Conservation Studies.</p> <p>7. Using an independent contractor, monitor wolverine activity with remote cameras in winter on an established schedule (every 2 or 3 years) using a method that incorporates collecting genetic material (hair snagging with gun brushes) to identify and track individuals. The Western States wolverine conservation projects’ camera survey provides a blueprint.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	332	<p>12. New motorized vehicle routes and facilities in winter will adversely affect many wildlife species, particularly the wolverine. Significantly, the Forest Service failed to adhere to the requirements of Subpart C of Travel Management Rule when proposing to designate new over-snow vehicle (OSV) routes for the SGP</p> <p>This issue is discussed in depth in this comment letter in section N. New Motorized Vehicle Routes (references to orders, rules, and regulations are footnoted in section N).</p> <p>Here, we address the most relevant aspects to wildlife. Subpart C of Travel Management Rule (TMR), also known as the OSV Rule, provides a framework for winter travel planning on National Forests. Forests, with adequate snowfall, are required to analyze, designate, and display on an “over-snow vehicle use map” a system of routes and areas where OSV use is permitted based on resource protection needs and other recreational uses. The SGP proposes changes and additions in winter travel, and OSV routes, that must be adequately addressed in the SDEIS to comply with the TMR and minimize effects to wildlife. Planning under the TMR, requires compliance with the “minimization criteria” outlined in Executive Orders 11644 and 11989 (issued in 1972, and 1977, respectively.) Two criteria are particularly important to wildlife: 1) minimize damage to soil, watershed, vegetation, or other resources of the public lands, and 2) minimize harassment of wildlife or significant disruption of wildlife habitats.”</p> <p>Neither of the two OSV routes proposed in the SDEIS are currently designated OSV routes. The 15 miles of new road proposed to link the existing Burnt Log Road with the SGP mine site would also be a new travelway, open year round. As noted previously , in order to designate these routes, the Forest Service must follow the requirements of the TMR and comply with the minimization criteria. Of particular concern is the impact that each route will have on wildlife, specifically wolverine, which are known to occur in the area and are currently proposed for listing under the Endangered Species Act.</p> <p>While the SDEIS (4.13) raises the possibility that new routes in winter will impact wildlife, these effects are not addressed in any detail. The proposed Cabin Creek OSV route would bring additional use and impacts into an area that, while open to OSV use, has no groomed trail. It is important that the Forest Service fully analyze potential impacts to wildlife from the new OSV route, since grooming would increase use into an area that currently does not see much, if any, recreational use in winter due to lack of access.</p> <p>Perhaps more important, because the Payette and Boise National Forests have not conducted winter travel management planning in accordance with Subpart C of the Travel Management Rule, it cannot assume that its existing system of OSV routes and areas comply with this Rule.</p>	WIL	No text revisions made. Current design features and required protection measures in the EIS are adequate to address potential impacts to this species.

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			<p>The Payette National Forest has long recognized the need to complete winter travel planning. In fact, previous environmental analyses of winter travel were put on hold to allow studies on the effects of winter recreation on wolverines. This became a multi-year, multi-forest study (including the Boise and Sawtooth National Forests, among others) that is certainly one of the most extensive and rigorous to date. The results of this study showed that male and female wolverines avoided motorized and non motorized recreation to some degree, with females showing a stronger response. Both male and female wolverines responded more to dispersed recreation, motorized and non motorized, than linear travel. Increasing avoidance of areas as the amount of off-road winter recreation increased resulted in indirect habitat loss or degradation of moderate- or high-quality habitats.</p> <p>Following this study, the IDFG continued to collect data on wolverines in the project area with remote cameras. A multi-state survey in the winter of 2016-17 encompassed the project area, and a follow-up, more intensive camera survey occurred during the winter of 2020-21. Wolverine were detected in the project area during both efforts. More information on the potential effects to wolverine and lynx is provided above.</p> <p>It is essential that the Forest Service makes use of this research and best available science, (conducted on and supported by the Payette and Boise national forests) to inform decisions regarding winter travel in the SGP area. Ideally, the Forest Service would meet the intent of the Travel Management Rule and conduct a comprehensive travel plan analysis across both national forests, before making any project specific decisions on winter travel. But certainly, any project-specific decisions must be informed by recent research and science.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	335	<p>14. Utilities and right-of-ways contribute to the effects on wildlife. Large portions of the proposed transmission corridors associated with the SGP are located in lands with few roads. The SDEIS does not adequately analyze the effects of these facilities on wildlife habitat; including habitat fragmentation and migration corridors. While the proposed alternatives do not appear to designate ROWs as trails for public motorized use, unauthorized recreational motorized vehicle use may increase on the ROWs used for the project. We are concerned that this use could increase in summer and (with OSV) in winter, resulting in additional impacts to wildlife beyond those addressed in the analysis. The SDEIS needs to incorporate a more thorough analysis of potential incidental impacts to wildlife, particularly increased habitat fragmentation and disturbance of migration corridors from both authorized and unauthorized use of ROWs.</p>	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in Section 4.13.2.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	336	<p>15. Avalanche hazard mitigation activities will negatively affect wildlife, but the SDEIS failed to adequately analyze these effects</p> <p>As discussed in section L. Avalanche and Avalanche Mitigation, of this comment letter, the analysis fails to address effects to wildlife resulting from avalanche mitigation measures and control on the proposed access roads and the Cabin Creek OSV route. This is of major concern to wildlife because, as noted in section L, the SDEIS underestimates the frequency and extent of the control work. The SDEIS, and the associated report (DAC 2021), provide some information used to evaluate avalanche control noise impacts to humans, but not to wildlife. The SDEIS also fails to acknowledge impacts to wildlife from any associated helicopter activity. Alternatively, automatic exploders might be installed in some problematic areas (i.e., high cirques and ridges), but impacts from the noise of the explosives would still occur.</p> <p>Much of the control work is expected to occur along the Burntlog Route, but control work would likely be necessary along the Cabin Creek OSV route, if approved. As stated elsewhere in our letter, the Cabin Creek Route should not be considered a OSV recreation mitigation measure, as it only leads to the need for mitigation for wildlife, particularly wolverine. It will increase OSV use into an area with little use in the past, and also with a high avalanche hazard. This proposed route should be dropped to ensure human safety and wildlife habitat protection.</p> <p>Many of our concerns about the insufficient analysis for wildlife are included in section L. As noted, wolverine and mountain goats are two important species that could be impacted. Increased activities in wolverine habitat, particularly occupied habitat, such as occurs in the analysis area, provide more</p>	WIL	<p>No text revisions made. Avalanche control would occur in areas that are already in locations where avalanches occur naturally and the Project is not creating new avalanche areas.</p> <p>The EIS provides the wolverine data and analysis to make the not likely to jeopardize determination.</p> <p>A mitigation measure has been added to the EIS restricting public use of the Burntlog Route. The Project decision would incorporate this public use restriction and continues to include requirements to decommission and reclaim portions of the Burntlog Route newly constructed as part of the Project.</p> <p>Mountain goats are not a TEPC, sensitive or other special status species under the PNF Forest Plan. However, due to nearby occupied habitat, a statement regarding the potential use in the Project vicinity has been added to Section 3.14. However, no impacts are anticipated to occur to this species as a result of the Project.</p>

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			<p>rationale for ESA listing of the wolverine (currently proposed) as Threatened. Almost the entire length of the Burntlog Route occurs in modeled wolverine habitat, and much of the priority denning habitat occurs near to the route.</p> <p>Helicopter flights and control work are also expected to occur in areas near to occupied mountain goat habitat. These activities have been documented to cause negative impacts to mountain goats, (see also our comments on mountain goats above.) The area also provides suitable habitat for the threatened lynx. Although lynx have not been documented in the analysis area, potential effects to the species must be addressed, including compliance with FP standards and guidelines for the species (see discussion in this section above).</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	337	Also, the SDEIS is unclear about whether under the 2021 MMP, the Stibnite Road would be maintained in winter, thereby adding to the effects identified for the Burntlog Route. If that is the case, then the total number of charges per year could increase 50% (an estimated 146 charges on the entire Burntlog Route combined with 71 charges on Stibnite road) based on data in DAC 2021 (which is likely an underestimate).	WIL	The text has been clarified to indicate that the Stibnite Road would not be maintained in winter except during its usage as site access during the construction period.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	338	If either action alternative is selected, and before any control activities commence, Perpetua should work with the FS and IDFG to conduct mountain goat surveys in the area to be affected by control activities (including noise). Additional wolverine surveys are recommended elsewhere in section S. The proposed OSV route on Cabin Creek should be dropped. Ultimately, the best option for wildlife protection and human safety would be to restrict mine access to snow-free months.	WIL	<p>Based on the lack of anticipated impacts to mountain goats as a result of the Project, no mitigation measures are warranted beyond what is presented in Chapter 2 of the Final EIS. Additionally, design features and protection measures have been incorporated into the Project design in Chapter 2 of the Final EIS to protect wolverines that occur in the Project vicinity.</p> <p>Due to year-round access to the SGP, the existing groomed OSV trail from Warm Lake to Landmark would be closed for the life of the SGP. To replace this, the Cabin Creek OSV route would be established for recreational use.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	339	<p>16. The effects to various wildlife species from climate change are addressed perfunctorily (see 3.4.4.11 Wildlife and Wildlife Habitat). The climate change analysis and the analysis of cumulative effects for wildlife fail to account for the cumulative impacts of habitat loss associated with the mine and with habitat loss from climate change to snow-dependent species such as the lynx and wolverine</p> <p>The region is currently facing unprecedented rates of change in climatic conditions that may outpace the natural adaptive capacities of several native species (Halofsky et al. 2018). Increased climate variability and frequency of extreme conditions will favor species adapted to frequent disturbance, potentially increasing the abundance of invasive species. Impacts to terrestrial species as a result of climate change are already being experienced through habitat loss and fragmentation, physiological sensitivities, alterations in the timing of species life cycles (e.g., seasonal changes impacting migration, hibernation, and reproductive success), and indirect effects (e.g., disruption of species interaction across communities). Most species are expected to exhibit sensitivity to changes in the climate, especially those restricted to high elevations or surface water habitats. Of the special status wildlife species occurring in the analysis area, the flammulated owl (<i>Otus flammeolus</i>), wolverine (<i>Gulo gulo</i>), and Columbian spotted frog (<i>Rana luteiventris</i>) are expected to be the most vulnerable terrestrial populations in the region (Halofsky et al. 2018). Other special status species expected to be impacted include the Canada lynx (<i>Lynx canadensis</i>) and Rocky Mountain bighorn sheep (<i>Ovis canadensis</i>) (Halofsky et al. 2018).'</p>	WIL	No text revisions made as it has been determined that the level of analysis in the EIS related to climate change (primarily discussed in Sections 3.4, 4.4, and 5.4) is sufficient.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	340	<p>Climate Change Impacts to Analysis Area Resources (p. 4-64)</p> <p>Wildlife and Wildlife Habitat</p> <p>Climate change impacts to wildlife and wildlife habitat in the SGP area would include habitat loss and fragmentation, physiological sensitivities, and alterations in the timing of seasonal life cycles. Habitat loss and fragmentation may occur in the region and analysis area due to the increased potential for wildfire that is anticipated from changing climatic conditions (Halofsky et al. 2018). Construction and operation of the SGP, access roads, utilities, and off-site facilities would additionally impact wildlife from habitat loss and fragmentation. Reclamation activities are intended to achieve post-mining land use for wildlife habitat as reasonably possible, which would help to reclaim habitat connectivity. However, some displacement and habitat fragmentation would be a long-term effect. (p. 4-70).</p>	WIL	No further response required. General in nature or position statement.

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			The climate change analysis in the SDEIS and climate specialist report fail to consider long-term impacts of climate change in relation to wildlife. Known effects of climate change include rising temperatures, decreased snowpack, and increased rain-associated precipitation. These factors could affect many species including wolverine, lynx, and whitebark pine. Only one paragraph was dedicated to wildlife in the entire climate specialist report (see 6.2.9).		
Idaho Regulatory Agencies	17718	168	Reference: “However, under both alternatives, greater impacts would occur for several groups of wildlife (e.g., big game [moderate impacts] and wolverine [major impacts]) due to the species known occurrences and location and amount of habitat disturbance associated with the SGP” There are multiple references to ‘major’ and ‘irreversible’ impacts to low population species, such as wolverine and Canada lynx, throughout the document. The State would like the Forest Service to acknowledge that these predictions are based primarily on habitat suitability models and limited site-specific data, which greatly reduce how accurately impacts to these species can be predicted.	WIL	No text revisions made. Models for most species as presented in tables in Section 3.13.4 and shown on Figures in Section 3.13 [see also additional figures in the Wildlife Specialist Report] are described in detail in the EIS as well as any site-specific occurrence data for each species. Therefore, conclusions regarding the types of anticipated impacts in Section 4.13.2 are based on these details found in the Affected Environment, Chapter 3 of the EIS.
Idaho Regulatory Agencies	17718	170	Reference: “Mitigation measures required by the Forest Service would represent reasonable and effective means to reduce the impacts identified in the previous section or to reduce uncertainty regarding the forecasting of impacts into the future. These mitigation measures would be in addition to the Forest Service requirements and EDFs (Section 2.4.9) accounted for in the preceding impact analysis. At this time, no mitigation measures have been identified for Wildlife and Wildlife Habitat.” Comment: It is unclear to the State as to why this document does not include any mitigation measures for Wildlife and Wildlife habitat after the extensive analysis of habitat functional units. If Perpetua, or the Forest Service, are waiting for public comment to formulate what kind of wildlife mitigation would be appropriate, this approach is less than ideal. If the project moves forward under the current preferred alternative, the State encourages the Forest Service and Perpetua to adopt an adaptive framework in the final decision that works with the State and FWS to manage activities and disturbances to these low density species, consisting of monitoring plans, consultations, and a set of predetermined conservation measures to address potential resource conflicts or issues.	WIL	Project design features and associated mitigation measures are part of the EIS and BA.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	10	The two action alternatives differ on their impacts to wildlife largely due to the access to the site. The 2021 MMP relies on the Johnson Creek route until the Burntlog Route is constructed, while the Johnson Creek route utilizes Johnson Creek road throughout the project lifespan. The Burntlog Route would add 15 miles of new roads in a currently unfragmented and roadless area, as well as upgrade the entire 38 mile route to accommodate for expected traffic. Both routes would remove around 3,000 acres of habitat, but their impacts are greater than the amount of habitat acreage that would be removed. Big game are particularly susceptible to an increase in human development and presence, with motorized access in areas that did not have such access being at the top of game managers’ issues to sustain herds. Whereas human access into elk habitat has the potential to displace and disturb elk, motorized access (whether on roads or trails) generally has the greatest negative impact on elk movements, vulnerability, habitat security, habitat effectiveness, and therefore elk population levels. Idaho Department of Fish & Game describes the lasting impacts of disturbance of elk habitat and behavior associated with roads and trails in its’ Elk Management Plan: “Displacement of elk away from roads and trails may cause substantial reductions in habitat utilization and habitat effectiveness. Human disturbance associated with roads and trails negatively influences elk behavior because elk vacate otherwise suitable habitat to avoid human activity (Lyon 1979, 1983; Naylor et al 2009). Displacement of elk into poorer habitat might be equally or more detrimental than increase energetic costs cause by movements (Hobbs 1989). When elk are displaced into poor-quality habitats, they may be forced to use poorer quality forage and expend more energy on thermoregulation (Cassirer et al 1992). Water and riparian areas are important to lactating elk (McCorquodale et al 1989), but in Idaho many roads and trails follow drainages, thus making these important habitats less available to elk. Research has shown quality of summer and autumn ranges largely determines condition of an elk heading into winter, and thus whether that elk can survive winter (Cook et al 2004).”	WIL	No further response required. General in nature or position statement.

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			IDFG encourages state and federal land managers to continue to develop comprehensive access management programs that include multiple tools such as timing of use, limitations on use, appropriate density of roads and trails, and complete or seasonal closures of roads and trails to create large blocks of habitat with non-motorized access to benefit elk populations.		
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	11	<p>The SDEIS is significantly lacking analysis on Mountain Goats. Mountain Goats are listed as a Species of Greatest Conservation Need by Idaho Department of Fish & Game (IDFG) and have been documented in IDFGs Upper South Fork Population Management Area (PMU).</p> <p>IDFG describes the current and future pressures on Mountain Goats in its Mountain Goat Management Plan:</p> <p>“Most threats facing mountain goats in Idaho are either direct threats to their habitats or indirect threats that could cause them not to use available habitat (Festa-Bianchet and Cote 2008). For example, road construction, timber harvest, mining, power infrastructure, oil and gas extraction, climate change, wildfires, and fire suppression are direct threats to mountain goat habitat and are likely to negatively affect nearby mountain goat populations... These disruptions may result in a variety of negative impacts, including habitat abandonment, changes in seasonal habitat use, alarm responses, lowered foraging and resting rates, increased rates of movement, and reduced productivity (Pendergast and Bindernagel 1976, MacArthur et al. 1979, Foster and Rahe 1985, Hook 1986, Joslin 1986, Pedevillano and Wright 1987, Dailey and Hobbs 1989, Frid 1997, Duchense et al. 2000, Phillips and Alldredge 2000, Dyer et al. 2001, Frid 2003, Gordon and Wilson 2004, Keim 2004).”</p> <p>The use of the Burntlog Route may pose risks to Mountain Goats that are not analyzed in the SDEIS, particularly with initial road construction and continuing operations such as avalanche control. If motorized equipment and explosives are used to control avalanche risk along the proposed Burntlog Route, the SDEIS needs to consider the negative impacts these activities could have on this sensitive species. Additionally, SDEIS must disclose how changes in winter travel access along the Burntlog Route may lead to increases in over-snow recreation, which has shown negative impacts to Mountain Goats. We ask that the Forest Service keep in mind the Travel Management Rule when proposing new Over-Snow Vehicle (OSV) routes, specifically its requirement to “minimize harassment of wildlife or significant disruption of wildlife habitats.”</p>	WIL	No Forest Plan standards exists for managing mountain goat habitat. This species is managed by IDFG as a trophy species but is not considered sensitive under the 2003 Forest Plan. However, due to nearby occupied habitat, a statement regarding the potential use in the Project vicinity has been added to Section 3.14. No impacts are anticipated to occur to this species as a result of the Project.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	12	<p>Rocky Mountain Bighorn Sheep are a Forest Service Region 4 Sensitive Species and a Species of Greatest Conservation Need by IDFG. IDFG collaring data (2017b) verified several existing herds (Pinnacles, Big Creek, Monumental herds) and lambing areas within proximity to the SGP area. Approximately 59,405 acres of summer habitat and 10,306 acres of winter habitat is modeled within the wildlife analysis area, including some habitat on the Salmon-Challis National Forest.</p> <p>The SDEIS summarizes impacts to Bighorn Sheep below:</p> <p>“The 2021 MMP may directly and indirectly impact Rocky Mountain bighorn sheep individuals and habitat but would not likely contribute to a trend towards ESA listing or loss of viability of the species within the planning area. However, due to their value as a big game species in Idaho, impacts may include potential changes in abundance and distribution of bighorn sheep, and therefore impacts to bighorn sheep hunting opportunities in the surrounding region. More summer habitat would be directly and indirectly impacted than winter habitat. Therefore, based on the impact analysis for the bighorn sheep and its habitat, the 2021 MMP would result primarily in localized, short-term, long-term, and permanent, moderate impacts to the bighorn sheep.”</p> <p>Our groups are particularly concerned about the action alternatives’ impacts on this iconic Western species. IDFG disclosed potential impacts to bighorn sheep due to increased human pressure in its’ Draft Bighorn Sheep Management Plan:</p> <p>“Bighorn sheep may respond to human disturbance (including recreational activities) by temporary or permanent abandonment of the area (Wilson et al. 1980, DeForge 1981, Legg 1998, Papouchis et al. 2001, Keller and Bender 2007, Longshore et al. 2013, Lowrey and Longshore 2017). These movements</p>	WIL	No further response required. General in nature or position statement.

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			<p>may displace bighorns into less optimal habitats, thereby decreasing foraging efficiency (Horejsi 1976, Hicks and Elder 1979, Legg 1998, Bailey 1999, Courtemanch 2014, Sproat et al. 2020), increasing energy expenditures (MacArthur et al. 1982, Legg 1998), and increasing their risk of predation (DeForge 1981, Papouchis et al. 2001). Human disturbance may also increase stress levels in bighorn sheep (Legg 1998) and lower resistance to disease (Spraker 1977, Foreyt and Jessup 1982, Spraker et al. 1984, Schwantje 1986)....Because fitness of individual bighorn sheep often decreases with increase disturbance levels, it is important to limit potential negative effects of recreation and and human disturbance during critical times of the year (e.g. lambing season and on winter range; Boyle and Samson 1985, Papouchis et al. 2001, Courtemanch 2014).</p> <p>While the SDEIS concedes that under both alternatives, moderate impacts are expected to big game species, it does not go into enough detail into the direct and indirect disturbances or mortality associated with each alternative. Our groups feel that the Forest Service underestimates the impacts of the action alternatives on wildlife and focuses too much on the acreage reduction in wildlife habitat around the mine site rather than the lasting impacts of human disturbance on the way to the site.</p>		
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	55	<p>7.2.1.2 2021 MMP</p> <p>The untrammled quality of wilderness character would be impacted when noise and lights change wildlife species distribution and behaviors. Noise from mine activities, vehicles on Burnt Log Route, and changes to natural dark skies during construction, operation, and closure and reclamation activities could result in a long-term change in wildlife species natural distribution. The duration could be short-term as some individuals of wildlife populations become habituated to noise, lights, and human activity.</p> <p>This entire section is a disingenuous description of impacts to wildlife. A true and complete study of impacts to all species of wildlife should be complete identifying how blasting, lights, noise and increased vehicle and human traffic may impact the species. Locations of migration, impacts to local areas that have not had wildlife species present and potential repercussions should be fully identified.</p>	WIL	No text revisions made. Section 4.23.2.2 of the SDEIS presents the potential impacts to the untrammled quality of wilderness due to impacts to wildlife. The Forest Service has determined that the level of analysis regarding potential impacts (e.g., noise, light, and increased human presence) is adequate for wildlife species that may occur in the wildlife analysis area as discussed in the EIS and Wildlife Specialist Report.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	58	<p>7.4 Cumulative Effects 7.4.1 Past and Present Actions Midas Gold Exploratory Drilling (2009-2012), Monitoring Wells for the Golden Meadows Project (2013), Midas Gold Baseline Studies (2013- 2017), Winter Geotechnical Study (2017), Geotechnical Studies along Meadow Creek (2017), Operations Exploratory Drilling (2016-2019), Exploration and Geotechnical Drilling (2018), On-going Monitoring for Golden Meadows Project, Burnt Log Route Geophysical Investigation Field Work (2020-2021), Transportation projects have all occurred for over a decade to support the Stibnite Gold mining project. What have the impacts been to the wildlife? Have studies been occurring to determine what impacts have occurred? This information must be provided to identify migration patterns, avoidance, wildlife deaths, spills, etc.</p>	WIL	No text revisions made as it has been determined that the level of analysis regarding potential cumulative impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in the EIS and Wildlife Specialist Report.
Joseph Pietri	19062	12	About the Wildlife? where will they go when their Habitat is destroyed and they are displaced?	WIL	No text revisions made. Potential impacts are discussed in detail for each group of species in Section 4.13.
Joseph Pietri	19062	14	Will restoration and Rewilding bring back all the habitat and populations lost by Wolverines, Canada Lynx, Cougar, Wolves, Eagles, Owls and diverse populations that share the Lands?	WIL	No text revisions made. Potential impacts are discussed in detail for each group of species in Section 4.13.
Joseph Pietri	19062	15	<p>The world needs less roads not more, especially roads like the Burnt Log Road. The eco destruction that goes along with road construction brings more devastation to a pristine area too close to the FCRCNRW.</p> <p>How will this affect Migration Corridors and Wildlife ?</p>	WIL	No text revisions made. Potential impacts are discussed in detail for each group of species in Section 4.13.
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	1	<p>The FS did not provide a useful summary of the changes between DEIS and SDEIS in relation to wildlife (or most every other resource) which impeded our review of the effects to wildlife.</p> <p>The project was originally analyzed in a DEIS in 2020. In response to the FS request for public comments, ICL and others provided an extensive analysis of project effects. In October 2022, the FS released a SDEIS. The FS made little effort to provide a comparison of changes between the draft and supplement EIS. The FS did not acknowledge ICL's original concerns, and did not show how the</p>	WIL	No further response required. General in nature or position statement.

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			concerns were addressed. This lack of information and transparency does not meet the intent of the NEPA.		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	2	<p>2. The FS incorrectly refers to state and county agencies as cooperating agencies; the definition of which pertains only to federal agencies (see 40 CFR sec. 1501.6 Cooperating agencies). The FS does not include important federal agencies such as the NOAA - Fisheries and the US Fish and Wildlife Service in its list of cooperating agencies.</p> <p>As stated in the SDEIS Executive Summary (ES-1):</p> <p>“The Forest Service, specifically the Payette National Forest, is the lead agency in the preparation of this SDEIS (40 CFR 1501.5). The Boise National Forest is participating, as well as cooperating agencies including the U.S. Army Corps of Engineers (USACE), U.S. Environmental Protection Agency (EPA), Idaho Governor’s Office of Energy and Mineral Resources (OEMR), Idaho Department of Lands (IDL), Idaho Department of Environmental Quality (IDEQ), and Valley County, Idaho. (ES-1)”</p> <p>In addition to listing state and local agencies as “cooperating agencies,” which is incorrect under 40 CFR sec. 1501.6, the SDEIS discusses how these agencies played a role in the development of alternatives (pp. 1-18, 2-1, 2-127). Unfortunately, despite the assertion that this project is designed to benefit threatened fish species, the FS does not include the federal agencies responsible for threatened and endangered fish and wildlife (NOAA - Fisheries and USFWS) as cooperating agencies.</p>	WIL	The list of Cooperating Agencies for the EIS is appropriately provided in the document, see 40 CFR 1508.5 which states “A state or local agency of similar qualifications or, when the effects are on a reservation, an Indian tribe, may by agreement with the lead agency become a cooperating agency.” The description of consultation efforts with other agencies such as the Section 7 consultation with the USFWS and NOAA-Fisheries is described in Chapter 6.
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	3	<p>3. The FS provides little information on the important role of consultation with the US Fish and Wildlife Service (USFWS) and the NOAA - Fisheries, despite the anticipated effects to ESA-listed wildlife (and fish and plant) species.</p> <p>The FS makes little mention of Endangered Species Act consultation with NOAA - Fisheries and the USFWS. Consultation is an essential element in the analysis of effects to species listed and proposed under the ESA. In the project area, the wolverine is proposed for listing, lynx and the northern Idaho ground squirrel (NIDGS) are listed as threatened. The monarch butterfly is a candidate species under the ESA. On page 3-263 the SDEIS describes the requirements of consultation:</p> <p>Endangered Species Act Section 7 Consultation: The ESA (16 USC 35 1531 et seq. 1988) provides for the protection and conservation of threatened and endangered species and their Critical Habitats. Section 7 of the ESA (16 USC 1531 et seq.) requires all federal agencies to consult with the USFWS and/or the NMFS or NOAA Fisheries, collectively known as “the Services”, which share regulatory authority for implementing the ESA. ...The federal agency taking the action or the “action agency” (i.e., the Forest Service and the USACE in the case of the SGP) may prepare a BA (or designee, a non-federal representative to prepare the BA acceptable to the agency under federal regulation) to aid in determining a project’s effects on listed or proposed species or designated Critical Habitat. If the action agency determines that the action is likely to adversely affect ESA-listed or proposed species or designated Critical Habitat, then the action agency enters into “formal” consultation (or “conference” for species proposed for listing). The USFWS and/or NOAA Fisheries then prepare(s) a Biological Opinion and determines whether the action is likely to jeopardize the continued existence of the species or adversely modify designated Critical Habitat. If there is any anticipated “incidental take” (50 CFR 402.02 [defining “take”]) of a species, one or both of the Services must issue an Incidental Take Statement that includes terms and conditions and reasonable and prudent measures that must be followed to eliminate or minimize impacts to the species or its designated Critical Habitat.</p> <p>Chapter 6.2.2 6.2.2 Endangered Species Act Section 7 Consultation, makes reference to a “collaboration memo in the Administrative Record.” This memo was requested and received, and showed that no documented consultation had occurred on the project since 2020.</p> <p>6.2.2.2 Informal Consultation History</p> <p>Informal consultation on the Project began in 2017 and is ongoing. The pertinent letters, emails, meetings, and conference calls are summarized in a collaboration memo in the Administrative Record.</p>	WIL	The description of consultation efforts with other agencies such as the Section 7 consultation with the USFWS and NOAA-Fisheries is described Chapter 6.

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			Formal consultation will commence once the final BA is deemed complete and accepted by USFWS and NOAA/NMFS.		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	4	<p>4. Effects to Wildlife were not identified as a significant issue even though some project activities (such as new access routes) may have significant effects to listed wildlife species (see section 4.13.2.2 2021 MMP; p. 4-393):</p> <p>Threatened, Endangered, Proposed, and Candidate Species</p> <p>The analysis of direct effects includes the potential take of ESA listed species. Pursuant to the ESA, take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” (16 USC 35.1531 et seq.). Take of an individual or population could occur for various reasons such as traffic collisions, change in an individual or population’s habitat use due to noise, other disturbance, or contamination of food or water sources. Direct effects also would include loss of habitat or the encroachments into wildlife migration or travel areas, although no defined corridors have been identified. For all species, habitat loss could be temporary (0 to 3 years); short-term (3 to 15 years); long-term (>15 years); or permanent for land use changes (i.e., pit lakes, TSF, TSF Buttress, transmission line upgrades). The analysis of potential indirect effects on threatened, endangered, proposed, and candidate species includes fragmentation of habitat; increased competition for resources or habitat due to displacement of individuals from the affected area into the territory of other animals; or other effects, such as increased human presence in the species-specific analysis areas (e.g., hunters, trappers, and recreationists) that can cause mortality (i.e., illegal hunting or trapping) or reduced breeding and recruitment in the future population.</p> <p>Canada Lynx (p. 4-395)</p> <p>Therefore, based on the impact analysis for the Canada lynx and its habitat, the 2021 MMP would result primarily in localized, long-term, and permanent, minor impacts to the Canada lynx.Disturbance impacts to Canada lynx along roadways due to noise and light would be long-term.</p> <p>Wolverine (p. 4-399)</p> <p>.....Therefore, based on the impact analysis for the wolverine and its habitat, the 2021 MMP would result in localized and long-term impacts to the wolverine, particularly the local population (part of larger Central Idaho sub-populations).</p>	WIL	The NEPA analysis considered all resources along with the Project impacts to these resources. The resources that most affect the Forest Service decision on the Project were called out as significant, as described in Section 1.10.1.
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	5	5. The SGP would have impacts on many wildlife species. While the primary difference between the effects of the two action alternatives (2021 MMP and Johnson Creek) on wildlife are the access roads, there are other impacts to key habitats and species at specific time periods. The SDEIS admits that effects will be “long-term and permanent” to many species. Impacts to wildlife are not adequately analyzed based on the metric of “acres disturbed.” In addition, impacts to mountain goats were not analyzed.	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in Section 4.13. Additionally, mountain goats are not a sensitive species in the PNF Forest Plan. However, due to nearby occupied habitat, a statement regarding the potential use in the Project vicinity has been added to Section 3.14. No impacts are anticipated to occur to this species as a result of the Project.
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	6	<p>The SDEIS compares acres of habitat disturbed under each alternative for a number of species (p. ES-19). However, many other impacts also are described in the SDEIS but not fully analyzed. These effects are summarized in pages ES-19 through ES-20:</p> <p>2021 MMP and Johnson Creek Route Alternative would remove an estimated 3,266 acres and 3,096 acres, respectively, of wildlife habitat, including habitat for Canada lynx (194 and 175 acres, respectively), wolverine (2,342 and 2,005 acres, respectively), northern Idaho ground squirrel (63 acres), Monarch butterfly, Region 4 sensitive species and management indicator species, Idaho species of greatest conservation concern, general wildlife species, big game species, and migratory bird species and bald and golden eagles.</p> <p>Direct impacts to wildlife species may include direct mortality (i.e., wildlife-vehicle collisions, removal of nest or roost trees, etc.) or loss of habitat due to land clearing activities and land use changes. Indirect impacts could include reduced use of foraging or breeding habitat or reduced prey resources in the analysis area.</p>	WIL	No further response required. General in nature or position statement.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
			<p>.....Light, noise, and fugitive dust impacts associated with mine site activities are likely to disturb or displace wildlife species.</p> <p>As a result of new access roads, direct effects on wildlife species would primarily be due to loss and fragmentation of habitat; direct mortality through vehicle-wildlife collisions; and disturbance from light, noise, fugitive dust, and increased human activity. Construction of 15 miles of new road for the Burntlog Route would likely fragment habitat for general wildlife species and may act as a barrier to movement for some species. The intensity of this impact could range from minor displacement to mortality.</p> <p>Regarding utilities, direct impacts on wildlife species may include loss or fragmentation of habitat along utility corridors, substations, and communication towers due to land clearing activities and land use changes under the 2021 MMP and Johnson Creek Route Alternative. The addition of new utility access roads, as well as new transmission lines, and upgraded transmission lines, could impact individual wildlife species.....</p> <p>The important differences among the alternatives lie in the acres of habitat loss, the amount and location of the disturbance from noise and human activity, new access roads, and the location of the facilities. The Johnson Creek Route Alternative would have 170 fewer acres than the 2021 MMP due to the elimination of the Burntlog Route which also would reduce the magnitude and extent of impacts on most wildlife, especially wolverine, big game, and migratory birds. However, under both alternatives, greater impacts would occur for several groups of wildlife (e.g., big game [moderate impacts] and wolverine [major impacts]) due the species' known occurrences and location and amount of habitat disturbance associated with the SGP.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	7	<p>ii. The SDEIS admits that effects to many wildlife species will be “long-term and permanent”. Impacts to wildlife are not adequately analyzed based on the metric of “acres disturbed.”</p> <p>As examples, the following species all had a determination of localized, long-term, and/or permanent impacts: Canada lynx (p. 4-395), wolverine (p. 4-399), dusky grouse (p. 4-410), boreal owl (p. 4-412), fisher (p. 4-415), flammulated owl (p. 4-417), northern goshawk (p. 4-422), pileated woodpecker (p. 4-425), peregrine falcon (p. 4-431), bighorn sheep (p. 4-432), Townsend’s big-eared bat (p. 4-434), and bald eagle (p. 4-435). See also these excerpts from the SDEIS:</p> <p>Fisher (p. 4-415)</p> <p>The 2021 MMP may directly and indirectly impact fisher individuals and habitat but would not likely contribute to a trend towards ESA listing or loss of viability of the species within the planning area. Therefore, based on the impact analysis for the fisher and its habitat, the 2021 MMP would result primarily in localized, long-term and permanent, minor impacts to the fisher.</p> <p>Northern Goshawk (p. 4-422)</p> <p>.....The 2021 MMP may directly and indirectly impact northern goshawk individuals and habitat but would not likely contribute to a trend towards ESA listing or loss of viability of the species within the planning area. Based on the impact analysis for the northern goshawk and its habitat, the 2021 MMP would result primarily in localized, long-term and permanent, minor impacts to the northern goshawk.</p>	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in Section 4.13.
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	8	<p>In addition, the impact of roads is not adequately analyzed or displayed based on “acres disturbed.”</p> <p>Canada Lynx</p> <p>Access Roads (pp. 4-395, 4-396)</p> <p>.....Construction and the year-round operation (and plowing in winter) of the Burntlog Route could be a potential source of mortality for transient Canada lynx.</p> <p>.....Indirect impacts could occur in the form of increased competition for resources, including the competition created by plowing the Burntlog Route, which is currently not plowed for winter use. Currently, access in this area during the winter is limited to predators suited for over-snow travel (i.e., lynx and wolverine). Construction and operation of the Burntlog Route would open new corridors for</p>	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in Section 4.13.

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			<p>predators and recreational activities. This could increase the predation on snowshoe hares by other predators (e.g., coyotes) or become a source of mortality for prey species (e.g., snowshoe hare, squirrels, etc.), which could affect food availability for transient Canada lynx. The increased human access and potential increase in hunting and trapping pressure for lynx and prey species in previously undisturbed areas also would be indirect effects.</p> <p>Northern Idaho Ground Squirrel (NIDGS)</p> <p>Off-site Facilities (p. 4-398)</p> <p>Vehicle traffic associated with the proposed off-site facilities could impact individual NIDGS where the 2021 MMP components cross modeled habitat known to support populations. Surveys of modeled habitat would be required before construction activities occur. All staff and contractors would be trained to reduce wildlife collisions.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	9	<p>We note that these surveys were not listed as an Environmental Design Feature (see also #9,ii).</p> <p>Idaho Species of Greatest Conservation Concern</p> <p>Access Roads (p. 4-441)</p> <p>Direct effects on general habitat for SGCN would primarily be due to loss and fragmentation of habitat, and disturbance from light, noise, fugitive dust, and increased human activity under the 2021 MMP. Construction of 15 miles of new road for the Burntlog Route would likely fragment habitat for SGCN and may act as a barrier to movement for some species. The new 15-mile-long section of Burntlog Route would be constructed and plowed year-round and have an AADT level of 50 during operations, which could disturb the bird and bat SGCN. The intensity of this impact could range from minor displacement to mortality. The duration ranges from temporary road construction to short-term. It is not expected that the increased risk of injury or mortality would become permanent, because the new segment of the Burntlog Route would be reclaimed upon closure, and traffic levels on the existing roads would return to current levels. The geographic extent of these impacts would be limited to the vicinity of the access road. Restricting public access on the Burntlog Route would likely reduce impacts due to mortality.</p> <p>We note that the group of species above is technically called “Species of Greatest Conservation Need” (SGCN) (emphasis added). The summary of effects to this group from the Burntlog Route is inconsistent with the “long-term and permanent” effects from roads described for other wildlife species.</p>	WIL	Text has been revised per the comment. "Long-term and permanent" inserted in place of "short-term and permanent".
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	10	<p>iii. Impacts to mountain goats were not analyzed.</p> <p>The FS’s omission of mountain goats is a significant oversight, as the species has been observed in Idaho Department of Fish and Game’s (IDFG) “Upper South Fork” Population Management Unit (PMU) as recently as 2016 on Big Baldy Ridge, Murphy Peak, Red Peak, and Red Ridge in Game Management Unit (GMU) 27 - all adjacent to or within the SGP wildlife analysis area. Murphy Peak, in particular, lies on the easternmost side of the area of analysis. Murphy Peak, in particular, lies on the easternmost side of the area of analysis. Mountain goats have also been observed in the area of Pinnacles on the border of GMUs 25 and 26, along the upper ends of Big Creek, Monumental Creek, and in West Fork Monumental Creek in GMU 26 (Idaho Department of Fish and Game 2019). Additionally, IDFG is currently evaluating the potential for successful translocations of mountain goats into historically occupied portions of this PMU to restore healthy populations.</p> <p>Mountain goats are listed in Idaho’s State Wildlife Action Plan (SWAP; Idaho Department of Fish and Game 2017) as SGCN (Tier 3). SWAP is the “guiding document for managing and conserving species before they become too rare and costly to protect.” IDFG’s 2022 Draft SWAP indicates that mountain goats are a high-profile Alpine Tundra and Forest & Woodland species potentially impacted by outdoor recreation, forestry management, development, invasive species and climate-related stressors.</p> <p>Required habitat for mountain goats is regarded as rare in Idaho (Idaho Department of Fish and Game 2019). Populations of Idaho’s mountain goats grow slowly due to low reproductive rates. IDFG’s management plan for mountain goats (2019) points to specific life history requirements when</p>	WIL	Mountain goats are not sensitive species in the PNF Forest Plan. However, due to nearby occupied habitat, a statement regarding the potential use in the Project vicinity has been added to Section 3.14. No impacts are anticipated to occur to this species as a result of the Project.

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			<p>considering actions which would: allow the species to maintain stability or increase populations, increase distribution, consider augmentation efforts and/or achieve harvestable surplus such that limited, structured hunts could occur. These factors include avoidance of activities that can pose direct or indirect threats affecting the use of habitat such as “road construction, timber harvest, mining, power infrastructure, oil and gas extraction, climate change, wildfires, and fire suppression”. Those threats could also disrupt mountain goat behavior by triggering alarm responses, lowering foraging and resting rates, and reducing productivity. For example, Joslin (1986) determined kid production and survival were negatively correlated with seismic surveys in Montana.</p> <p>In their SWAP, IDFG also notes that “conservation of existing quality mountain goat habitat should be one of the highest priorities for managers. Specifically, proactively managing access and travel will be critical to protecting mountain goat populations.”</p> <p>Goat distribution in the Upper South Fork PMUs could be underrepresented in the data, compared to other parts of the state, since IDFG doesn't perform rigorous surveys on a regular basis. This is because populations aren't robust enough to support any sort of managed hunt, leading to a deprioritization of limited resources for goat monitoring in the project's area of impact. IDFG also acknowledges that data is showing that there's more seasonal migration of populations than originally modeled (J. Abrams. pers. comm. with Dennis Newman, Wildlife Manager, Salmon Region).</p> <p>Some of the most negative human-induced effects on mountain goats originate from mechanized devices. The impacts of helicopters, in particular, are well documented (Idaho Department of Fish and Game 2019 and citations therein). The potential for disturbance to mountain goats, within and adjacent to the Upper South Fork PMU, would come from not just avalanche control activities, but from construction, operations and closure actions associated with SGP. In addition, a new source of human-caused disturbances would be introduced by increased road access - possibly during all four seasons of the mountain goat's life cycle. The Forest Service must account for these activities in the wildlife impacts analysis.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	11	<p>The analysis of effects to migratory bird species admits the project could include direct mortality of migratory birds, and does not meet the requirements of the Migratory Bird Treaty Act.</p> <p>The Migratory Bird Treaty Act is described on p. 3-328 of the SDEIS</p> <p>The Migratory Bird Treaty Act (MBTA) (16 USC 703–712) provides protection for all migratory bird species. The MBTA specifically prohibits any action to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention for the protection of migratory birds or any part, nest, or egg of any such bird.” (16 USC 703). The list of migratory bird species protected by this law is based on bird families and is periodically updated.</p> <p>The current list of migratory bird species can be found in 50 Code of Federal Regulations Part 10.13</p> <p>The analysis of Migratory Bird Species and Bald and Golden Eagles (p. 4-448,) shows the project fails to meet the requirements of the MBTA:</p> <p>Direct impacts on migratory bird species and bald and golden eagles could include direct mortality (i.e., collisions with vehicles, structures, removal of nest trees, etc.) or loss of habitat due to land clearing activities and land use changes. Indirect impacts on these species could include reduced use of foraging or nesting habitat; reduced prey resources (insects and pollinators) in the analysis areas; or disturbance from noise, light, and emissions Effects on migratory birds under the 2021 MMP are similar in nature to the effects discussed for general wildlife. Therefore, this section focuses only on the differences for migratory bird species.</p> <p>The 2021 MMP may directly and indirectly impact migratory bird species, individuals and habitat. Therefore, based on the impact analysis for migratory bird species and their habitat, the 2021 MMP</p>	WIL	Project impacts on migratory birds would be minimized through the application of Forest Service requirements to conduct migratory bird surveys prior to engaging in ground disturbing activities. Activities would not proceed in areas with identified nests. Further, Project infrastructure would follow design criteria for bird species.

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			<p>would result primarily in localized, short-term, long-term, and permanent, minor impacts to migratory bird species.</p> <p>Cutting of trees for 2021 MMP activities and removal of snags would avoid avian tree nests, where feasible; and a Forest Service wildlife biologist would be notified of any occupied sensitive species nests or dens encountered. Although design features would reduce impacts, there would still be a decrease in habitat.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	12	<p>The SDEIS further admits that some effects to wildlife will be Irreversible and Irretrievable Commitments.</p> <p>Irreversible and Irretrievable Commitments for wildlife include habitats that require long time periods to reestablish, recovery of species such as Canada lynx or wolverine that occur in low numbers, or direct mortality. The SDEIS describes these commitments on pp. 4-459 to 4-460: 4.13.4 Irreversible and Irretrievable Commitments of Public Resources</p> <p>4.13.4.2 Action Alternatives</p> <p>Although most wildlife species are considered renewable, certain biological resources that would be affected by the 2021 MMP and Johnson Creek Route Alternative are renewable only over long-time spans, including mature vegetation, including snags, seedbanks, and topsoil. Loss of these resources would be considered irreversible. Reclamation of high-value habitats for wildlife species such as Canada lynx, wolverines and migratory bird species may require long periods of time (decades).</p> <p>Impacts to populations of threatened or endangered species, or species with low populations, such as Canada lynx or wolverine, would be considered irreversible, because recovery may take a long period of time or not occur at all. The direct mortality of wildlife also would be an irreversible impact.</p> <p>Irretrievable commitments include biological resources that are renewable over a short time, such as vegetation, wetlands, and streams. Although the loss of the resource itself is reversible, the temporal loss of the use of the resource is irretrievable. The 2021 MMP and Johnson Creek Route Alternative activities would cause a temporal loss of habitat for a number of species; both from direct removal of vegetation, and indirectly through avoidance due to human presence. Some species sensitive to human presence, such as Canada lynx and wolverine, may not return to the area for years after the mine is closed.</p> <p>Injury or mortality of individuals, such as burrow-dwelling species and slow-moving species that are unable to relocate when ground-disturbance activities begin, or through vehicle or transmission line collisions, would result in an irretrievable commitment of these resources. Although most animals displaced from the affected areas are expected to survive relocation, some displaced animals may not survive due to the associated dangers of migration and competition for resources; their loss also would be irretrievable.</p> <p>Any reduction in habitat functions also would be irretrievable. Once the habitat is reclaimed to its full function, the irretrievable loss would only be the temporal loss of habitat during the period before it was reclaimed. Some vegetation and soil habitats would be lost for future use by wildlife until reclamation could be successfully implemented. Wildlife displaced from the affected habitat may relocate throughout the region, changing the availability of game for hunters and predators. The change could increase or decrease hunting success, but any reduction in game availability would represent an irretrievable loss of opportunity.</p> <p>Under the Johnson Creek Route Alternative, there would not be improvements or construction of new segments for Burntlog Route, which would be a significant reduction of irretrievable commitments compared to the 2021 MMP. Relocation of the maintenance facility could affect different habitats</p>	WIL	No further response required. General in nature or position statement.

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Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	13	<p>The NEPA requires that an EIS describes the environmental baseline of the areas to be analyzed (40 C.F.R. § 1502.15), noting that an accurate baseline is “essential” to an informed analysis (40 C.F.R. § 1502.22). The current condition of wildlife habitat was not updated with the effects of recent fires, hence the analysis is inaccurate. Further, an agency cannot rely on post-approval surveys, studies, or mitigation as a substitute for suitable baseline information.</p> <p>The ICL 2020 comment letter repeatedly noted areas where wildlife data should be updated. The 2022 SDEIS made little effort to address these concerns. For example, the habitat layer for lynx was not updated to reflect changes from recent fires. As identified in our wolverine comments (below) the Forest Service did not utilize adequate baseline data. The Environmental Design Features (EDFs) for the project include EDFs that commit to future survey work, hence important wildlife data would not be obtained or available to inform the current analysis in the SDEIS.</p>	WIL	Where appropriate (e.g., change in protection status, significant update in available data or understanding of the species’ known range/habitat requirements), additional data has been added to the Final EIS. This includes the incorporation of additional data for the wolverine and monarch butterfly. However, for most species, a data cutoff date for the EIS was 2017/2018.
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	14	<p>The Wildlife Environmental Design Features (EDFs) are not consistent between the analyses in the wildlife specialist report and the SDEIS. The analysis is predicated on certain surveys to be conducted; but these surveys are not included in the EDFs.</p> <p>i. Wildlife EDFs are not consistent between the analyses in the wildlife specialist report and the SDEIS.</p> <p>The Wildlife Specialist Report (WSR) lists design features to address regulatory and Forest Plan requirements, see WSR, Table 2-2 Prominent Regulatory and Forest Plan Requirements for Wildlife and Wildlife Habitat. Some of the EDFs are worded differently and so might cancel one another (see below, specifically bolded text). Following each EDF listed below, we identify if the EDF was included in the SDEIS.</p> <p>Some measures would be designed during project implementation. As noted in our comment #8, this is a violation of the NEPA: an agency cannot rely on post-approval surveys, studies, or mitigation as a substitute for suitable baseline information.</p> <p>Impacts to known nests, denning sites, winter roosting sites, and hibernacula (bats) of TEPC and Sensitive wildlife species will be avoided during the nesting or denning period whenever possible. If impacts cannot be avoided, specific mitigation measures would be developed to minimize impacts, maintain key features of habitat, or to avoid disruption on a case-by-case basis through coordination with Forest Service wildlife biologists. BNF and PNF: TEST12, WIST03</p> <p>(not in SDEIS)</p> <p>The Forest Service wildlife biologist would be notified of any sightings of TEPC or Sensitive wildlife species, including occupied sensitive species nests or dens encountered during implementation. If necessary to maintain key features of nesting/denning habitat or to avoid disruption of nesting/denning activities, prescribed activities would be modified in accordance with the Forest Service wildlife biologist. Design Feature developed for compliance with BNF and PNF: WIST03, TEST12</p> <p>(same in SDEIS)</p> <p>Mitigate management actions within known winter roosting sites or hibernacula (bats) of Sensitive species if those actions would measurably reduce the survival of wintering or roosting populations. Sites, periods, and mitigation measures will be determined during project planning. FP Component BNF and PNF: WIST04</p> <p>(same in SDEIS)</p> <p>The proponent will coordinate with Forest biologists to consider TEPC habitat needs when designing and implementing facilities and management activities that may affect TEPC species and their habitats BNF and PNF: Developed in response to BTGU02, BTGU05, TEGU06, TEGU07, TEST09, TEST10, TEST13, BTST01, BTST02, WIST03</p> <p>(not in SDEIS)</p>	WIL	The requirements for wildlife surveys have been added to the Forest Service requirements described in Chapter 2 of the SDEIS.

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			<p>To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than two feet deep will be covered with tarp, plywood, or similar materials at the close of each working day to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow for animals to escape, if necessary. Before such holes or trenches are backfilled, they would be thoroughly inspected for trapped animals. If trapped wildlife are observed, escape ramps or structures will be installed immediately to allow escape. WIST06</p> <p>(not in SDEIS)</p> <p>To mitigate impacts to known nesting or denning sites of MIS or Sensitive species, land clearing activities in areas where complete vegetation removal is necessary greater than 0.5 acres would not occur, to the extent possible, until after the bird breeding season (April 1 through July 30th) for migratory and resident birds. This design feature does not apply to the mine site, road construction or maintenance, hazard tree felling, or the power line upgrades and construction. Design Feature developed for compliance with BNF and PNF: WIST03.</p> <p>(same in SDEIS)</p> <p>The last EDF listed above, is one of the most problematic, as it removes timing restrictions for most of the major activities and impacts associated with the project. Timing restrictions are one of the most commonly used methods (through EDFs or project design) to mitigate impacts to species during key time periods, such as nesting and calving. This not only limits the ability to meet the other EDFs listed above, but was found inconsistent with text in the SDEIS. One example is provided here (emphasis added):</p> <p>Boreal Owl</p> <p>Access Roads (p. 4-414)</p> <p>The 2021 MMP could disturb individual boreal owls in the wildlife analysis area through direct habitat loss (9 acres) due to tree clearing, road construction, and increased human activity along the access roads (Table 4.13-8). Direct take of adult birds due to these activities is possible, but unlikely, because most individuals are expected to avoid areas of activity. However, it is possible that nests, eggs, and young could be directly disturbed by vegetation removal, including cutting of trees if it occurs during the nesting season. Timing restrictions described for the mine site would be used to reduce impacts.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	15	<p>ii. The analysis is predicated on certain surveys to be conducted; but these surveys are not included in the EDFs.</p> <p>As an example, the SDEIS states that, for the preferred alternative, site checks and formal surveys for the northern Idaho ground squirrel would be conducted, as needed, prior to ground-disturbing activities in suitable habitat (SDEIS at p. 3-343 and 4-398). It also states that surveys would be required before construction activities occur at off-site facilities (SDEIS at p. 4-398). However, there is no survey-related item listed in either Table 2.4-12 (regulatory and Forest Plan requirements) or in Table 2.4-13 (proponent proposed design features). In addition, no mitigation measures were identified for any wildlife species or wildlife habitat (SDEIS at p. 4-459). Given that the SDEIS said such surveys would be conducted, surveys must either be formally recognized as a design feature or identified as mitigation.</p> <p>The northern Idaho ground squirrel (NIDGS hereafter), a federally listed species, is not known to occur currently in the project area. There are 2 historical, assumed extirpated, locations adjacent to the project area, referred to as “Van Wyck”, which likely was inundated by the creation of Cascade Reservoir, and “2 mile S Cascade” (Yensen 1991). NIDGS are dynamic on the landscape and have reappeared in or near places presumed to be extirpated (IDFG data). The NIDGS is a burrow-dwelling mammal that hibernates approximately 8 months of the year. Ground-disturbing and excavating activities have the potential to destroy burrows, remove vegetation needed for food, and cause direct mortality from large machinery. Excavating activities in occupied sites during the animal’s below-ground season could be</p>	WIL	Text added to Chapter 2 and Chapter 4 (Section 4.14) of the Final EIS clarifying that ground disturbing activities in NIDGS modeled/potential habitat would be surveyed prior to ground disturbing activities.

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			<p>more lethal. Squirrels that are hibernating would not have the option of moving away from activity, and if aroused from hibernation and forced to the surface, would have no food resources to survive.</p> <p>The most extensive modeled habitat in the project area is along the east side of Cascade Reservoir, including the transmission line corridor that will be upgraded from Lake Fork to Cascade (Figure 3.13-3). As described in the SDEIS, contractors conducting surveys for NIDGS in 2018 and 2019 also identified suitable habitat around, east of, and north of, the proposed Cascade switching station and near the Scott Valley Substation (SDEIS at p. 3-343).</p> <p>For reasons described above, surveys should occur prior to ground disturbing activities. The USFWS generally requires that all NIDGS surveys be conducted at the appropriate time of year, at the appropriate times of day, under suitable weather conditions, and by observers experienced in detecting NIDGS or their sign. Clearance-type surveys conducted for other projects generally have a life of 3 years. If the action has not occurred within that time frame, follow-up surveys are required. Surveys should specifically include the length of the transmission line ROW from Lake Fork to Cascade, which is proposed to be upgraded and support structures replaced.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	16	<p>The analysis of effects to Canada lynx is insufficient.</p> <p>The Canada lynx is a mid-sized forest carnivore that occurs across mountainous areas of northern North America. The lynx is highly adapted to hunting its primary prey, the snowshoe hare in deep, powdery snow. Canada lynx were listed as threatened under the Endangered Species Act (ESA) for the contiguous U.S. in March of 2000. The USFWS designated critical habitat for Canada lynx in 2006, revising the designation in 2009, and finalizing critical habitat designations and what constitutes the range in which lynx are protected by the ESA in 2014. None of the designated critical habitat is located in the SGP analysis area.</p> <p>The Forest Service modeled lynx habitat across 656,493 acres of the Boise and Payette National Forests, subdividing the area into seven Lynx Analysis Units (LAUs). No critical habitat has been designated on the forests, with project area lands described as secondary habitat. The SDEIS states that, “Although there is suitable habitat for the Canada lynx...there have been no verified sightings since 1978.” The SDEIS further states that, “wildfires account for the majority of unsuitable habitat in these LAUs.” We recommend the Forest Service provide a current (2022) map of fire activity in the SGP area that includes an overlay of suitable lynx habitat. This is necessary for the Forest Service to disclose the most likely areas for transient lynx movements to help avoid unintentional and indirect impacts to this threatened species.</p> <p>As some habitats are made temporarily unsuitable for lynx, the importance of remaining habitat increases. While a broad swath of marginal habitat for lynx may see lynx utilizing any portion of it as transitional habitat, if this habitat is reduced, lynx may restrict their travels to the remaining corridor of functional habitat, such as the ridgeline that would be impacted by construction and use of the Burntlog Route.</p> <p>As forest succession proceeds, some areas will become suitable foraging habitat for snowshoe hare and subsequently suitable denning habitat for lynx. Because of the long duration of mining activities, the Forest Service needs to describe how habitat within the LAUs is expected to change over time. Access roads threaten remaining suitable habitat for lynx in the SGP analysis area. The Mine site and associated infrastructure may displace transient Canada lynx as they move between occupied habitats. Based on the Forest Service’s assessment that wildfire accounts for the majority of unsuitable habitat in the LAUs, any remaining intact habitat becomes even more important to lynx for movement across the landscape. Access roads stand out as the primary threat to Canada lynx and the remaining intact suitable habitat in the analysis area.</p> <p>The Burntlog Route is a potential source of mortality for transient lynx, as well as fragmenting habitat and acting as a barrier to movement. Further, increased traffic on Warm Lake Road, Johnson Creek Road, and the Stibnite portion of the McCall-Stibnite Road would also discourage lynx from crossing or using these areas. The Forest Service needs to examine the cumulative impacts to Canada lynx by providing map overlays of habitat in the Stibnite and Burntlog LAUs with impact overlays to determine</p>	WIL	Where appropriate (e.g., change in protection status, significant update in available data or understanding of the species’ known range/habitat requirements), additional data has been added to the Final EIS. This includes the incorporation of additional data for the wolverine and monarch butterfly. However, for most species, including the Canada lynx, a data cutoff date for the EIS was 2017/2018. It has been determined that the analysis in the EIS is sufficient for the species; however, the Canada lynx is a federally threatened species and therefore, included in the Project’s BA as part of the Section 7 ESA consultation process with the USFWS. Additional details for this species are provided in the BA.

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			<p>the full impacts mine development and infrastructure will have on fragmenting transient and migration corridors. Adverse effects to these areas would reduce the chances of Canada Lynx reestablishment or migration/movement.</p> <p>Because Canada lynx depend on snowshoe hares as their primary prey, additional impacts to transient habitat will stem from winter snow plowing, particularly along the 38-mile Burntlog Route and from the proposed construction of a new 10.4-mile groomed OSV trail.</p> <p>Winter recreation is known to impact the effectiveness and success rate of Canada lynx hunting strategies, based on their ability to travel in deep snows with large paws. The proposed new OSV trail to offset recreation impacts will introduce additional sources of snow compaction, reducing hunting success rates and potentially allowing for other apex predators to take advantage of the fragmented and compacted snow conditions. It is due to the potential effects of winter recreation on lynx that the Lynx Conservation Strategy (LCAS) and Forest Plan direction (TEST34) state:</p> <p>Allow no net increase in groomed or designated over-the-snow routes or play areas, outside of baseline areas of consistent snow compaction, by LAU or in combination with immediately adjacent LAUs unless the Biological Assessment demonstrates the grooming or designation serves to consolidate use and improve lynx habitat. This does not apply within permitted ski area boundaries, to winter logging, and access to private inholdings. Permits, authorizations, or agreements could expand into baseline routes or areas of existing snow compaction, and grooming could expand to routes of existing snow compaction and routes that have been designated but not groomed in the past and still comply with this standard.</p> <p>The Forest Service needs to examine the full impacts of winter recreation to Canada lynx, comparing the existing conditions to those anticipated and potential conditions and how winter recreation and access potentially affects any transitory and migrating lynx. The FS also needs to address consistency with FP direction, or provide rationale for not meeting that direction (see SDEIS App. A).</p> <p>The SDEIS fails to provide any Environmental Design Features (EDFs) and/or mitigation measures that would reduce the impacts to suitable Canada lynx habitat, particularly the potential adverse effects associated with increased winter recreation and access and increased fragmentation associated with access roads and recreation opportunities. We suggest EDFs and mitigation measures for wolverine that would also benefit lynx (see #11 below). Due to the potential adverse impacts to the ESA-listed lynx, we expect that the Biological Assessment (unavailable to date), and the subsequent results of consultation with the USFWS, will result in additional mitigation measures or modifications to the project alternatives.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	17	<p>The analysis of effects to Wolverine is insufficient.</p> <p>The Forest Service used the most current ruling on the wolverine’s status under ESA (U.S. District Court May 2022) to appropriately analyze this species as “proposed threatened”. As such, the FS has direction to prioritize conservation and recovery of endangered, threatened, and proposed species and their habitats (Forest Service Manual 2670.31).</p> <p>Wolverines are not abundant. While it is generally accepted that wolverines have recolonized much of their historical range in the northwestern U.S., there is no definitive wolverine population estimate for the lower 48 states, or for Idaho specifically, as the SDEIS recognized. A frequently used value of ~300 wolverines for the lower 48 is based on a study that projected suitable habitat capacity for ~600 individuals, and an assumption by the authors that the population was approximately half of capacity at the time of their analysis (Inman et al. 2013). In contrast, a genetics-based study estimated an effective population size (the number of individuals contributing to the next generation) of 35 for the Rocky Mountains (Schwartz et al. 2009). A more accurate estimate likely is somewhere between these two values.</p> <p>The SDEIS also recognized that the wolverine naturally occurs at low densities on the landscape due to low reproductive rates and large home ranges that exclude other individuals of the same sex. What the</p>	WIL	No text revisions made as it was determined that a cutoff date for data for the EIS was 2017/2018 and that the analysis in the EIS is sufficient for the species; however, the wolverine is a federally proposed (as threatened) species and therefore included in the Project's BA as part of the consultation process with the USFWS. Additional details for this species are provided in the BA.

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			SDEIS failed to connect is that the spatial separation and low fecundity determined by life history, combined with specialized habitat requirements (persistent snow cover, cool temperatures), magnify this species' vulnerability to threats such as climate change, habitat fragmentation, backcountry winter recreation, and other factors. Thus, the SDEIS did not fully capture the importance of the project area for wolverine or the difference between alternatives using acres of habitat as the metric. We detail these shortcomings as follows.		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	18	<p>Summary of wolverine occurrence is not complete and its importance is not adequately portrayed.</p> <p>The SDEIS carried forward, from the DEIS, a summary of wolverine occurrence in and near the wolverine analysis area (SDEIS Table 3.13-3). From these data, the SDEIS stated that the winter recreation study (Heinemeyer et al. 2017) identified 10 individuals and five confirmed den sites within the Payette and northern Boise study areas, which encompassed portions of the SDEIS wolverine analysis area (SDEIS at 3-345). These data are (1) incomplete and (2) fail to integrate the relationship to other sightings documented in SDEIS Table 3.13-3. An additional 4 wolverines (2 female, 2 male) were identified during the life of the winter recreation study from the Payette and northern Boise study areas (Heinemeyer and Squires 2012, Heinemeyer and Squires 2014), for a total of 14 individuals from that study. In addition, the wolverines documented from Midas Gold's remote camera study, listed in Table 3.13-3 as Garcia and Associates 2013 and 2014, were identified as only male or female, when in fact genetics data and physical characteristics observable in remote camera photos of those individuals identified at least 2 different males and 1 female. One of the males was M4, known from the winter recreation study. Thus, at least 16 individual wolverines were identified in or adjacent to the SDEIS wolverine analysis area during 2010–2015. More importantly, 4 of these were documented within the Stibnite Gold Project area, including a resident reproductive female.</p> <p>In addition, the Forest Service did not take the opportunity in the interval between DEIS and SDEIS to update occurrences beyond 2014, despite subsequent data available to them within a reasonable time frame. The table of wolverine occurrences remains unchanged from DEIS to Wildlife Specialist Report to SDEIS. Most relevant of subsequently available data were results from the Western States Wolverine Conservation Project's occupancy survey in the winter of 2016–17, in which 200 remote camera stations were deployed in wolverine habitat across four states (Lukacs et al. 2020). Two camera stations were within the SDEIS wolverine analysis area, and another 5 were within the Payette and northern Boise studies areas of the winter recreation study. Notable results from this survey were (1) the continued documentation of M4 and F5 in their presumed territories north and south of Landmark within and adjacent to the SDEIS wolverine analysis area, and (2) detection of a female offspring of M4 (Evans Mack 2018).</p> <p>A complete and accurate synthesis of sightings is important to establish a baseline for analysis. Resident, breeding individuals maintain established territories and exhibit high fidelity to their territories (Aronsson and Persson 2018). Venturing outside a territory boundary incurs some level of risk due to neighboring territorial wolverines. The SDEIS recognized this:</p> <p>“This is important because territoriality constraints define how wolverines can react to changes in habitat quality or displacement from occupied habitat.” (SDEIS p. 3-345).</p> <p>Thus, the potential impacts of new roads and increased human-related activities should be put in the context of potential loss of quality habitat within individuals' home ranges. The Forest Service made no attempt to do so.</p>	WIL	Due to the species recent reinstatement as a federally proposed species, updated species occurrence information has been added to Section 3.14 and 4.14 in the Final EIS.
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	19	<p>Importance of wolverine habitat is not adequately portrayed and the potential for habitat fragmentation and barriers to movement is not adequately addressed.</p> <p>Figure 3.13-4 displays modeled wolverine habitat based on persistent spring snow (Copeland et al. 2010). We appreciate that the Forest Service used the updated 2009–2015 version of this model (Heinemeyer et al. 2017) for their analysis.</p>	WIL	No text revisions made as it was determined that a cutoff date for data for the EIS was 2017/2018 and that the analysis in the EIS is sufficient for the species; however, the wolverine is a federally proposed (as threatened) species and therefore included in the Project's BA as part of the consultation process with the USFWS. Additional details for this species are provided in the BA.

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			<p>At a fine scale, modeled wolverine habitat within the project area encompasses the higher-elevation terrain encircling river bottoms. From a broad-scale perspective, the project area supports high-quality wolverine habitat that is part of an interconnected landscape across south-central Idaho. South-central Idaho is near the southern extent of wolverine occurrence in the continental U.S. (Aubry et al. 2007, Idaho Department of Fish and Game 2014). Wolverines at the southern extent of their range, specifically the Rocky Mountains, exist as small and semi-isolated subpopulations within a larger metapopulation (Inman et al. 2013). Research has demonstrated the importance of habitat connectivity to demographic connectivity of wolverines, where connection among reproductive habitat blocks is needed to sustain wolverines within any single continuous block. In other words, wolverine persistence at this southern extent of its range in North America depends on regular dispersal of individuals among blocks of habitat (Aubry et al. 2007).</p> <p>The SDEIS makes no assessment of the importance of the project area to wolverine persistence in Idaho, yet habitat in the project area provides a stepping stone between important breeding concentrations of wolverine to the north (Salmon River Mountains north and east of McCall) and to the south (Sawtooth Mountains). Two long-distance wolverine dispersal events have been documented between the Sawtooth and White Cloud Mountains, respectively, to the Salmon River Mountains (Copeland 1994, Heinemeyer and Squires 2014). While the exact routes these individual wolverines traveled is unknown, the map of modeled suitable habitat across central Idaho suggests that habitat within and surrounding the Stibnite Gold project area could have provided a corridor for dispersal. In addition, a male wolverine resident in the project analysis area is linked genetically (parent-offspring relationship) to the McCall area, demonstrating demographic connectivity (Pilgrim and Schwartz 2013).</p> <p>Thus, although the SDEIS noted that the Stibnite Gold Project area supports resident wolverines that are part of a subpopulation occupying the McCall region, it did not emphasize the depth or significance of this connection and makes no assessment of the importance of habitat in the project area to wolverine persistence in Idaho.</p> <p>The SDEIS did not adequately address the potential impact of habitat fragmentation and potential barriers to movement that proposed roads and other activities could pose to forest carnivores in general and the wolverine in particular. Within the project area, a network of wolverine movement in winter has been documented with cameras, non-target trapping events, and DNA that connects Warm Lake Summit (Landmark Summit) to Johnson Creek Road to Burnt Log Road to Horse Heaven and beyond (Evans Mack and Hagen 2022; Heinemeyer et al. 2012, 2014; Pilgrim and Schwartz 2013, 2014). The proposed increase in infrastructure, new travel corridors in both summer and winter, increased road widths, higher traffic volumes, and increased frequency and duration of use could impede wolverine movement, resulting in a functional loss of habitat and potential reduction in genetic exchange.</p> <p>The Forest Service should analyze the two action alternatives in terms of how much wolverine habitat remains connected and contiguous rather than simply a count of acres affected. Specifically, the preferred alternative changes the character of the Burnt Log Road (FR #447) and the adjacent unroaded area, by creating the Burntlog Route, a corridor of year-round traffic and access that bisects wolverine habitat adjacent to the FCRNRW. In contrast, the Johnson Creek Road Alternative, by concentrating activity west of the Burntlog drainage, keeps more habitat intact and does not impinge on the refugia represented by the FCRNR Wilderness.</p> <p>The ICL et al. 2020 comment letter on the potential negative impact to wolverine from roads was a good synthesis of available literature. We incorporated their assessment in this and the following paragraphs. The proposed Burntlog Route is of particular concern for wolverines because it is adjacent to, and occasionally directly crosses, some of the highest-quality habitat in the analysis area based on the number of years with persistent snow cover (SDEIS Figure 3.13-4). The SDEIS attempts to downplay the impact the Burntlog Route would have on wolverines by citing its narrow ROW and moderate traffic levels (SDEIS p. 4-400) compared to research findings. For example, the Forest Service cites Luensmann (2008) to conclude that since wolverines have an aversion to crossing roads with ROWs over 328 feet, and the Burnt Log and Thunder Mountain roads of the Burntlog Route would be widened only to a 26-foot ROW, then the roads would not impede wolverine movement. The SDEIS implies that</p>		

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			<p>any road with a ROW <328 feet is a non-issue for wolverines. However, the reference states that wolverines avoid areas within 330 feet of the highway and actively prefer being at least 3,600 feet away from a road. It is improper for the SDEIS to cite this study and subsequently the narrow ROW of the Burntlog Route as justification for dismissing its potential impacts.</p> <p>In the same section of the SDEIS (P. 4-400), the Forest Service makes a similar error when citing a study of traffic levels and wolverine movement in northern Alberta to imply that the traffic levels on the Burntlog Route would not cause significant impacts to the species. The SDEIS states:</p> <p>Scrafford and Boyce (2014) found that wolverines in northern Alberta tended to avoid areas within 300 meters (i.e., approximately 1,000 feet) of roadways, but regularly crossed paved roads with more than 100 vpd. Traffic levels on the Burntlog Road would be highest during operations at about 65 vpd.</p> <p>The 2014 Scrafford and Boyce reference cited here is actually a progress report for a research project at the University of Alberta, not a peer-reviewed study. The same researchers did actually publish their findings in a peer-reviewed journal - Behavioral Ecology - in 2018 (Scrafford et al. (2018). In the discussion section of that study, the authors conclude the following:</p> <p>Traffic volume was an important predictor of wolverine speed but not avoidance. Wolverines increased speed most when near roads with greater relative traffic volume. This result suggests that wolverines are more likely to be flushed by vehicles from habitats along roads with higher-traffic volume. Unlike speed, wolverine avoidance of roads was constant regardless of traffic volume. (emphasis added) The authors of that study go on to further address the issue of traffic volume later in the discussion section:</p> <p>Although we found that wolverines were displaced by higher traffic roads, our models also indicated that roads scarcely used by vehicles were deleterious to wolverine habitat suitability. (emphasis added) This finding aligns with the prediction that wildlife species with low density and fecundity, such as wolverines, would be sensitive to roads even with low traffic volumes (Jacobson et al. 2016).</p> <p>Taking into consideration the most recent and peer-reviewed research on wolverines and traffic volume, it is improper for the Forest Service to conclude that the Burntlog Route will not have significant impacts to wolverine movement and habitat on the basis that the traffic volume is “only” expected to be 65 vpd. The best-available science indicates that all roads, regardless of their width or traffic levels, can and do significantly disrupt wolverine movement and behavior. We point out that the Forest Service did not adjust their narrative of road impacts to wolverine in the SDEIS, despite having these inconsistencies pointed out in the ICL et al. comment letter submitted in 2020 on the DEIS. The Forest Service must correct these errors, accurately disclose the impacts to wolverine posed by access roads and other infrastructure, and develop design features to avoid, minimize and mitigate impacts to wolverine.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	20	<p>iii. SDEIS does not adequately address the potential for increased non-target trapping.</p> <p>The SDEIS does not adequately address the potential for increased non-target trapping incidents that could result from the anticipated increase in year-round access. While there is no legal hunting or trapping season for wolverine in Idaho, the species’ propensity for scavenging, particularly in winter, increases risk of injury or mortality in traps set legally for other species. Trapping contributed to the widespread decline and range contraction of wolverine in the lower 48 states in the 1900s (Aubry et al. 2007, Idaho Department of Fish and Game 2014). IDFG collects information on non-target trapping incidents that are voluntarily reported to the Department, and Wildlife Services reports to the Forest Service incidents of non-target captures during their control actions on FS-managed land. These numbers were not disclosed in the SDEIS. Not all non-target trap incidents result in direct mortality. Nevertheless, wolverines usually sustain injuries to some degree while attempting to escape from a foothold trap or during human intervention to free them. Injuries include missing toes, bone fractures, and worn teeth (IDFG data, Heinemeyer unpublished data).</p> <p>The SDEIS acknowledged indirect effects from trapping for listed species in general (SDEIS p. 4-393) and for two forest carnivore species specifically: Canada lynx (SDEIS p.4-395) and fisher (SDEIS p. 4-416). In each case, the statement was similar to this for Canada lynx:</p>	WIL	No text revisions made as it has been determined that the analysis in the EIS is sufficient for these species; however, the Canada lynx and the wolverine are listed species and therefore included in the Project's BA as part of the consultation process with the USFWS. Additional details for these species are provided in the BA.

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			<p>“The increased human access and potential increase in hunting and trapping pressure for lynx and prey species in previously undisturbed areas also would be indirect effects.”</p> <p>Such statements are not an analysis and totally insufficient. Notably, there was no mention in the SDEIS of direct or indirect impacts to wolverine from trapping, despite the fact that the wolverine is relatively more numerous than lynx or fisher in the project area and that there are documented cases of wolverine incidentally trapped in the project area.</p> <p>While it may be difficult to demonstrate a population effect of non-target trapping on wolverine in Idaho, the loss of a breeding-aged female from a small, semi-isolated subpopulation could be an additional factor that suppresses population stability or growth (Mowat et al. 2020). The Forest Service should conduct a more thorough analysis of potential effects from non-target trapping.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	21	<p>iv. SDEIS does not adequately address the likely increase in winter travel and associated impacts.</p> <p>The SDEIS gave a vague and inconsistent description of how the Burntlog Route would be managed for public access. Thus, it is unclear how the FS could have completed a thorough analysis of impacts to any wildlife species, including wolverine, with regard to public access. What can be concluded is that, under either proposed alternative, there would be a change (increase) in winter travel for a 20+ year time frame, although the exact footprint cannot be reliably teased out of the SDEIS.</p> <p>As described below under #12, “ motorized vehicle routes in winter”, the proposed new groomed permanent snow machine trail along Cabin Creek, although described as a replacement for the current groomed route along Warm Lake Rd, would in fact be additive, because it would operate contemporaneously with proposed year-round travel on Warm Lake Road and proposed year-round travel on the Burntlog Route (which currently is groomed for only a portion of its length and gets limited winter recreation use). For wolverine, the concern is the increased opportunity for over-snow recreational activity that the project directly and indirectly would provide. The proposed Cabin Creek OSV groomed route would give new, direct access to over-snow recreation in wolverine habitat. The Burntlog Route, if selected, would provide access to additional areas by virtue of a newly plowed road in winter. The SDEIS made no attempt to quantify the public’s use of plowed roads for backcountry access in winter, and was unclear as to how far along the entire Burntlog Route access would be allowed. In addition, the Forest Service Recreation Specialist Report acknowledged the potential for unauthorized motorized use of the FCRNR wilderness area from the Burntlog Route (Stibnite Gold Project, Recreation Resource Specialist Report at p. 67).</p> <p>The SDEIS gives only a qualitative recognition that over-snow recreation can impact wolverine. Thus, the SDEIS does not adequately address the potential impact to wolverine from increased recreation resulting from increased access, particularly in winter. The potential effects of winter recreation on wolverine behavior and habitat use were the focus of a 6-year research project in central Idaho and the western Yellowstone region during 2010–2015 (Heinemeyer et al. 2017, 2019). Findings from that rigorous study were that wolverines avoided areas of both motorized and non-motorized winter recreation, and off-road recreation elicited a stronger response than road-based recreation. Female wolverines exhibited strong avoidance of off-road motorized recreation and experienced higher indirect habitat loss than male wolverines. For example, on average 14% of habitat within female home ranges was reduced in quality due to winter recreation, with at least 1 individual experiencing a 70% degradation of habitat (Heinemeyer et al. 2019).</p> <p>Similarly, wolverines used areas of recreation less as intensity of recreation increased. The research conclusions suggest indirect habitat loss, particularly to females, could be of concern in areas with higher recreation levels. It is also important to note that, at the conclusion of that study, the researchers noted that the number of wolverines in the western Salmon River Mountains, which encompassed the SGP area, appeared to have declined from when the project was initiated, with an incremental loss of resident animals (Heinemeyer et al. 2017).</p> <p>Results from Heinemeyer et al. (2019) were supported by a study in British Columbia that found that density of forestry roads was a strong negative predictor of wolverine distribution in winter, particularly</p>	WIL	No text revisions made as it has been determined that the analysis in the EIS is sufficient for the species; however, the wolverine is a federally proposed (as threatened) species and therefore included in the Project's BA as part of the consultation process with the USFWS. Additional details for this species are provided in the BA.

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			<p>of females (Kortello et al. 2019). They hypothesized that the negative relationship with roads was related to a high level of snow machine operation in their study area and reflected anthropogenic disturbance. Their model also found a positive relationship between wolverines and protected areas. The authors proposed a reduction in road density or mechanized use of roads in winter as a conservation tool for wolverine.</p> <p>The Idaho Department of Fish and Game also recognized the importance of managing winter recreation to benefit wolverine in their draft management plan for Canada lynx, wolverine, and fisher (Idaho Department of Fish and Game 2023). The plan establishes a wolverine-specific priority action of “providing technical assistance for land managers and recreation planners related to intensity and distribution of winter recreation, and considerations for wolverine habitat or connectivity.”</p> <p>The SDEIS states, in the context of roads and increased recreational activity in winter, that wolverines would “avoid the areas by moving away from the activities...” (SDEIS p. 4-401). This statement is overly simplistic and fails to consider wolverine social structure. As described above, resident wolverines, such as occur in the project area, maintain and defend territories. Both adult and subadult wolverines are killed by other wolverines in some instances (Aronsson and Persson 2018). As a consequence, venturing beyond one’s territory has associated risk. For a wolverine to “avoid” human-related activity, it would have to do so temporally or spatially, either of which could equate to a loss of access to resources within its territory and effectively reduce territory size.</p> <p>In summary, the SDEIS assessment of impacts of winter recreation on wolverine was insufficient.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	22	<p>v. Cumulative impacts were not considered</p> <p>ICL’s 2020 comments on cumulative impacts to wolverine pointed out that the SDEIS failed to consider the cumulative impacts of the SGP, increasing winter recreation, and climate change to wolverines. We concur with the assessment that the SGP is not happening in a vacuum; any adverse impacts that this project will have on wolverines and wolverine habitat will be amplified and exacerbated by the pressures the species is already facing with declining spring snow cover and expanding winter recreational use. Access points to groomed trails and winter backcountry routes around McCall have continued to attract increased levels of visitation in the past decade, to the point that an additional winter snow park (parking lot) was developed along Warren Wagon Road to augment the Francis Wallace lot to accommodate visitors. The wolverine–winter recreation study documented a steady increase of use during 2010–2015 using infrared trail use counters (Heinemeyer et al. 2019). The groomed route along Warm Lake Road also has seen increased use in winter, in both the number of traditional over-snow vehicles and in hybrid users (snow machines carrying backcountry skiers; DEM personal observation). It is only logical to expect that recreationists will welcome the chance to move from the congested McCall area to new territory made available by the proposed Cabin Creek OSV groomed trail and the new and existing roads proposed to be open year-round. This use will almost certainly expand beyond the road/access corridors and infringe on wolverine habitat across the larger accessible landscape. Climate projections identify a change in the type and timing of precipitation in Idaho, creating a potential scenario where recreationists and snow-dependent wildlife become concentrated in a shrinking snowpack. These threats were not addressed in the SDEIS.</p>	WIL	No text revisions made as it has been determined that the analysis in the EIS is sufficient for the species; however, the wolverine is a federally proposed (as threatened) species and therefore included in the Project's BA as part of the consultation process with the USFWS. Additional details for this species are provided in the BA.
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	23	<p>The SDEIS states the SGP would result in “localized and long-term impacts to the wolverine.” Many other impacts are recognized, despite the insufficiency of the analysis. It is difficult to see how the FS makes a “not likely to jeopardize determination” for wolverine. In addition, the numerous effects to wolverine do not meet FP direction (TEST04). Given the numerous detrimental effects, additional Environmental Design Features (EDFs) and/or mitigation measures are necessary.</p> <p>It is clear from the SDEIS, published scientific literature, and unpublished reports that the SGP area is important to wolverines, both in terms of the number of resident individuals and the amount of high-quality habitat. The SDEIS does not adequately address the impacts (direct, indirect, and cumulative) that the SGP would have on this vulnerable species, nor does it include sufficient mitigation measures to minimize these impacts. Rather, the SDEIS tends to downplay the potential impacts that the large-scale</p>	WIL	<p>The EIS provides the wolverine data and analysis to make the not likely to jeopardize determination.</p> <p>A mitigation measure has been added to the EIS restricting public use of the Burntlog Route. The Project decision would incorporate this public use restriction and continues to include requirements to decommission and reclaim portions of the Burntlog Route newly constructed as part of the Project.</p>

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			<p>and long-term disturbance would have. While wolverines may not be entirely extirpated from the larger area due from the expanded road network, it is likely that their utilization of this landscape and access to other areas will be diminished and connectivity with surrounding subpopulations will be negatively affected. We base this conclusion on the fact that there are less than 300 wolverines in the western U.S.; wolverines have been well-documented in the SGP area, which overlaps with two Tier 1 Wolverine Priority Conservation Areas; wolverines in the project area are linked demographically with breeding concentrations to the north and south; wolverines are already facing significant pressures from climate change, declining snow cover, winter recreation, and existing road networks; and the best-available science shows that wolverines are sensitive to roads, regardless of their width or traffic levels, and both motorized and nonmotorized winter recreation.</p> <p>The Forest Service determined that the 2021 MMP would result in “localized and long-term impacts to the wolverine, particularly the local population (part of larger Central Idaho sub-populations).” (SDEIS p. 4-399).</p> <p>“The Forest Service has preliminarily determined that the 2021 MMP may directly and indirectly impact wolverine individuals and habitat resulting in adverse impacts but would not jeopardize the continued existence of the species. Informal Section 7 ESA consultation is ongoing with the USFWS. The 2021 MMP would impact the most habitat overall, reduce habitat connectivity, and result in the highest level of displacement (particularly from breeding and winter range), based on direct and indirect impacts. Therefore, based on the impact analysis for the wolverine and its habitat, the 2021 MMP would result in localized and long-term impacts to the wolverine, particularly the local population (part of larger Central Idaho sub-populations...)”</p> <p>In addition, “Direct impacts on wolverines are likely along the access roads due to habitat loss by access road construction, year-round vehicle traffic causing disturbance and potential avoidance behavior, over-snow recreation in the winter and new construction and plowing of the Burntlog Route through potential suitable habitat.” (SDEIS p. 4-400). “Vehicle-wildlife collisions and habitat fragmentation would likely be the largest impact on the wolverine related to the 2021 MMP.” (SDEIS p. 4-401). Given these effects disclosed in the SDEIS, and the many impacts not sufficiently addressed, it is difficult to see how the FS makes a “not likely to jeopardize determination” for wolverine.</p> <p>The FS also provides no rationale for how these effects meet Forest Plan direction:</p> <p>Management actions that have adverse effects on Proposed or Candidate species or their habitats, shall not be allowed if the effects of those actions would contribute to listing of the species as Threatened or Endangered under the ESA (TEST04).</p> <p>The FS needs to address consistency with FP direction, or provide justification for not meeting that direction (see SDEIS App. A). Despite all of these acknowledged impacts, the only Environmental Design Feature (EDF) included in the SDEIS pertaining directly to wolverines is to monitor high elevation habitats “where practicable” (SDEIS p. 2-105):</p> <p>As written, it is unclear what, if anything, would actually occur for monitoring, so we can not evaluate whether the data would be sufficient to assess impacts from project-related activities. A concerted monitoring effort will be needed for the Forest Service and Perpetua to determine the extent to which the SGP is adversely impacting wolverine.</p> <p>We recommend the following additional EDFs or mitigation measures for wolverine:</p> <ol style="list-style-type: none"> 1. If the Burntlog Route is approved and built, only mine traffic should be allowed for its entirety in winter. In summer, public use should occur only on the existing Burnt Log Road (FR #447). 2. No new OSV route in Cabin Creek. Any changes to OSV grooming and routes must be informed by an analysis consistent with the Travel Management Rule, Subpart C. This analysis must fully consider the recent research on the effects of winter recreation and travel on wolverine. 3. Remove roadkill as encountered. 		

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			<p>4. Fund development of a model of winter recreation, such as was completed in Colorado (Olson et al. 2017), based on terrain selection of motorized and non motorized winter recreationists. This will enable predictions of areas of potential conflict or disturbance to wildlife. For expediency and economy, coordinate and/or contract with Round River Conservation Studies and partners to use their extensive recreation dataset collected during the wolverine–winter recreation study (Heinemeyer et al. 2019).</p> <p>5. Fund development of a fine-scale denning habitat model (e.g., talus layer) for wolverine for the two Tier 1 Wolverine Priority Conservation Areas that include the project area. Framework and methods were established during the wolverine–winter recreation study (Heinemeyer et al. 2019).</p> <p>6. Conduct annual recreation monitoring of winter recreation for the first 5 years, beginning with the construction phase, then on adjusted schedule thereafter. A survey grid and methods were developed for the wolverine–winter recreation study that uses fixed wing aerial surveys and infra-red trail counters (Heinemeyer et al. 2017, Heinemeyer et al. 2019b). A baseline of recreation intensity and footprint was established for the SGP area from surveys in 2018 (Heinemeyer et al. 2019b), hence data analysis should be coordinated and/or contracted with Round River Conservation Studies.</p> <p>7. Using an independent contractor, monitor wolverine activity with remote cameras in winter on an established schedule (every 2 or 3 years) using a method that incorporates collecting genetic material (hair snagging with gun brushes) to identify and track individuals. The Western States wolverine conservation projects’ camera survey provides a blueprint (Lukacs et al. 2020).</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	24	<p>New motorized vehicle routes and facilities in winter will adversely affect many wildlife species, particularly the wolverine. Significantly, the Forest Service failed to adhere to the requirements of Subpart C of Travel Management Rule when proposing to designate new Over-Snow Vehicle (OSV) routes for the SGP.</p> <p>This issue is discussed in depth in the ICL et al. group comment letter on the 2022 SDEIS at P. New motorized vehicle routes, 1. Over Snow Vehicle and other public access issues.</p> <p>Here we address the most relevant aspects to wildlife. Subpart C of Travel Management Rule (TMR), also known as the OSV Rule, provides a framework for winter travel planning on National Forests. Forests, with adequate snowfall, are required to analyze, designate, and display on an “over-snow vehicle use map” a system of routes and areas where OSV use is permitted based on resource protection needs and other recreational uses. The SGP proposes changes and additions in winter travel, and OSV routes, that must be adequately addressed in the SDEIS to comply with the TMR and minimize effects to wildlife. Planning under the TMR, requires compliance with the “minimization criteria” outlined in Executive Orders 11644 and 11989 (issued in 1972, and 1977, respectively.) Two criteria are particularly important to wildlife: 1) minimize damage to soil, watershed, vegetation, or other resources of the public lands, and 2) minimize harassment of wildlife or significant disruption of wildlife habitats.”</p> <p>Neither of the two OSV routes proposed in the SDEIS are currently designated OSV routes. The 15 miles of new road proposed to link the existing Burnt Log Road with the SGP mine site would also be a new travelway, open year round. As noted in section P, in order to designate these routes, the Forest Service must follow the requirements of the TMR and comply with the minimization criteria. Of particular concern is the impact that each route will have on wildlife, specifically wolverine, which are known to occur in the area and are currently proposed for listing under the Endangered Species Act.</p> <p>While the SDEIS (4.13) raises the possibility that new routes in winter will impact wildlife, these effects are not addressed in any detail. The proposed Cabin Creek OSV route would bring additional use and impacts into an area that, while open to OSV use, has no groomed trail. It is important that the Forest Service fully analyze potential impacts to wildlife from the new OSV route, since grooming would increase use into an area that currently does not see much, if any, recreational use in winter due to lack of access.</p>	WIL	The reroute of Stibnite Road and the designation of a temporary OSV route to replace an existing OSV route are actions that fall under the Travel Management Rule (36 CFR 212), Subparts B and C respectively (FSM7715.03(5)). These actions require consideration under the Travel Management Rule Minimization Criteria (36 CFR 212.55(b)). The Travel Management Rule analysis was added to Section 4.19 of the Final EIS.

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			<p>Perhaps more important, because the Payette and Boise National Forests have not conducted winter travel management planning in accordance with Subpart C of the Travel Management Rule, it cannot assume that its existing system of OSV routes and areas comply with this Rule.</p> <p>The Payette National Forest has long recognized the need to complete winter travel planning. In fact, previous environmental analyses of winter travel were put on hold to allow studies on the effects of winter recreation on wolverines. This became a multi-year, multi-forest study (including the Boise and Sawtooth national forests, among others) that is certainly one of the most extensive and rigorous to date. The results of this study showed that male and female wolverines avoided motorized and non motorized recreation to some degree, with females showing a stronger response. Both male and female wolverines responded more to dispersed recreation, motorized and non motorized, than linear travel. Increasing avoidance of areas as the amount of off-road winter recreation increased resulted in indirect habitat loss or degradation of moderate- or high quality habitats.</p> <p>Following this study, the IDFG continued to collect data on wolverines in the project area with remote cameras. A multi-state survey in the winter of 2016–17 encompassed the project area, and a follow-up, more intensive camera survey occurred during the winter of 2020–21. Wolverines were detected in the project area during both efforts (see above #11.i). More information on the potential effects to wolverine and lynx is provided above.</p> <p>It is essential that the Forest Service makes use of this research and best available science, (conducted on and supported by the Payette and Boise national forests) to inform decisions regarding winter travel in the SGP area. Ideally, the Forest Service would meet the intent of the Travel Management Rule and conduct a comprehensive travel plan analysis across both national forests, before making any project specific decisions on winter travel. But certainly, any project-specific decisions must be informed by the recent research and best available science.</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	25	<p>Road construction and use are highly likely to affect wildlife species. The description of public road access is inconsistent in the SDEIS. In addition, the Forest Service appears to ignore the requirements of the Travel Management Rule when designating new motorized routes for the SGP. Hence, the analysis of effects to wildlife is also inconsistent and, therefore, flawed.</p> <p>Under either action alternative, traffic will increase dramatically, with direct and indirect effects to wildlife.</p> <p>Under the 2021 MMP and the Johnson Creek Route Alternative, operational AADT would be 50 vehicles (33 heavy vehicles and 17 light vehicles), resulting in approximately four mine-related vehicles per hour traveling outside the SGP. (ES-23) The SDEIS inconsistently describes public access on the Burntlog Route throughout the document. In some sections it is asserted that “After construction is completed, public use would be allowed on Burntlog Route when other public access roads are blocked by mine operations,” while in other places it is assumed that the public may have unlimited access. Representatives for Stantec, the company that prepared the SDEIS, gave two conflicting answers when asked; one said the analysis was supposed to assume the “worst case scenario” of unlimited public access, while the other individual said they assumed the route would only be used by the public when access was closed elsewhere. See 2.4.4.3 Access Roads, Figure 2.4-5 (p. 2-18) and descriptions in Ch. 4 under Access and Transportation (p. 4-486, 4-487, 4-490); Recreation (p. 4-533, 4-534). The portion of the route to be closed to public use in winter was also unclear. See Ch. 4 Recreation which initially says the road from Warm Lake to Landmark would be closed to the public in winter, and then states the opposite (p. 4-435, 4-454, 4-459).</p> <p>Since this route will have a major impact on ESA-listed species, it is essential that, if approved, the newly constructed portion of the route is permitted only as a temporary road used solely for mining purposes, with no public access and should not be part of the minimum road system as defined under the FS’s Travel Management Rule as regulated by 36 CFR 212, 251, 261, and 295 – Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule.</p>	WIL	A mitigation measure has been added to the EIS restricting public use of the Burntlog Route. The Project decision would incorporate this public use restriction and continues to include requirements to decommission and reclaim portions of the Burntlog Route newly constructed as part of the Project.

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			<p>If the Burntlog Route is selected and approved, it is also essential that nothing changes the route status to interfere with the commitment in the SDEIS to decommission the constructed Burntlog Route after mining is completed in about 20 years (p. 2-89): 2.4.7.9 Burntlog Route</p> <p>Once all final mine closure/reclamation work has been completed, Perpetua would reduce the 21-foot-wide travel way of 19.8 miles of Burntlog Road (FR 447), 1.3 miles of Meadow Creek Lookout Road (FR 51290), and 2 miles along Thunder Mountain Road (FR 375) of the Burntlog Route to their approximate pre-mining width....The approximately 15 miles of Burntlog Route that was newly constructed for the SGP, connecting Burnt Log Road (FR 447) to Meadow Creek Lookout Road (FR 51290) and Thunder Mountain Road (FR 50375) would be fully decommissioned.</p> <p>In the recent past, the Payette National Forest transferred jurisdiction of Forest Roads to Valley County citing direction in the Forest Roads and Trail Act (FRTA):</p> <p>Forest Roads and Trail Act Easements: Section 2 of the FRTA authorizes the road and trail systems for National Forests, the granting of easements across NFS lands, the construction of maximum economy roads, and the imposing of requirements on road users for maintaining and reconstructing roads (16 USC 532 et seq.). FSM 7703.3 states that, "Wherever possible, transfer jurisdiction over any NFS road and associated Forest transportation facilities (FSM 7705) to the appropriate public road authority when the road meets any of the following criteria: a) More than half the traffic on the road is not related to administration and use of NFS lands; b) The road is necessary for mail, school, or other essential local governmental purposes; c) The road serves yearlong residents within or adjacent to NFS lands" (Forest Service 2016d).</p> <p>Information provided in the SDEIS Access and Transportation section (p. 4-490) does not fully address the concerns expressed above - that the Burntlog Route be permitted only as a temporary road used solely for mining purpose with no public access (except "when other public road access is blocked by mine operations") and that the route be decommissioned after mining and reclamation is completed in about 20 years. The SDEIS states:</p> <p>The newly constructed Burntlog Route connecting to Thunder Mountain Road would be a temporary road necessary for mining purposes and would meet 36 CFR 228A requirements for environmental protection to assume that mine operations are conducted to minimize adverse environmental impacts to the extent feasible for roads. Accordingly, the road would not be designated for public motor vehicle use under 36 CFR 212.50 on the Motor Vehicle Use Map. Therefore, for public motor vehicle use to be allowed on the road when other public access roads are blocked by mine operations, one of the other exceptions from the prohibitions on motor vehicle use on NFS land at 36 CFR 261.13 must be met. The approved plan of operations would meet the exception for written Forest Service authorization under 36 CFR 261.13(h) by including a provision in the mine plan for public use of the road when other public road access is blocked by mine operations. (p. 4-490)</p>		
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	26	<p>14. Utilities and right-of-ways contribute to the effects on wildlife. Large portions of the proposed transmission corridors associated with the SGP are located in lands with few roads. The SDEIS does not adequately analyze the effects of these facilities on wildlife habitat; including habitat fragmentation and migration corridors.</p> <p>While the proposed alternatives do not appear to designate ROWs as trails for public motorized use, unauthorized recreational motorized vehicle use may increase on the ROWs used for the project. We are concerned that this use could increase in summer and (with OSV) in winter, resulting in additional impacts to wildlife beyond those addressed in the analysis. The SDEIS needs to incorporate a more thorough analysis of potential incidental impacts to wildlife, particularly increased habitat fragmentation and disturbance of migration corridors from both authorized and unauthorized use of ROWs.</p>	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in Section 4.13.

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Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	27	<p>Avalanche hazard mitigation activities will negatively affect wildlife, but the SDEIS failed to adequately analyze these effects.</p> <p>As discussed in the ICL et al. Comment Letter on the 2022 SDEIS, section N. Avalanche and Avalanche Mitigation, the analysis fails to address effects to wildlife resulting from avalanche mitigation measures and control on the proposed access roads and the Cabin Creek OSV route. This is of major concern to wildlife because, as noted in section N, the SDEIS underestimates the frequency and extent of the control work. The SDEIS, and the associated report (DAC 2021), provide some information used to evaluate avalanche control noise impacts to humans, but not to wildlife. The SDEIS also fails to acknowledge impacts to wildlife from any associated helicopter activity. Alternatively, automatic exploders might be installed in some problematic areas (i.e., high cirques and ridges), but impacts from the noise of the explosives would still occur.</p> <p>Much of the control work is expected to occur along the Burntlog Route, but control work would likely be necessary along the Cabin Creek OSV Route, if approved. As stated elsewhere in our letter, the Cabin Creek Route should not be considered a OSV recreation mitigation measure, as it only leads to the need for mitigation for wildlife, particularly wolverine. It will increase OSV use into an area with little use in the past, and also with a high avalanche hazard. This proposed route should be dropped to ensure human safety and wildlife habitat protection.</p> <p>Many of our concerns about the insufficient analysis for wildlife are included in section N. As noted, wolverine and mountain goats are two important species that could be impacted.</p> <p>Increased activities in wolverine habitat, particularly occupied habitat, such as occurs in the analysis area, provide more rationale for ESA listing of the wolverine (currently proposed) as Threatened. Almost the entire length of the Burntlog Route occurs in modeled wolverine habitat, and much of the priority denning habitat occurs near to the route. The Johnson Creek Road impacts 90 acres of priority denning habitat, but this habitat is more isolated and removed from known wolverine locations.</p> <p>Helicopter flights and control work are also expected to occur in areas near to occupied mountain goat habitat. These activities have been documented to cause negative impacts to mountain goats, (see also our comments on mountain goats above.) The area also provides suitable habitat for the threatened lynx. Although lynx have not been documented in the analysis area, potential effects to the species must be addressed, including compliance with FP standards and guidelines for the species (see discussion in this section above).</p> <p>Also, the SDEIS is unclear about whether under the 2021 MMP, the Stibnite Road would be maintained in winter, thereby adding to the effects identified for the Burntlog Route. If that is the case, then the total number of charges per year could increase 50% (an estimated 146 charges on the entire Burntlog Route combined with 71 charges on Stibnite Road) based on data in DAC 2021 (which is likely an underestimate).</p> <p>If either action alternative is selected, and before any control activities commence, Perpetua should work with the FS and IDFG to conduct mountain goat surveys in the area to be affected by control activities (including noise). Additional wolverine surveys are recommended elsewhere in section U of the ICL et al. 2022 SDEIS comment letter. The proposed OSV route on Cabin Creek should be dropped. Ultimately, the best option for wildlife protection and human safety would be to restrict mine access to snow-free months.</p>	WIL	<p>No text revisions made. Avalanche control would occur in areas that are already in locations where avalanches occur naturally and the Project is not creating new avalanche areas.</p> <p>The reroute of Stibnite Road and the designation of a temporary OSV route to replace an existing OSV route are actions that fall under the Travel Management Rule (36 CFR 212), Subparts B and C respectively (FSM7715.03(5)). These actions require consideration under the Travel Management Rule Minimization Criteria (36 CFR 212.55(b)). The Travel Management Rule analysis was added to Section 4.19 of the Final EIS. The EIS contains the data and analysis to make the not likely to jeopardize determination.</p> <p>A mitigation measure has been added to the EIS restricting public use of the Burntlog Route. The Project decision would incorporate this public use restriction and continues to include requirements to decommission and reclaim portions of the Burntlog Route newly constructed as part of the Project.</p> <p>Due to nearby occupied habitat, a statement regarding the potential use in the Project vicinity has been added to Section 3.14. However, no impacts are anticipated to occur to this species as a result of the Project.</p>
Ana Egnew, Diane Mack (Wildlife Biologists, retired)	19217	28	<p>16. The effects to various wildlife species from climate change are addressed perfunctorily (see 3.4.4.11 Wildlife and Wildlife Habitat). The climate change analysis and the analysis of cumulative effects for wildlife fail to account for the cumulative impacts of habitat loss associated with the mine with habitat loss from climate change to snow-dependent species such as the lynx and wolverine.</p> <p>“The region is currently facing unprecedented rates of change in climatic conditions that may outpace the natural adaptive capacities of several native species (Halofsky et al. 2018). Increased climate variability and frequency of extreme conditions will favor species adapted to frequent disturbance,</p>	WIL	<p>No text revisions made as it has been determined that the level of analysis in the EIS related to climate change (primarily discussed in Sections 3.4, 4.4, and 5.4) is sufficient.</p>

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			<p>potentially increasing the abundance of invasive species. Impacts to terrestrial species as a result of climate change are already being experienced through habitat loss and fragmentation, physiological sensitivities, alterations in the timing of species life cycles (e.g., seasonal changes impacting migration, hibernation, and reproductive success), and indirect effects (e.g., disruption of species interaction across communities). Most species are expected to exhibit sensitivity to changes in the climate, especially those restricted to high elevations or surface water habitats. Of the special status wildlife species occurring in the analysis area, the flammulated owl (<i>Otus flammeolus</i>), wolverine (<i>Gulo gulo</i>), and Columbian spotted frog (<i>Rana luteiventris</i>) are expected to be the most vulnerable terrestrial populations in the region (Halofsky et al. 2018). Other special status species expected to be impacted include the Canada lynx (<i>Lynx canadensis</i>) and Rocky Mountain bighorn sheep (<i>Ovis canadensis</i>) (Halofsky et al. 2018).”</p> <p>Climate Change Impacts to Analysis Area Resources (p. 4-64) Wildlife and Wildlife Habitat</p> <p>Climate change impacts to wildlife and wildlife habitat in the SGP area would include habitat loss and fragmentation, physiological sensitivities, and alterations in the timing of seasonal life cycles. Habitat loss and fragmentation may occur in the region and analysis area due to the increased potential for wildfire that is anticipated from changing climatic conditions (Halofsky et al. 2018). Construction and operation of the SGP, access roads, utilities, and off-site facilities would additionally impact wildlife from habitat loss and fragmentation. Reclamation activities are intended to achieve post-mining land use for wildlife habitat as reasonably possible, which would help to reclaim habitat connectivity. However, some displacement and habitat fragmentation would be a long-term effect. (p. 4-70)</p> <p>The climate change analysis in the SDEIS and climate specialist report fail to consider long-term impacts of climate change. Known effects of climate change include rising temperatures, decreased snowpack, and increased rain-associated precipitation. These factors could affect many species including wolverine, lynx, and whitebark pine. WBP is currently a candidate species for ESA consideration, and is considered critical to the survival of numerous wildlife species, including Clark’s Nutcrackers, a variety of woodpecker species, and snowshoe hare, to name a few. Only one paragraph was dedicated to wildlife in the entire climate specialist report (see 6.2.9).</p>		
Karen Balch (North Fork Veterinary Service)	19228	7	I am also disturbed that the Forest Service allowed the British Columbia-based Midas Gold Corp. authority to author the 2019 Biological Assessment (BA) report referenced above. As U.S. Rep. Betty McCollum, Chair of the House Appropriations Subcommittee stated: “Allowing a mining company to author its own BA on its project’s potential impacts to ESA-listed species creates potential conflicts of interest and undermines public confidence in the permitting process.” In short, as the beneficiaries of the proposed mining were allowed to write the official Biological Assessment there is reason to wonder if the report was written to “whitewash” or “obfuscate” even more damning conclusions that potentially engender distrust of Midas Gold and possible efforts to strong-arm the federal agency that should be overseeing and scrutinizing the mining proposal, potentially casting doubts on the integrity and transparency of the Forest Service.	WIL	No text revisions made. The BA is currently being developed by the Forest Service and will not be written by Perpetua (formerly Midas Gold).
Karen Balch (North Fork Veterinary Service)	19228	13	I am extremely concerned about wolverines in particular. Some scientists suggest that wolverines should be officially listed as “endangered” under the ESA: the Payette NF and Boise NF have a seemingly permanent but small resident population of wolverines. Increased human activities around crucial winter denning areas could directly impact this animal whose literal existence is already of concern to scientists. As reported by Keith Ridler of the Associated Press in an article: “Tribe doesn’t want this Idaho mine to reopen but U.S. environmental review moves ahead” published August 15, 2020, “...The project includes about 500 acres of patented mining claims and 2,900 unpatented claims on the Payette National Forest and Boise National Forest.” How are resident wolverines being protected within Stibnite Gold’s mining area?	WIL	No text revisions made as it has been determined that the analysis in the EIS is sufficient for the species; however, the wolverine is a federally proposed (as threatened) species and therefore included in the BA as part of the consultation process with the USFWS. Additional details for this species are provided in the BA.
Olin Balch (North Fork Veterinary Service)	19234	4	I am also disturbed that the Forest Service allowed the British Columbia-based Midas Gold authority to author the 2019 Biological Assessment (BA) report referenced above. As US Rep. Betty McCollum, Chair of the House Appropriations Subcommittee stated: “Allowing a mining company to author its own BA on its project’s potential impacts to ESA-listed species creates potential conflicts of interest and undermines public confidence in the permitting process.” In short, as the beneficiaries of the proposed	WIL	No text revisions made. The BA was developed and written by the Forest Service and not written by Perpetua (formerly Midas Gold).

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			mining were allowed to write the official Biological Assessment there is reason to wonder if the report was written to “whitewash” or obscure even more damning conclusions.		
Kira Tenney	19247	7	2. Lack of addressing Migratory Bird and Wildlife impacts Regarding Wildlife, 1) The project directly and indirectly impacts hundreds of thousands of acres of wolverine habitat as a result of mine activities (Chapter 4.13.2.1.3.2). Wolverines are specially designated, and therefore the DEIS and proposed alternatives need to account for the special designation, and they do not. Please provide this in a supplemental DEIS for public comment. Similarly, the Direct impacts on gray wolves would include and direct/indirect impact to individuals and habitat loss (Chapter 4.13.2.2.4.1).	WIL	No text revisions made. The wolverine (federally proposed as threatened) is discussed in detail in Sections 3.13.4.2 and 4.13.2. The gray wolf is discussed in Sections 3.13.4.2 and 4.13.2.
Kira Tenney	19247	8	The Migratory Bird Treaty Act prohibits actions that kill birds on the list of migratory bird species. Executive Order 13186 directs the US Forest Service to protect migrating birds and promote their conservation. In the DEIS, Opinion M-37050 (3.13.2.4) is noted stating that “incidental” takes of migratory birds are not prohibited. In August 2020 the above opinion was rejected by the court. The court stated that it is unlawful to kill birds “by any means whatever or in any manner”, including incidental takes. With this in mind, project actions that kill migratory birds must be readdressed to comply with the court ruling. These include emissions, removal of nest trees, etc. In addition, I was unable to locate a discussion in the DEIS or SDEIS of the effects of arsenic, mercury, etc on water birds that may land on the pit lakes, potentially causing mortality.	WIL	Project impacts on migratory birds would be minimized through the application of Forest Service requirements to conduct migratory bird surveys prior to engaging in ground disturbing activities. Activities would not proceed in areas with identified nests. Further, Project infrastructure would follow design criteria for bird species. Water chemistry conditions are not predicted to be toxic to wildlife.
Joel Drake	19251	8	The lake's abundance of wildlife makes it highly popular for; camping, fishing, and hunting. Large mammals present in the area include moose, mule deer, black bear, and elk. Large birds present in the area include bald eagles and osprey. The lake contains rainbow, brook, lake, and bull trout as well as mountain whitefish and Kokanee salmon. [source: https://en.wikipedia.org/wiki/Warm_Lake] All these human activities and animal species are dependent on preservation and protection of current water quality of the lake and its tributary, Warm Lake Creek (which provides 90% of total inflow to the lake).	WIL	No further response required. General in nature or position statement.
Gayle Dixon	19321	1	I am writing to comment on the Stibnite Gold Project SDEIS. I am very concerned that the Project violates the Clean Water Act, the Endangered Species Act, and the Payette and Boise National Forest Plans. In addition, it violates the Migratory Bird Treaty Act (MBTA), which I will address.	WIL	Comment noted. Statement of position.
Gayle Dixon	19321	2	The MBTA prohibits the killing of migratory birds and also protects their nests and eggs. The SDEIS states 1) that the "direct take of adult birds due to construction or operational activities is possible, but unlikely" but says nests, eggs and young could be directly affected (4-448), 2) that there will be "localized, short-term, long-term, and permanent, minor impacts to migratory bird species" and 3) that there will be direct impacts to migratory birds from collisions, removal of nest trees, and loss of habitat. Other components of the project that can affect birds are dust, noise, light pollution, and toxic metals in the food chain. The SDEIS states unequivocally that the Stibnite Gold Project violates the MBTA.	WIL	Project impacts on migratory birds would be minimized through the application of Forest Service requirements to conduct migratory bird surveys prior to engaging in ground disturbing activities. Activities would not proceed in areas with identified nests. Further, Project infrastructure would follow design criteria for bird species.
Gayle Dixon	19321	3	During mining operations there will be toxic surface water at the site. I cannot find in the SDEIS a discussion of the potential effects to water fowl that may land in the ponds? Can you tell me where this is discussed? At a time when bird populations are plummeting worldwide, this project does nothing but compound the problems causing their decline. How will the Perpetua Resources be held accountable for killing migratory birds? How can you allow a project that violates numerous federal environmental laws? I request that you choose the No Action Alternative.	WIL	Project impacts on migratory birds would be minimized through the application and implementation of Forest Service requirements and EDFs identified in Tables 2.4-12 and 2.4-13. In addition, migratory bird surveys would be conducted prior to engaging in ground disturbing activities. Activities would not proceed in areas with identified nests. Further, Project infrastructure would follow design criteria for bird species. Water chemistry conditions are not predicted to be toxic to wildlife.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	13	Comments on Section 4.13 and the Wildlife and Wildlife Habitat Specialist Report are provided and are varied. Several requests for clarification are related to the impact analysis and seek clear definition on the differentiation between impacts to habitat and species. Reviewers also note that clear definition of habitat “types” would be helpful to the reader to assess more accurately what is actually being impacted. A specific example of this ambiguity is illustrated by discussions on the North Idaho Ground Squirrel (NIDGS). Based on 2018 and 2019 Perpetua Resources NIDGS field surveys, no NIDGS were observed and much of the modeled habitat designated as potentially suitable was not considered suitable or only	WIL	Based on current research (Conway et al., in prep), it appears that NIDGS have summer activity areas/sites and hibernacula areas/sites. Hibernacula sites are generally within 100 meters of the known summer activity area, but some individuals may hibernate as far as 400 meters from summer activity sites. Because it is almost impossible to document NIDGS hibernacula beyond 100 meters from the summer activity areas, most current survey methods focus on the 100 meters and is considered adequate.

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			<p>partially suitable. The terms “suitable habitat” and “modeled habitat” are interchangeably used in some places, which is inappropriate application of the terminology; modeled habitat does not coincide with field verified suitable habitat in many cases. In addition, the SDEIS analysis relies on modeled habitat instead of the actual 2018 and 2019 field survey data. This approach does not adequately provide the correct context/details for the results in Table 7-3 from the Wildlife Specialist Report. Therefore, the information provided in Table 7-3 in the wildlife specialist report (excerpt below) can be misleading for what should be considered direct or indirect impacts on NIDGS.</p> <p>To provide clarity to the reader, any discussion of impacts should be prefaced with the fact that there are no identified NIDGS in the analysis area. It should also clearly define (classify) and quantify the habitat included in Table 7-3 and within Section 4.13 of the SDEIS. In addition, whereas the SDEIS includes a 1-mile analysis buffer around the modeled habitat area that was field surveyed, it should also recognize that the actual field surveys incorporated a 100-meter buffer around proposed Project disturbance; a value which was based on input from the USFS and United States Fish and Wildlife Service while the field survey methodology was being developed. Therefore, any reporting of indirectly impacted acreage should include a footnote or some other description acknowledging that this analysis method was changed, and that in much of the area, it is unknown whether suitable habitat exists between the 100-meter surveyed buffer and the 1-mile analysis area buffer. In addition, it is unclear in Section 3.13, Figure 3.13-3 what the justification or reasoning is for such a large buffer. Finally, the No Action Alternative, as described in Section 4.13.2.1, includes an assumption of no NIDGS within an area of modeled habitat within the vicinity of the transmission line and associated access roads within the Operations Boundary, and thus concludes no impacts to NIDGS under the No Action Alternative. Within this same area, the activities for the No Action Alternative are very similar to those described in the 2021 MMP (i.e., operations and maintenance vs. reconstruction of the transmission line).</p> <p>Therefore, if the No Action Alternative assumes no impacts due to lack of presence, then the same assumption should be applied to the action alternatives, and there should be no assumed direct or indirect impacts. If the author is suggesting direct and indirect impacts to modeled habitat from both the Johnson Creek and 2021 MMP, then those impacts would also affect the No Action alternative because of the same “anthropogenic influences” cited.</p>		Text has been added to describe the analysis area buffers for TEPC species, plus additional information has been added to the Final EIS regarding impacts to modeled habitat specific to Project components for the NIDGS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	45	"The 2021 MMP and Johnson Creek Route Alternative would remove an estimated 3,266 acres and 3,096 acres, respectively, of wildlife habitat, including habitat for Canada lynx (194 and 175 acres, respectively), wolverine (2,342 and 2,005 acres, respectively), northern Idaho ground squirrel (63 acres), Monarch butterfly, Region 4 sensitive species and management indicator species, Idaho species of greatest conservation concern, general wildlife species, big game species, and migratory bird species and bald and golden eagles ." Please provide the basis supporting this statement. Please see additional comments on Wildlife sections of Chapters 3 and 4.	WIL	No text revisions made. This statement refers to the potential direct removal of vegetation (wildlife habitat) associated with the 2021 MMP and Johnson Creek Route Alternative. For certain species, acres of habitat potentially disturbed by the Project alternatives based on models are provided.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	46	"The 2021 MMP and Johnson Creek Route Alternative would remove an estimated 3,266 acres and 3,096 acres, respectively, of wildlife habitat, including habitat for ...northern Idaho ground squirrel (63 acres) " Please clarify for the reader that this is modeled habitat and there are no observed NIDGS in the analysis area.	WIL	No text revisions made. This statement is accurate and refers to the 63 acres of modeled habitat as presented in Section 4.13.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	96	"NIDGS Direct Impacts: 63 acres " See comments in the wildlife specialist report. This is modeled habitat only, with no NIDGS observed within the analysis area based on surveys. Please review and revise.	WIL	No text revisions made. The 63 acres referred to originates from Section 4.13.2 and refers to "modeled habitat". This is consistent with other species in the EIS with modeled habitat.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	346	"There have been no recent observations ..." Recent observations is relative and should be quantified with years since last lynx sighting in the area.	WIL	Text has been added per the comment. "at least within the last 25 years" has been added to this statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	347	"While modeled habitat for the NIDGS occurs in the region, no NIDGS are known or estimated to occur in the Operations Area Boundary, thus no current impacts are occurring or would occur under the No Action Alternative in this area." This same logic (here applied to the No Action Alt) should then be used for the 2021 MMP and JC Alternatives.	WIL	Text has been modified per the comment. Text revised to be more accurate describing modeled habitat and survey areas near the Project components.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	348	"As depicted by modeled habitat, there is a possibility that NIDGS may occur in existing utility corridors". This statement conflicts with the first statement in this section and is inaccurate; the utility corridor WAS surveyed and NO NIDGS were observed. Please clarify this for the reader.	WIL	Text has been added per the comment. The Operations Area Boundary refers mostly to the mine site area and this statement is in regard to the utility corridors.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	349	"Existing roads also would continue to affect wolverines through habitat fragmentation and vehicle-wildlife collisions." If there is documented wolverine mortality due to vehicles it should be mentioned here.	WIL	No text revisions made. As presented in the analysis in Section 4.13.2 for wolverine, multiple citations are presented regarding wolverine response to roadways, including crossings highways with over 100 vehicles per day. Therefore, it is reasonable to assume that wolverine mortality as a result of vehicle collisions may occur as a result of Project-related traffic. Implementing speed limits (i.e., generally 30 mph or less) would help mitigate this potential impact.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	350	"The analysis of potential indirect effects on threatened, endangered, proposed, and candidate species includes fragmentation of habitat; increased competition for resources or habitat due to displacement of individuals from the affected area into the territory of other animals; or other effects, such as increased human presence in the species-specific analysis areas (e.g., hunters, trappers, and recreationists) that can cause mortality (i.e., illegal hunting or trapping) or reduced breeding and recruitment in the future population". It does not seem appropriate for the NEPA process to include illegal activities as part of effects analysis. Suggest removing.	WIL	No text revisions made. Illegal hunting/trapping may increase due to increased public use of the area as a result of improved road access associated with the Project.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	351	"Therefore, based on the impact analysis for the Canada lynx and its habitat, the 2021 MMP would result primarily in localized, long-term, and permanent, minor impacts to the Canada lynx". Lynx have not been recently using these area (4.13.1.2 above). Therefore this statement should only refer to the habitat not the lynx. Please consider revising this statement.	WIL	No text revisions made. This statement is correct as the classification of Project-related potential impacts to the species is limited to minor habitat impacts, albeit localized, long-term, and permanent, which is accurate for the species given the baseline information available for the region.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	352	"therefore, it is likely that the Operations Area Boundary area would be a barrier to lynx movement, which would be a direct effect". Given the Operations Area Boundary only directly overlaps a small portion of modeled suitable habitat (Fig 3.13-2) this statement should indicate only a portion of the habitat could be a barrier. Also, this statement contradicts the statement above in the same paragraph regarding displacement around the perimeter of disturbance which implies the mine disturbances would not be a movement inhibiting barrier. Please note also that the Operations Boundary is not a physical barrier, but rather one established well beyond the limits of surface disturbance and operations for the purpose of air quality modeling. Please consider revising this statement.	WIL	Text has been revised per the comment. Additional clarification added regarding potential impacts to transient lynx through the Operations Area Boundary.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	353	Please clarify that the NIDGS survey was conducted along the transmission line and access roads. Although it is not mentioned, please confirm that it was used in the analysis. The survey in this area is mentioned below in Access Roads & Utilities Section.	WIL	No text revisions made. The survey information (i.e., Yensen and Tarifa 2019, 2018) is referenced in the Access Roads subsection, Utilities subsection, and Off-site Facilities subsection of Section 4.13.2.2.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	354	Large tracts of the modeled habitat were field surveyed and found to be unsuitable habitat. This map and analysis appears to not have taken these field surveys into consideration and continues to rely on the GIS models for habitat impact analysis. Please clarify this in the text.	WIL	No text revisions made. Text states "Figure 3.13-3 shows the components of the 2021 MMP within the NIDGS analysis area compared to <i>modeled</i> habitat."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	355	Prior to the execution of the NIDGS habitat surveys, the USFS/USFWS agreed (prior to the survey) that 100 meters was sufficient for a buffer. Use of a 1-mile buffer for effects analysis thus seems inappropriate here. Please clarify the use of the 1-mile buffer in the text.	WIL	No text revisions made. For the indirect impacts analysis in the EIS, a 1-mile buffer distance was used. This buffer distance was developed using best professional judgment, in coordination with the USFWS, to encompass the area of potential indirect impacts from anthropogenic influences (e.g., noise, light, human presence) along Project components.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	356	"Therefore, based on the impact analysis for the NIDGS and its habitat, the 2021 MMP would result primarily in localized, temporary, and short-term, minor impacts to the NIDGS" As with lynx, this statement should clarify implied impacts based on modeled habitat and not direct impacts on the species. Please clarify this in the text.	WIL	No text revisions made. The NIDGS analysis is based on modeled habitat as described in the introduction to the species and therefore, the conclusion is accurate. This is consistent with other species' analyses in the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	357	Applying migration into modeled habitat for the action alternatives and not the No Action Alternative seems inconsistent, particularly since the roads discussed already exist. Please clarify this in the text.	WIL	No text revisions made. "Wildlife migration" or travel areas are not precisely defined but rather cover other possible wildlife habitat potentially impacted by the action alternatives.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	358	"the 10.4-mile groomed OSV trail along the existing Cabin Creek Road (FR 467) and the new 7-mile temporary groomed OSV trail along Johnson Creek Road would occur in and near close proximity to modeled habitat for NIDGS but would be unlikely to affect NIDGS due to its seasons (i.e., late fall and winter) of use " The Yensen survey indicates NO NIDGS habitat was observed in the survey along the OSV route. Please clarify this in the text.	WIL	Text has been edited to better reflect where modeled habitat occurs and where surveys have occurred along Project components.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	359	"(43 miles of Burntlog Route and utility access roads) may act as a barrier to squirrel movement and dispersal". Please delete, previous statement indicates no modeled habitat along BL Route	WIL	Text has been edited to better reflect where modeled habitat occurs and where surveys have occurred along Project components.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	360	"Increased habitat fragmentation between colonies could indirectly impact dispersal between populations, which could lead to genetic and demographic consequence s". Please delete, this is a speculative statement about populations that were not confirmed in modeled habitat.	WIL	No text revisions made as text is appropriate for potential future populations in modeled habitat.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	361	"The existing (23 miles of NFS roads and 75 miles of county roads) and new roads (43 miles of Burntlog Route and utility access roads) may act as a barrier to squirrel movement and dispersal ". This statement (in part) contradicts the previous statement which indicates no modeled habitat along BL Route. Suggest deleting .	WIL	Text has been edited to better reflect where modeled habitat occurs and where surveys have occurred along Project components.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	362	"Construction of the utility corridors, substations, and communication towers, as well as maintenance activities in the ROWs, would likely impact individual NIDGS where the 2021 MMP components overlap modeled habitat known to support populations " This statement is conclusive and is contradictory with field surveys that have not identified individuals of this species in modeled habitat. Please correct or remove.	WIL	No text revisions made as text is appropriate for potential future populations in modeled habitat.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	363	"but there is a possibility that NIDGS may occur in the future at suitable sites " This is a speculative statement that is not supported by documented nearby populations, identification of migration pathways or environmental stressors that would induce such migration. Please remove.	WIL	No text revisions made as text is appropriate for potential future populations in modeled habitat.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	364	"The year-round maintenance and winter plowing of the Burntlog Route could potentially open new and more remote areas for other predators, such as wolves or coyotes, which could indirectly increase the competition for food resources with wolverines " Without further explanation or supporting information regarding use of roadways by wolves/coyotes, this statement is speculative and should be supported or removed.	WIL	No text revisions made as it has been determined that the level of analysis in this section is sufficient. Additionally, it is reasonable to assume other predators such as wolves and coyotes would utilize linear corridors with less snow cover/depth for movement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	365	"due to the low potential for this species to occur in the wildlife analysis area, primarily due to a lack of suitable habitat, the 2021 MMP would not likely contribute to a trend towards ESA listing or loss of viability of the species within the planning area. " This statement, supports our suggested changes to the previous 2 pages of discussion that were focused on potential impacts to a species that is not likely to be present.	WIL	No further response required. General in nature or position statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	366	Moderate intensity per Table 4.1-1 in Section 4.1.2 "affects a large percentage of a population" and lead to reduction in "productivity in the overall population." Evidence is not provided that leads a reader to this conclusion. Request changing to "minor" (for this and other species where the same conditions occur, e.g. big-game species).	WIL	No text revisions made as it has been determined that the level of analysis in these sections and their conclusions are accurate and based on the amount of suitable habitat both directly impacted and indirectly impacted by the Project.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	367	(reference to illegal hunting) - It is unclear why the NEPA process is analyzing illegal behavior. Illegal behavior is not a result of the MMP and should not be part of the analysis. Suggest removing.	WIL	No text revisions made. Illegal hunting may increase due to increased public use of the area as a result of improved road access associated with the Project.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	368	"Fragmentation of habitat" for bighorn sheep is not supported by citations, whereas wolverine and Lynx have several references. Please provide references or remove speculative statement for bighorn sheep.	WIL	Text has been added per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	369	The analysis area buffers are not defined or justified in these sections below for TEPC species. Recommend providing.	WIL	Text has been added to describe the analysis area buffers for TEPC species.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	370	The analysis area for the Monarch butterfly should be limited to elevations at or below 5,600 ft amsl.	WIL	Text has been revised per the comment. Additionally, the wildlife analysis area figure has been updated to show elevations below 5,600 feet amsl to correlate with the revised monarch butterfly analysis.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	371	Of the four TEPC species, only wolverine have been sighted in the area. This should be clarified in this opening paragraph and the nature of "modeled habitat" versus confirmed species presence should be clarified in this introduction.	WIL	Text has been added per the comment. Text revised to the following: "These species include Canada lynx (modeled habitat present), NIDGS (modeled habitat present), wolverine (documented in the wildlife analysis area), and Monarch butterfly (potential to occur in suitable habitats at or below 5,600 feet amsl) (Table 6-1)."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	372	"NIDGS, which is listed as a threatened species under the ESA, are known to occur in the region." This statement should be clarified as to what encompasses "region". The NIDGS ground surveys during baseline surveys which included modeled habitat and buffer zones (100 m) approved by USFS and USFWS did not yield any observations of NIDGS.	WIL	No text revisions made. Statement in the introduction is general in nature and NIDGS is discussed in detail later in Section 6.2.2, including what the modeled habitat parameters are and the definition of the analysis area.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	373	"modeled NIDGS habitat " Recommend providing a footnote or short description in this paragraph as to what modeled habitat means.	WIL	Text has been added per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	374	"While modeled habitat for the NIDGS occurs in the region, no known observations of NIDGS or modeled habitat occur in the mine site area" This is true, and appears to be contradictory to statement in Section 6.2.	WIL	No text revisions made. Text in Section 6.2 of the Wildlife Specialist Report only describes the species as potentially occurring in modeled habitat at much lower elevations than the mine site.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	375	Please clarify in this table that not all modeled habitat was considered suitable and/or highly or even moderately suitable.	WIL	The modeled habitat conservatively included suitable habitat and areas with the potential to become future suitable habitat.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	376	"Therefore, based on the impact analysis above for the NIDGS and its habitat, the action alternatives would result primarily in localized, temporary, and short-term, minor impacts to the NIDGS " This is a speculative conclusion that is inconsistent with previous statements within this Section. No NIDGS found, no DCH, only some modeled habitat deemed suitable. Above in baseline, they list the few locations where habitat determined highly suitable. It is highly speculative that any impacts to NIDGS would occur.	WIL	No further response required. General in nature or position statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	377	"An increase in big or small game collision mortality along roadways would be likely... " This should say "could" instead of "would".	WIL	No text revisions made. "Would" is appropriate here.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	378	"However, it is possible that nests, eggs, and young could be directly disturbed by vegetation removal (including cutting of trees)." There project design features stating that pre-construction surveys will be conducted to minimize this impact. This should be considered and clarified.	WIL	The utilization of bird surveys prior to ground disturbance has been described in the EIS in Chapter 2 and has been reflected in the analysis.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	664	"Wildlife and Wildlife Habitat including Threatened, Endangered, Proposed, and Sensitive Species " Federally listed wildlife and wildlife habitat for T&E species are covered here, but federally listed fish are not. Nor are they discussed in any detail under Fish and Fish Habitat. Please add.	WIL	No text revisions made. Federally listed fish species are discussed in Sections 3.12, 4.12, and 5.12.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	665	"During exploratory drilling, development, and operations, the increased noise and light impacts and road networks will be a source of disturbance and mortality for wildlife and will likely also displace several species . " Please provide information on which species would be displaced and why.	WIL	Text has been revised per the comment. "...displace wildlife sensitive to human disturbance." has been added to clarify sentence.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	666	"Early seral and grassland habitats would be available for wildlife within a short time, while mature forest types would not be available for decades. " Please replace " seral " with " successional " for ease of understanding by the general public.	WIL	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	667	Please clarify for the No Action Alternative that " <i>continued exploration work at Stibnite</i> " could occur...not would . Also, references to ASAOC activities will likely require updating in the FEIS as they will by then have occurred in 2022 and 2023.	WIL	Text has been revised per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	668	"However, the 2021 MMP would likely result in impacts that would be considered to permanently contribute to an adverse cumulative impact on these resources when combined with past, present, or RFFAs . " This statement does not appear to be supported by evidence presented in this section. Immediately above this statement is: " <i>However, the region is still somewhat remote and relatively wild, and the types of projects listed above are unlikely to significantly change this wilderness character in the near term, with the exception of additional wildfires reducing mature forest structure .</i> " So, if RFFAs would not significantly affect...please clarify how would there be cumulative impacts.	WIL	No text revisions made. Due to the permanent habitat loss associated with the Project, this statement is accurate.
Jesse Lutz	19386	9	There should be restrictions if and when blasting can occur. Studies should be done on how will that affect elk calving and migration, and avian life within that "operational bubble" of extreme noise. Not to mention any other species within the impact area. By saying 'wildlife encounters will decrease because of noise or wildlife will relocate because of noise the DEIS is performing a disservice to science, much less the ecosystem that depends sounds science for proper land management. This is another example of an uncertainty that waits for something negative to happen only to have an explanation after the fact. How is nature supposed to remain in an area that is unlivable? This is degrading to the Natural ecological process which the Payette National Forest is tasked to protect.	WIL	Section 2.4.5.2 provides a description of the blasting needs of the Project and regulatory measures and EDFs in Tables 2.4-12 and 2.4-13 would be implemented to limit potential blasting impacts to the environment. Indirect impacts from blasting, mainly from noise to wildlife is provided in Section 4.13 of the EIS.

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Jesse Lutz	19386	16	Can the USFS please provide data modeling what species will thrive and what species will decline within this time frame shown on a map of the project area and areas that are listed to have adverse impacts on air and water quality?	WIL	Section 3.13 describes data modeling performed while Section 4.13.2.2 describes the Project effects on the wildlife species analyzed as appearing in Figures 3.13-2 through 3.13-20.
Samuel Penney (Chairman)	19396	16	The Tribe is nationally recognized for its leadership in the conservation of bighorn sheep and recovery of gray wolves. Bighorn sheep populations roam more than 25 miles up and down the Salmon River Canyon through the Frank Church-River of No Return Wilderness Area, north and northeast of the Project. Importantly, this is one of the last remaining native populations in the region and is threatened by disease and habitat degradation. Collaborative research led by the Tribe over a decade ago on federal lands, and the Tribe's ongoing advocacy for bighorn sheep, were instrumental in the reduction of disease risk on 70,000 acres of bighorn sheep on the Payette National Forest. Because this was a vital step for bighorn sheep recovery, the Forest must protect all bighorn sheep habitat. Several herds and lambing areas are within close proximity to Stibnite. Activities proposed are likely to adversely impact individuals, degrade habitat conditions, and deter expansion of populations into historical but unoccupied habitat across three national forests.	WIL	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	17	Gray wolves, extirpated in Idaho in the 1930s, gained federal protection in 1967 and were listed as endangered under the ESA in 1973. With the support of several partners, the Tribe led the recovery and reintroduction of gray wolves in central Idaho, including in the Forest, in the 1990s. Today, population numbers exceed recovery goals. Recovery and delisting of gray wolves are great conservation achievements. Protection of wolf habitat, which includes minimizing human disturbance, needs the utmost attention from the Forest.	WIL	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	140	The Forest modeled source habitat for wildlife species and groups by subwatershed. The SDEIS also discloses whether the species is documented in the analysis area. The Tribe is pleased to see that the analysis considers impacts to summer and winter habitats of bighorn sheep (<i>Ovis canadensis</i> ; tinúun).	WIL	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	141	The SDEIS includes analysis of impacts to a select number of terrestrial vertebrate species identified in the 2015 Idaho SWAP as SGCN, but lacks supporting rationale for their inclusion. The SDEIS fails to include any invertebrate species (e.g., insects, arachnids, and mollusks) and their associated habitats, (except for monarch butterfly), many of which are found in the Idaho Batholith region. Idaho is also in the process of revising the SWAP which includes 25 invertebrate SGCN and 73 invertebrate SGIN. The Tribe requests that the Forest describe existing conditions in the Project area for invertebrate species, particularly terrestrial and aquatic insects and mollusks.	WIL	No text revisions made as it has been determined that the level of analysis regarding potential impacts is adequate for wildlife species that may occur in the wildlife analysis area as discussed in Sections 3.13.4 and 4.13.2. Aquatic species are discussed further in Sections 3.12 and 4.12.
Samuel Penney (Chairman)	19396	142	The Tribe also requests that the Forest evaluate other big game species, such as moose (<i>Alces alces</i> ; saaslaqs) and mountain goat (<i>Oreamnos americanus</i> ; caXisXis).	WIL	Moose and mountain goats are trophy species managed by IDFG and are not considered sensitive, MIS, TEPC species. However, due to nearby occupied habitat, a statement regarding the potential use in the Project vicinity has been added to Section 3.14. No impacts are anticipated to occur to these species as a result of the Project.
Samuel Penney (Chairman)	19396	363	The SDEIS omits analysis on impacts to Idaho giant salamanders (<i>Dicamptodon aterrimus</i>), which have been documented in the SFSR watershed. The Project may degrade important Idaho giant salamander habitat, through construction and increased use of roads, as well as ground disturbing activities. Indeed, occurrence of Idaho giant salamander is negatively correlated to road density. Nonetheless, the SDEIS does not mention Idaho giant salamanders or potential impacts from the Project. The Forest needs to remedy this omission in the FEIS with an analysis of effects on Idaho giant salamanders from the Project.	WIL	No text revisions made. Idaho giant salamanders are not part of the PNF TESP species list and therefore, not included in the analysis.
Samuel Penney (Chairman)	19396	366	4.13 Wildlife and Wildlife Habitat The Tribe raised several concerns regarding impacts to plants and wildlife in scoping and DEIS comments. The Tribe remains concerned that soils, wildlife, and vegetation are not identified as significant issues in the SDEIS. Under both alternatives, thousands of acres will not maintain or move	WIL	The NEPA analysis considered all resources including soils, wildlife, and vegetation along with the Project impacts to these resources. The resources that most affect the Forest Service decision on the Project were called out as significant.

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			towards Forest Plan desired conditions for vegetation into the foreseeable future. How is this impact not significant?		
Samuel Penney (Chairman)	19396	369	The SDEIS discloses that both alternatives will result in adverse effects to wildlife (e.g., wolverine) and wildlife habitat (e.g., loss of vegetation in perpetuity). The action alternatives would further degrade habitat conditions for Canada lynx (a Forest Plan Standard violation) and cause irreversible impacts such as direct mortality from collisions with mine-related traffic and structures. The Tribe requests that the Forest identify wildlife and wildlife habitat as significant issues.	WIL	The effects on wolverine and Canada lynx are described in SDEIS Section 4.13.2.2. SDEIS Section 3.13 describes that the Forest Plan Standard is not met under the existing condition. Therefore, Project effects do not change habitat conditions relative to Forest Plan Standards.
Samuel Penney (Chairman)	19396	372	The Tribe is pleased that the Forest considered and used new literature to update habitat models for 15 species. However, the Forest needs to update the analysis for NIDGS and include new findings about overwintering habitat, diet, and habitat distribution models.	WIL	No text revisions made as it was determined that a cutoff date for data for the EIS was 2017/2018 and that the analysis in the EIS is sufficient for the species; however, the NIDGS is a federally threatened species and therefore included in the Project's BA as part of the consultation process with the USFWS. Additional details for this species are provided in the BA.
Samuel Penney (Chairman)	19396	373	Furthermore, it should be noted that for some habitat models, special features such as foraging and nesting habitats, snags, and downed wood large snags, hollow live trees, and large dead and downed trees for foraging are not represented well in models, and the SDEIS does a poor job at interpreting impacts to these features.	WIL	The SDEIS analysis is based comprehensive vegetation data for the area of analysis and is sufficient to inform the determination of effects of the Project on wildlife.
Samuel Penney (Chairman)	19396	374	The SDEIS fails to consider species interactions (e.g., primary and secondary cavity nesters, mutualistic relationships (e.g., whitebark pine and Clark's nutcracker)) and changes to spatial configuration of the landscape.	WIL	No text revisions made as it has been determined that the analysis in the EIS is sufficient for wildlife species. Additionally, examples of the requested information is already within Sections 3.13.4 and 4.13.2, specifically under the wolverine and several sensitive species sections.
Samuel Penney (Chairman)	19396	375	The SDEIS also lacks snag estimates and whether they are meeting snag requirements for wildlife species, such as flammulated owls.	WIL	The SDEIS analysis is based comprehensive vegetation data for the area of analysis and is sufficient to inform the determination of effects of the Project on wildlife.
Samuel Penney (Chairman)	19396	376	Association of foraging and nesting habitat, snags, and downed wood for nest sites and prey habitat, are special habitat features not represented by the model for boreal owls.	WIL	The SDEIS analysis is based comprehensive vegetation data for the area of analysis and is sufficient to inform the determination of effects of the Project on wildlife.
Samuel Penney (Chairman)	19396	377	For great gray owls, the model overestimates the amount of source habitat because it does not account for forest stands proximate to open meadows or other foraging habitats. The SDEIS fails to elaborate beyond this clarification in Chapter 4.13 for great gray owls.	WIL	The SDEIS analysis is based comprehensive vegetation data for the area of analysis and is sufficient to inform the determination of effects of the Project on wildlife.
Samuel Penney (Chairman)	19396	378	The SDEIS also fails to evaluate belowground ecosystems, terrestrial invertebrates, other big game (e.g., moose and mountain goat), and culturally important wildlife species and fails to include best available scientific information on mining impacts to wildlife and wildlife habitat and cumulative impacts of climate change on wildlife habitat in the analysis area.	WIL	The SDEIS covers general wildlife, as well as sensitive species, big game, and migratory birds in Sections 3.13 and 4.13. Implications for culturally important wildlife species are described in Section 4.24. Effects of climate change on wildlife habitat are described in Section 4.4.
Samuel Penney (Chairman)	19396	380	The Project area provides habitat for wolverine, flammulated owl, Columbia spotted frog, and fisher that all have high climate change vulnerability scores in the Intermountain Region, yet the SDEIS falls silent on these vulnerabilities and how the action alternatives may complicate postmining recovery and post-mining land uses.	WIL	No text revisions made. Climate Change is discussed in Sections 3.4, 4.4. and 5.4 of the EIS.
Samuel Penney (Chairman)	19396	381	The Tribe is concerned about the increase in access roads, traffic, noise, light, winter recreation, and associated impacts to wildlife and wildlife habitats. The SDEIS needs to include impacts to wildlife and wildlife habitat due to structures in and around the mine site, including fences.	WIL	No text revisions made. This information is discussed, as applicable, for wildlife species in Section 4.13.2 based on the specific Project component (i.e., mine site, access roads, utilities, and off-site facilities).
Samuel Penney (Chairman)	19396	382	The Tribe is especially concerned about the construction and use of the Burntlog Route under the preferred alternative because of adverse impacts to wildlife and vegetation, especially to wolverine. In terms of wildlife habitat loss, the preferred alternative would cause greater habitat loss than the Johnson Creek Road alternative.	WIL	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	383	The Tribe is concerned that the SDEIS does not include mitigation measures for impacts to wildlife and wildlife habitat.	WIL	Project design features and mitigation are part of both the EIS (Chapter 2) and biological assessment (Chapter 3).

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Samuel Penney (Chairman)	19396	384	The SDEIS fails to discuss the "so, what" element of an effects analysis. The SDEIS needs to interpret and support (with best available scientific information) the conclusory statements. The magnitude, extent, direction, duration, and speed of effects of each alternative need to be defined quantitatively and/or qualitatively. These interpretations of resource impacts should also be built on and integrated with other resources.	WIL	No text revisions made. The conclusion statements for each species or guild of species is presented based on the definitions provided in Table 4.1-1 and supported by a quantitative analysis (i.e., acres of habitat impacted) in Section 4.13.2.
Samuel Penney (Chairman)	19396	386	The Tribe also has concerns about the RCP and Wildlife Habitat Mitigation Plan. A restored ecosystem should have the following attributes: 1) similar diversity and community structure with comparison to a reference site; 2) presence of indigenous species; 3) presence of functional groups required for long-term stability; 4) capacity of the physical environment to sustain reproduction; 5) normal functioning; 6) integration with the landscape; 7) elimination of potential threats; 8) resilience to natural disturbance; and 9) self-sustainability. The proposed actions will cause significant adverse impacts to wildlife and wildlife habitat such that the Tribe does not support the claim the site will be fully restored. Considering the soil resource limitations (and deficits) and poor vegetation reestablishment, several of the attributes will be impossible to achieve.	WIL	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	387	<p>The Wildlife Habitat Mitigation Plan is narrow in scope and only provides feedback for a limited group of wildlife species and habitats. The Wildlife Habitat Mitigation Plan also lacks components important to wildlife such as connectivity, plant species composition, nutrient cycling, forage patterns, species migrations, species assemblages, and mutualistic relationships. It should also include focal species monitoring to assess success. The Wildlife Habitat Mitigation Plan only considers forage, hiding cover, and structure, and the RCP only uses plant canopy cover to gauge success. Using only these indices over a short period of time (<5 years) is an insufficient predictor of long-term success. There is more to a restored site than aboveground plant cover. Long-term monitoring in the western United States shows that short-term monitoring of plant production and/or cover alone detected "false" and "true" failures—situations where a project was abandoned only after four years and determined a failure, but decades later the plant community recovered.</p> <p>The lag in plant community response was attributed to soil properties that need more time to recover (i.e., infiltration and nutrient cycling associated with soil organic matter accumulation).</p> <p>The lack of soil organic matter limited the short-term recovery of the system, and thus, was deemed a reclamation failure. In contrast, many restoration projects deemed successful do not persist because one or more processes are absent. Integration of ecological indicators that reflect soil and site stability, hydrologic function, and biotic integrity have the potential to help avoid identifying false or true failures in restoration. Successful restoration for wildlife habitat goes beyond aboveground features. The narrow scope of the mitigation plan proposed is unacceptable and the Tribe requests that other ecological indicators are included to evaluate restoration success.</p> <p>One suggestion is to use the "International principles and standards for the practice of ecological restoration" developed by the Society for Ecological Restoration. It is the responsibility of the Forest Supervisor to ensure that administrative and environmental components are adequately addressed in each Plan of Operations when applicable, this includes fish and wildlife habitat reclamation or mitigation.</p>	WIL	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	417	<p>5.13 Wildlife and Wildlife Habitat including Threatened, Endangered, Proposed, and Sensitive Species</p> <p>Under all alternatives, RFFAs, past, and present actions would impact wildlife and wildlife habitat. The Tribe is concerned that disturbances from mining combined with wildland fire, climate change, forest management, and other human activities will cause irreversible and long-term damage to wildlife and wildlife habitat within and adjacent to the Project. Acres disturbed by the Project plus acres disturbed by other activities (e.g., exploration, transportation, wildland fire) have the cumulative potential to increase the occurrence of noxious weeds and non-native plants which will degrade the quality and distribution of wildlife habitat. If the Forest allows this Project to violate many Forest Plan Standards and Guidelines and proceed as planned, then the footprint of "sacrifice areas" will continue to grow. The Forests' actions will pave the way for future mining activities and thus create adverse and long-term impacts to treaty resources. The Tribe has little faith that impacts will be offset and reduced through restoration</p>	WIL	No further response required. General in nature or position statement.

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			considering that the land will take decades to recover. The preferred alternative would result in adverse cumulative impacts on which the Tribe considers unacceptable.		
Elizabeth Barnes	6652	35	Fencing around toxic pits, ponds, and pilings is mentioned, but no mitigation for waterfowl. Waterfowl using and feeding in these locations will be diseased and pose a risk of bioaccumulation to predators. What will prevent this?	WIL	No text revisions made. The ponds associated with the Project would be contact water ponds and the tailings supernatant pond. These ponds would contain water that does not meet drinking water standards, but the contact water ponds would be pumped out as reclaim water and therefore would contain water on a temporary basis following precipitation events. The cyanide destruction circuit would limit cyanide concentrations in the tailings supernatant pond to be protective of avian receptors. Avian exposure to these ponds would be acute in nature and these ponds are not acutely toxic when managed per plan. Further details on the water chemistry of these ponds is presented in Section 4.9.
Elizabeth Barnes	6652	43	4-434 Why are there no acreage estimates for bald eagle habitat or big eared bat?	WIL	No text revisions made. Due to varied and widespread habitat that may be used by the species, these two species do not have habitat models available for use in the EIS. It can be assumed that they are found throughout much of the wildlife analysis area.

Timber Resources

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	669	" Timber Resources " Please provide the definition of timber resources used. It is only concerned with commercial timber, and not even future commercial timber (which might not be commercial now). Please provide measurements in the definition.	TIM	SDEIS Section 3.14.1 and 4.14.1.1 defines timber resources in terms of commercial products and lists out the possible products. No measurements are included in the definition.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	670	" <i>This includes past and present actions that have, or are currently, affecting timber resources and areas from which timber is harvested,</i> " Please clarify if past actions are considered. It is unclear.	TIM	No text revisions made. This includes past actions as described in the text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	671	" <i>Projects with a vegetation management component that includes incidental removal of conifer tree species would not be considered to cumulatively contribute to timber resource impacts in the CEA unless the project included sale of the cut conifer trees.</i> " Please clarify. If a conifer is cut down and left to rot, used to create an in-stream structure, or sold for lumber, it is removed from the resource.	TIM	No text revisions made. Text is accurate in that only projects that include sale of cut trees are included in the analysis.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	672	" <i>None of the current and future forest management projects within the timber resources CEA include a commercial timber sale component and are therefore not considered to contribute to cumulative impacts on timber resources.</i> " AND " <i>None of the currently planned or future mine development projects in the CEA include sale of cut trees at this time and therefore were determined to not contribute to potential cumulative effects on timber resources.</i> " Please provide a source for this information. Both the PNF and the BNF have future commercial timber sale bidding opportunities posted on their websites.	TIM	No text revisions made. Timber resources being removed due to actions of a particular project would be measured and appraised at fair market value. The product would then be sold directly to the company completing the removal work. The timber removed would not be advertised to the general public.
Alan Haslam (Vice President, Permitting, Perpetua	19325	673	" <i>Both Big Creek Fuels Reduction and the Granite Meadows projects include explicit discussions of commercial timber sales associated with fuels reduction activities therefore they both could contribute to cumulative effects on timber resources.</i> " This is a current/future forest management project that includes a commercial sale component. Please revise earlier statements that say there are none of these projects.	TIM	No text revisions made. Timber resources being removed due to actions of a particular project would be measured and appraised at fair market value. The product would then be sold directly to the company completing the removal work. The timber removed would not be advertised to the general public.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	674	" Action Alternatives " None of the NEPA action alts are discussed here, just the other non-SGP RFFAs, which would also be part of the No Action just above.	TIM	Text has been revised to include both action alternatives. The following sentence has been revised "Implementation of activities proposed under the <u>action alternatives</u> , when combined with other potential activities associated with projects in the cumulative impact analysis area would not exceed harvest volume limits or contribute significantly to removal of timber from land suited for timber production in the CEA."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	675	" It is unknown if any portions of these areas would occur on land suited for timber production, but if the entire acreage was on land suited for timber production, the combined harvest area would only represent 20 percent of the suited lands on the PNF. " Please remove this hypothetical sentence to decrease chance of confusion.	TIM	Text has been deleted per the comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	379	" Timber resources are the trees used to develop merchantable forest products. Forest products include timber products, such as lumber, paper, and firewood, and other "special forest products," such as floral greenery, Christmas trees, medicinal herbs, fungi, and other natural products (Forest Service 2017e). Timber resources in the SGP area consist of conifer tree species typically harvested to make forest products, including merchantable sawtimber-sized trees and sub-merchantable small trees. " This is not the definition of timber resources used in the cumulative impacts. That seems to only be directed at commercial timber. Please reconcile these 2 sections.	TIM	No text revisions made. Text is accurate in both the affected environment and cumulative impacts sections. Merchantable forest products and commercial timber are synonymous.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	380	" Volumes and acres of timber resources removed. " Please specify how volume is measured and what it means.	TIM	No text revisions made. This information is discussed in detail in Section 4.14.1.1 Timber Volume.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	381	" Timber volumes presented in the discussions are distinguished between sawtimber and sub-merchantable trees; however, a breakdown by species is not provided. " If a breakdown of timber species is not considered it must be presumed that Whitebark Pine is considered as a timber resource impacted by the project. If this is the case the WBP volume should not be considered as a marketable timber loss because those stands would not be targeted for harvest. Please revise to address WBP.	TIM	No text revisions made to Sections 3.14 or 4.14 of the Final EIS. Whitebark pine is not historically a commercial timber species when a prescription can be applied to a stand leaving specific trees. With this Project, it may not be feasible to leave a tree standing, thus the species may become a commercial timber resource. However, in most cases, EDFs presented in Section 2.4.9 of the SDEIS and Forest Service-required mitigation measures would reduce the number of whitebark pine trees removed, especially those that are considered "plus" or "elite" and have shown some level of blister rust resistance.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	382	" Beyond the limitations associated with VCMQI mapping accuracy on NFS lands, these data were not available for portions of the SGP area on private, state, and other federal land. To characterize vegetation in these areas, publicly available vegetation community LANDFIRE data with a 30-square-meter minimum mapping unit were manually translated ("cross-walked") to the closest corresponding NFS vegetation dominance type. LANDFIRE data are not ground-truthed; therefore, vegetation conditions on private, state, and other federal land may be less accurately represented than conditions on NFS lands. " Please clarify whether timber acres on private lands were included in the analysis. If so, please clarify why other resources on private land were excluded (e.g.: soils)? Please reconcile.	TIM	No text revisions made. Unlike the VCMQI vegetation data, timber resources data is available for USFS-administered, private, state, and other non-federal lands within 1-mile of the Project components and therefore, included in the analysis in the SDEIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	383	" Therefore, indirect effects on timber resources are anticipated in all portions of the SGP area where timber removal would occur. " If there are indirect effects on forest that are directly affected by removal are being included in the impact analysis, this could result in a double impact analysis approach. Please revise to indicated that impact areas are only analyzed once.	TIM	No text revisions made. Text is clear in that indirect impacts may also occur in areas that are directly impacted from Project activities. This does not mean that impacts are counted twice but rather means that indirect impacts stem from areas that are directly impacted.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	384	"The analysis area under the 2021 MMP contains 54 acres of land suited for timber production, which is associated with the existing transmission line upgrade (within BNF MPC 5.1 and 4.2) and contains 206 MBF of sawtimber. " If these 54 acres are a culmination of the narrow strips on each side of the T-Line ROW expansion this should be noted as opposed to an actual 54 acre area readily available for timber production and harvest.	TIM	Text has been added clarifying where the 54 acres of timber occur, specifically that this loss of timber is associated with timber immediately adjacent to the ROW expansion for the transmission line.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	385	"Most disturbed areas planned for timber resource reclamation would not be prepared with GM or planted until operations are complete, including the Midnight GMS area, haul roads, the Yellow Pine pit walls, and North Yellow Pine GMS . " These GMS are carryover from the 2020 DEIS. The MMP has only one GMS in Fiddle Valley. Please delete.	TIM	Text has been deleted per the comment to match the components of the 2021 MMP.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	386	"Timber productivity generally correlates with soil depth and quality, which implies that the shallow depth of GM (6 inches) applied in most uplands where timber replanting is planned at final reclamation would likely limit native forest production. " Please provide a source for this information.	TIM	SDEIS Section 4.5.2.2 describes potential limitations on soil productivity that have the potential to affect timber productivity.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	14	Comments on applicable SDEIS sections include technical clarifications for Sections 3.14 and 4.14.	TIM	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	145	3.14 Timber Resources The analysis area for timber resources covers the mining site, access routes, offsite facilities, and utilities (approximately 855 acres, although it is unclear in the SDEIS how large is the entire analysis area for timber). Timber resources consist of conifer tree species typically harvested for forest products (e.g., Douglas-fir (<i>Pseudotsuga menziesii</i> ; páaps), Engelmann spruce (<i>Picea engelmannii</i> ; heslips), lodgepole pine, and ponderosa pine (<i>Pinus ponderosa</i> ; láaqa), grand fir (<i>Abies grandis</i> ; pítxpitx), subalpine fir, and western larch (<i>Larix occidentalis</i> ; kimíle)), including merchantable sawtimber-sized trees and sub-merchantable small trees.	TIM	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	147	Timber resource ownership and mining claim status across the analysis area includes 701 acres of Forest Service land, 104 acres on private land, and 50 acres on Idaho state land. These acres exclude burned areas due to wildfire within the analysis area.	TIM	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	388	4.14 Timber Resources Under the NFMA, all Forests are required to assess the impacts of management actions to ensure that they "will not produce substantial and permanent impairment of the productivity of the land" Permanent loss of timber resources would occur under all action alternatives. The SDEIS failed to consider NFMA requirements for reforestation on lands suitable for timber production. There is no mention in the SDEIS how timber would be harvested and how it would impact other resources such as soils (e.g., DD and TSRC), aquatics, and wildlife. As a result of the Project's actions, disturbed areas would remain unavailable for planting or regrowth for over 15 years, and some acres would be converted permanently from a forest to non forest use (i.e., permanently prevented from returning to timber vegetation following the Project). The RCP even states that the primary goal of the RCP "...is not the establishment of forest vegetation throughout reclaimed areas of the SGP..." which appears to violate NFMA and Forest Plans. It is the policy of the Forest Service that "[a]ll lands disturbed by mineral activities shall be reclaimed to a condition that is consistent with forest land and resource management plans, including applicable State air and water quality requirements." The Tribe would like to know how the action alternatives comply	TIM	SDEIS Section 4.5.2.2 describes project effects on soil productivity, TSRC, and DD. The effects of vegetation removal are also included in the analysis of soil effects. Project effects on soils are not anticipated to be permanent but are expected to involve a long recovery period. The duration of the recovery period results in a proposed Forest Plan Amendment. SDEIS Sections 3.14.3.1, 4.14.2 and 4.14.2.2 of the SDEIS describes Project impacts related to the permanent loss of timber resources in the analysis area.

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			with NFMA policies and Forest Plan directives related to timber resources. Under both action alternatives, more than 60% (>300 acres) of the impacted timber analysis area would not be reclaimed. Under the preferred alternative, acres of timber resources would be removed, and only 20% of this could be adequately restocked within 5 y after the final harvest. Perpetua needs to explain how this qualifies as leaving the site in a better condition than existing.		
Samuel Penney (Chairman)	19396	418	5.14 Timber Resources Under all alternatives, RFFAs, past, and present actions would impact timber resources. Mining activities under the proposed action alternatives would convert suitable timber areas to nonsuitable, and RFFAs such as mining has the potential to increase the amount of land removed from timber production. The Tribe is concerned that disturbances from mining combined with wildland fire, climate change, forest management, and other human activities will cause irreversible and long-term damage to forest vegetation. Acres disturbed by the Project plus acres disturbed by other activities (e.g., exploration, transportation, wildland fire) have the cumulative potential to increase the occurrence of noxious weeds and non-native plants which will degrade the quality and distribution of forest resources. If the Forest allows this Project to violate many Forest Plan Standards and Guidelines and proceed as planned, then the footprint of "sacrifice areas" will continue to grow. The Forests' actions will pave the way for future mining activities and thus create adverse and long-term impacts to treaty resources. The Tribe has little faith that impacts will be offset and reduced through restoration considering that the land would take decades to recover. The preferred alternative would result in adverse cumulative impacts on which the Tribe considers unacceptable.	TIM	No further response required. General in nature or position statement.

Land Use and Land Management

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	676	"Action Alternatives " Please provide a conclusion.	LAN	A conclusion has been-added to the section, "Cumulative effects on land use will be greater than the direct effects of the action alternatives, depending on which RFFAs occur."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	387	<i>"The analysis area for land use and land management includes the combined footprint of all potential components for the SGP including the Operations Area Boundary, the access routes, transmission line infrastructure, and off-site facilities. The analysis area and land status are shown in Figure 3.15-1. " The figure labels the "Analysis Area" as an orange polygon separate from the hatched "Operations Area Boundary". As a result, the analysis area from the text is the Figure "analysis area" plus the "operations area boundary". Please revise the map legend to show the orange as "combined footprint" or something similar for clarity, with another indication in the figure legend to show that the orange and hatched polygons are both the analysis area.</i>	LAN	The legend in Figure 3.15-1 has been-modified to identify the orange area as "Analysis Area - Project Components" and the hatched area as "Analysis Area - Operations Area Boundary". The header "Project Components" were removed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	388	<i>"The analysis area for land use and land management includes the combined footprint of all potential components for the SGP including the Operations Area Boundary, the access routes, transmission line infrastructure, and off-site facilities. The analysis area and land status are shown in Figure 3.15-1. The SGP primarily consists of NFS lands on the PNF and the BNF with some private, state, and BOR lands also included. Land use in the analysis area consists of mining uses, utilities, roads, agriculture, residential, fisheries, timber, tribal, recreational, and special uses. The discussion of existing conditions provides a land use context for the collective SGP area that could be impacted by the action alternatives."</i> AND	LAN	The first paragraph was removed from Section 3.15.1 and replaced by the paragraph in Section 3.15.2.

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			<p><i>The analysis area for land use and land management includes the combined footprint of all potential components for the SGP, including Operations Area Boundary, access and haul roads (proposed and existing), utility infrastructure (proposed and upgraded), and off-site facilities (Figure 2.4-1)."</i></p> <p>These two paragraphs are redundant, but cite different figures. Please consolidate and reconcile to simplify for the reader.</p>		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	389	"Approximately 14 acres of land listed under the PNF is administered by the PNF but is within the boundary of the Salmon- Challis National Forest. Does not account for 67 acres of temporary surface exploration pads and roads on Payette National Forest (see Chapter 2 acreage tables). " Table 2.4.1, sub bullet 2, indicates 65 acres . Please revise for consistency and check for accuracy.	LAN	The text was revised to use the correct value (i.e., 65 acres).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	390	"Public access to NFS lands within the Operations Area Boundary would be closed for timber harvest and designated tribal uses (Sections 4.14 and 4.24) . " Based upon the 2003 Land and Resource Management Plan, the management prescriptive category for the operations area boundary consists of category 3.1 and 3.2 (passive and active restoration, respectively) both of which have been identified as "not suited for timber production." Timber harvest should not be considered an activity that is limited by the project since it is not a viable existing activity. Please delete " timber harvest and "	LAN	The mention of timber harvest was removed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	391	"Due to year-round access to the mine site first along Johnson Creek Route during construction and then along the Burntlog Route, an existing, approximately 11-mile groomed OSV route from Warm Lake to Landmark would be closed." A new groomed snowmobile route along the Cabin/Trout Creek drainage to Johnson Creek would be maintained from a maintained parking area off the South Fork Road. Please include this information.	LAN	While the information regarding the new groomed snowmobile route is present at other locations within the SDEIS, it has been added to this section also for consistency.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	392	"Temporary closure of the existing 9-mile OSV route from Trout Creek campground to Wapiti Meadows under the 2021 MMP, during use of the Johnson Creek Route while Burntlog Route is constructed, would convert the land use from mainly recreation to mining transportation use for the short term. " Only during the winter season. Please revise to read "...would convert the land use in the winter season from mainly recreation..."	LAN	"in the winter season" has been added to the text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	393	"The construction and operation of the new road segment for the Burntlog Route would introduce new motorized access to an area where it currently does not exist . " Recommend revising. In no case are the new segments of the BLR more than a mile from existing roads/trails and in most instances much closer.	LAN	The sentence was revised to read "The construction and operation of the new road segment for the Burntlog Route would introduce new motorized access between the Landmark area through to the mine area."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	394	"JCR OSV trail during operations; 7.82 miles: 15.1 acres " This isn't a "new" use, but an existing use that gets returned following use of the JCR during construction. Please delete from table.	LAN	This item was removed from Table 4.15-3 and the acreage and mileage values described in the text were adjusted per the deletion.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	395	"The new ROW corridor is considered a direct effect to land use, changing these areas from undeveloped land to a utility use during construction, operation, and closure and reclamation. " Please clarify that this is not wholly "undeveloped land". While not currently an active Power Line easement, a portion of this alignment was a powerline previously, as evident by historic power poles, guy wires and line on the landscape. Please revise.	LAN	Text revised to read "... changing these areas that were not previously used for powerline alignments to a utility use ..."

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	396	"Recreational use and recreational special use areas adjacent to a new ROW could change due to increased access from new maintenance access roads . " No new maintenance access roads, that are open to the public, are proposed so there will be no change in access. Please revise.	LAN	The powerline Plan of Development calls for use of existing and new access roads as part of the powerline design and construction (POD, Table 2). The EIS text was clarified to read "...due to increased access from new access roads established per the Plan of Development."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	397	"The disturbance area for the tower would be approximately 30 feet by 60 feet, including all required equipment, and would be near the Meadow Creek Lookout, on a summit east of Blowout Creek drainage, or near the proposed transmission line alignment upslope of the proposed Hangar Flats pit. " Please replace " and would be near the Meadow Creek Lookout, on a summit east of Blowout Creek drainage, or near " with " and would be northeast of the Meadow Creek Lookout on a summit on or near "	LAN	Text revised per the suggested revision.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	398	"Access for cell tower and VHF repeater sites in IRAs managed for Backcountry /Restoration would be via helicopter under the Johnson Creek Route Alternative. " Cell tower and VHF repeater locations do not change (with the exception of the one VHF site located at the road maintenance facility). Access to these sites would continue to be via existing road to the MC lookout or via the powerline maintenance road and not via helicopter . Please revise and remove reference to helicopter.	LAN	Revision not accepted. In the description of the Johnson Creek route alternative, helicopter usage for cell town and repeater sites in IRAs is specified.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	399	"Land use impacts from communication towers and repeater sites would be similar to those described under the 2021 MMP, except the repeater sites would be located along Johnson Creek Route." Only the Maintenance facility repeater site is relocated. All others remain the same. Please change " repeater sites " to " the one relocated repeater site ".	LAN	Text revised to reflect a single repeater site.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	400	"Land use would be altered permanently in the mine site. An area that has been historically used for mining would, after the closure of the mine and reclamation of the site, no longer be used for mining; this would be considered an irreversible commitment of land use. " Please clarify why this would be the case or remove this statement. It is always possible that an area could be used for mining in the future. The SGP is an example of that.	LAN	Text clarified to read "An area mined for its mineral resource would, after the closure of the mine and reclamation of the site, no longer have mineral resource value for future mining..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	401	"Areas where specific land uses for the action alternatives would be converted from their original land uses, such as recreational (including special uses), tribal, and timber harvests, to mining uses would be considered an irretrievable commitment of land use, because these areas would not be available for other land uses during the life of the SGP for any of the action alternatives. " An irretrievable commitment by definition lasts into perpetuity. Following reclamation there is the opportunity for tribal, recreational, timber harvest and mining uses to remain. Please replace " an irretrievable commitment " with " a long term commitment " or " a several decades long commitment "	LAN	Irretrievable commitments of resources are not necessarily losses in perpetuity. In this case the loss of other land uses for this area for the duration of the project would be irretrievable because that non-perpetual period of lost use because no mitigation measure would make that use possible at those locations during mining. Therefore, no revisions were made to this sentence.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	15	Comments on applicable SDEIS sections include technical clarifications for Sections 3.15 and 4.15.	LAN	Summation of other comments. No response required.
Samuel Cousins		2	Major Increase In Land Disturbance. The Proposed Project (Operation Area) boundary would total 3,267 acres and would nearly double the footprint of the existing area of mining disturbance. It would move about 100 million tons of mining waste materials and deposit it behind a new 400 foot tall tailings dam. This massive tailings mass would permanently alter the natural scenery and create its own environmental risks in the long-term.	LAN	Restatement of information provided in the SDEIS. No response required.

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Marilyn Olson		4	Although Perpetua prefers to present the SGP as a 'restoration' project, it is a massive industrial mine that will leave the landscape unrecognizable and degraded for lifetimes to come through the creation of three open pits, the permanent storage of over 120 million tons of toxic mine tailings above previously undisturbed wetland habitat, and an expanded footprint that more than doubles the previous disturbance of the Stibnite mining district.	LAN	Restatement of information provided in the SDEIS. No response required.

Access and Transportation

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Wade Olsen (OK Gravel Works)	1000	4	As a company who has helped grade the roads along Johnson Creek and into Stibnite, we are personally familiar with how dangerous driving both Johnson Creek and Stibnite Road can be. We are strong supporters of building Burntlog road because it will reduce the interaction between mine traffic and recreationalists, have a lower risk of avalanche, and not parallel fish-bearing streams. To us, it seems like a no-brainer that Burntlog is the best alternative and according to the SDEIS the Forest Service feels the same way (Ch2. Pg. 2-18) The Burntlog Route would avoid environmental and human health and safety risks associated with the Johnson Creek Route which passes through identified areas for avalanches, landslides, and floods. This route would provide another route for SGP ingress/egress, would decrease SGP and public traffic interaction with the Village of Yellow Pine and Johnson Creek area residents; and would decrease the potential for spill risk adjacent to fish-bearing streams. This Stibnite Gold Project is a huge opportunity for Idaho. Please permit the Modified Mine Plan with Burntlog access	ACC	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative. However, impacts would occur on Johnson Creek and Stibnite roads as a result of road improvements and safety measures that are required during the construction of the preferred route.
Rebecca Lange	6524	3	I know people are concerned about mining's impacts on the environment but regulators identified Perpetua Resources refined plan as a preferred alternative in the Environmental Review Process because they determined the company could mine while minimizing impacts on the environment and communities. One of the ways the company does that is by using Burntlog Road. This reduces the number of stream crossings for mine traffic compared to the Johnson Creek Route, reduces the chances of accidents with recreationalists and minimizes the impacts of potential spills. By keeping traffic away from river crossings, it also lowers sedimentation impacts from mining.	ACC	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative. Impacts to Johnson Creek and Stibnite roads would occur under all alternatives analyzed due to the addition of mine construction traffic while the Burntlog Route is built under the 2021 MMP.
John Drew	6551	2	Looking at landside and avalanche data, it becomes obvious why the USFS named the Burntlog Route as its preferred alternative. According to the SDEIS, the Johnson Creek Route has 45 landside and 94 avalanche paths. While these natural hazards aren't eliminated on Burntlog, they are reduced. Mine traffic will only have to pass 26 landside and 38 avalanche paths while traveling on the Burntlog Route. Simply put, the Burntlog Route is safer. In fact, the SDEIS concludes utilizing Johnson Creek would increase the potential for accidents and spills associated with the project because of naturally occurring geohazards.	ACC	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative. Selection of this alternative does not eliminate the use of Johnson Creek Road during the construction of the Burntlog Route. Proposed mitigation that addresses safety and protection of the environment are included in the Access and Transportation Specialist Report and Hazardous Materials Specialist Report.
Dori Healey (Representative)	7145	2	One of the biggest changes has been the use of the Burntlog Road to access the site. This is a good change that most agree will be helpful to keep traffic away from major water areas such as Johnson Creek. Perpetua resources is planning on making some major improvements to the road that will both widen it and add roughly 15 miles to it. Moving traffic to Burntlog Road will be the safest, lowest risk transportation alternative. Further it is believed that public access to the area would be enhanced by the development of the new access road. This is clearly the best route for both the company and the public.	ACC	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative. The selection of the Burntlog Route does not eliminate the use of the Johnson Creek and Stibnite roads during the two-to-three year construction of the new route.
Linda Wright Hartgen (Senator, District 25)	7193	3	Moreover, the company was concerned about the impact traveling into Stibnite along the Johnson Creek and Stibnite Roads would have on the fish-bearing waterways. As a result, the Company suggested building Burntlog Road. After reviewing the Supplemental Draft EIS, it is clear that the Burntlog road will have the lowest impact on fish and wildlife populations. For instance, the document says that "The Burntlog Route would avoid environmental and human health and safety risks associated with the Johnson Creek Route which passes through identified areas for avalanches, landslides, and floods. This route would provide another route for SGP ingress/egress, would decrease SGP and public traffic	ACC	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative. The Burntlog Route would require two to three years of construction during which time the Johnson Creek and Stibnite roads to the Operations Area Boundary would be used during construction. The potential to impact fish and wildlife are addressed by the proposed mitigation measures outlined in the Final EIS.

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			interaction with Yellow Pine and Johnson Creek area residents; and would decrease the potential for spill risk adjacent to fish-bearing streams." (Ch2. Pg. 2-18)		
Todd Lahey (Senator)	7196	4	The Burntlog Route, which Perpetua has committed to implementing as part of the Modified Mine Plan (MMP), will improve water quality, eliminate the need for ongoing water treatment, and provide the community and the environment with the safest possible transportation option.	ACC	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Jeff Ehlers (Representative, District 21)	7209	3	After a thorough process the preferred alternative supports Perpetua Resources plan to use the Burntlog Route to access the site. This approach is the correct way as the new route into Stibnite is much safer and reduces risks of exposure to avalanche and slide paths. Also, it does not parallel major water ways and reduces company interaction with residential and recreational travelers.	ACC	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative. Selection of the Burntlog Route would require two to three years of construction during which time the Johnson Creek and Stibnite roads to the Operations Area Boundary would still be used. The potential to impact fish and wildlife are addressed by the proposed mitigation measures outlined in the Final EIS.
Susan Dorris (Mayor, Donnelly)	8432	3	We support MMP with Burntlog access route. With the MMP having all consolidated refinements in one document it better finalizes what the plan will look like moving forward. We feel the Burntlog route is best because it returns Johnson Creek to the Village of Yellow Pine residents and recreationalists after construction and keeps mine traffic away from the rivers and most of the avalanche areas.	ACC	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative. Selection of the Burntlog Route would require two to three years of construction during which time the Johnson Creek and Stibnite roads to the Operations Area Boundary would be used. The potential to impact fish and wildlife are addressed by the proposed mitigation measures outlined in the Final EIS.
Steve Hull (Fire Chief, Cascade Rural Fire Protection District)	10178	2	The Access and Transportation Specialist Report, page 61 indicates the Annual Average Daily Traffic to be 65 vehicles per day (45 heavy vehicles and 20 light vehicles). This amount of heavy vehicle traffic is concerning to CRFPD since we are equipped to provide vehicle extrication on light vehicles, however CRFPD's Motor Vehicle Extrication tools are not designed to stabilize or extricate patients from heavy vehicles, nor do we have the proper training to provide this service. In order for CRFPD to be able to provide this service we would need Heavy Duty Extrication and Stabilization Equipment and the proper training to operate them.	ACC	The SGP related traffic is anticipated to increase 65% with 198 SGP related Average Annual Daily Trips (AADT) during construction (SDEIS Table 4.16-2). This is the increase of concern as referenced in the comment. The overall percentage of heavy vehicles, again during construction, is 69% (SDEIS Table 4.16-2). At the end of construction which is estimated at 2-3 years, the operations traffic is anticipated to decrease (156 AADT) to 50% more than the current AADT. The existing traffic on the area roads would continue under the No Action Alternative. The concern of the Cascade Rural Fire Protection Department (CRFPD) is noted. The Transportation Management Plan, as a part of the Environmental Monitoring and Management Program, addresses the issue of accident response; specifically, the Perpetua Resources Vehicle Incident Emergency Response Plan (OHSF-008-L). It is mentioned that the CRFPD and other local emergency first responders would be contacted in the event of an incident. There is also an avenue for first responders to express concerns and challenges through a focus group between the proponent and Valley County.
Nissula, Judith (Mayor of Cascade)	16924	6	There may be additional impacts to the city airport as it primarily services this back-country area. We know there is a lot to consider when approving and permitting a project of this magnitude, it is our hope that Perpetua Resources will continue to work toward positive and meaningful solutions for all concerned.	ACC	An increase in airport services and/or flight demand into and out of the Cascade area are not anticipated. As described in Section 4.21 of the SDEIS and the Social and Economic Conditions Specialist Report, under both the 2021 MMP and the Johnson Creek Route Alternative, it is expected that the employees required for the construction, operations, and closure and reclamation phases of the Project would be retained from the local workforce and would be Idaho residents and thus would not likely require air transportation services to access the vicinity of the Project Area.
Fereday, Rick	17193	9	6. Because of time and budget constraints, the Economic Impact Study did not do in-depth analyses of some of the issues that could be very detrimental. The transportation issues alone (road closures, delays, detours, accidents, etc. could have major impacts on the recreation economy here and there is basically no mention in the SDEIS of what added costs there may be to repair and maintain county roads or the major highways that will be used. The SDEIS mentions at least two times a "road agreement" with the County but there are no details in the SDEIS. I suspect that Valley County taxpayers will be paying millions for road repairs similar to what the County had to pay to repair West Mountain Road after Tamarack was built. Police, Fire, EMS, Health Care and Hospital adequacy and Public Transportation could all suffer funding crises.	ACC	Perpetua has an existing agreement with Valley County for maintenance of Johnson Creek and Stibnite Roads to maintain access to their current private land holdings in the area, including performing maintenance measures to repair segments that have deteriorated. Appropriate revisions to the road maintenance agreement would be established for use of the Johnson Creek Route as a construction route and to ensure year-round access in accordance with Valley County's public road easement stipulations. Maintenance activities would be fully coordinated and subject to approval by the Valley County Road Superintendent. As analyzed in Section 4.16 and in the Stibnite Gold Project, Access and Transportation Specialist Report, while the Johnson Creek Route is in use, Perpetua would coordinate closely with Valley County on road use and maintenance. Under existing conditions, Valley County's use and maintenance requirements involve soil erosion control, vegetation maintenance on slopes associated with earth cut or fill, repair and cleanup of drainage facilities, removal and cleanup of hazardous spills originating from road use, removal of obstructions from the

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					<p>roadway (e.g., fallen trees, limbs), dust control, and snow removal. Revisions could be required to the existing Valley County Road Maintenance Agreement for the Johnson Creek Route for use as a construction route under the 2021 MMP. Further, the proposed haul roads would be built and maintained for year-round access and would be surfaced with gravel materials. Haul Road maintenance activities would be conducted to manage fugitive dust emissions and maintain stormwater management features. Due to the aforementioned road maintenance activities conducted by Perpetua under the existing road maintenance agreement with Valley County and the continuation of such under the 2021 MMP and the Johnson Creek Route Alternative, there would be no increased cost to Valley County and its taxpayers as a result of any SGP-related roadway repair costs, as stated in Section 4.21 of the SDEIS.</p> <p>Impacts to public services are analyzed under Section 4.21 of the SDEIS. Impacts to transportation and public access, including traffic volumes, are analyzed fully in Section 4.16 of the SDEIS.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	19	As another example, critical details about public access along the Burntlog Route are still undecided. While Perpetua states public access will be allowed on the Burntlog Route all the way to the mine site, many of the Forest Service's disclosures and analyses in the SDEIS assume the Burntlog Route would be closed at its current terminus and would not allow the public to travel on the newly constructed part of the road and to the mine site. Without deciding on this, the environmental effects are unresolved and likely have not been adequately considered and disclosed in the SDEIS.	ACC	The Final EIS includes a mitigation measure describing restrictions to public use of the newly constructed sections of the Burntlog Route. The newly constructed Burntlog Route connecting to Thunder Mountain Road for access to the SGP would be a temporary road necessary for mining purposes. The road would not be designated for public motor vehicle use under 36 CFR 212.50 on the Motor Vehicle Use Map. Therefore, for public motor vehicle use to be allowed on the road when other public access roads are blocked by mine operations, one of the other exceptions from the prohibitions on motor vehicle use on NFS land at 36 CFR 261.13 must be met. The 2021 MMP would meet the exception for written Forest Service authorization under 36 CFR 261.13(h) by including a provision in the mine plan for public use of the road when access via other public road is blocked by mining operations. Impacts to public access during construction would be localized, short term, and minor to major. During operations, the newly constructed Burntlog Route connecting to Meadow Creek Lookout Road and then Thunder Mountain Road would allow public access when other routes (i.e., the public access route through the SGP) are not available. Impacts to public access during operations would be localized, long term, and minor; impacts to public access during closure and reclamation would be localized, long term, and negligible.
Idaho Regulatory Agencies	17718	186	<p>IDPR's analysis of the 2022 SDEIS proposed Burntlog Route alignment revealed an opportunity to improve recreation access under temporary authorization for the public to utilize the road during the life of the Project. While the new sections of the proposed mine access road will remain temporary and not be added to the MVUM for public motorized use (36 CFR 212.50), public access may be allowed when addressed in the Mine Plan (36 CFR 261.13(h)).</p> <p>IDPR proposes inclusion into the road-building plan a developed parking area at a location where the proposed temporary road crosses an existing jeep trail and is nearby multiple trailheads. It should be sized to accommodate a modest number of vehicles and feature an informational kiosk typical of trailhead parking areas. This will improve public safety by discouraging roadside parking and improve the access experience for multiple motorized and non-motorized trailheads.</p> <p>The proposed road alignment is adjacent to: Meadow Creek Lookout Jeep Trail 51290, Thunder Mountain <50" Trail 297, and non-motorized trails Big Chief 4224 and Summit 4118 which provide access to the Frank Church-River of No Return Wilderness. Dependent on practical considerations on the ground, location at approximately 44.850, -115.377 (WSG84) we believe would be beneficial to accessing these multiple routes and trailheads.</p>	ACC	The 2021 MMP (the Preferred Alternative) would include construction of one new two-acre parking area west of South Fork Road to accommodate the new dedicated OSV route from Warm Lake to Landmark. No other recreation-focused parking areas have been proposed under the 2021 MMP or the Johnson Creek Route Alternative as the public would still be able to access trailheads via Burntlog Road.
Idaho Regulatory Agencies	17718	169	Reference: "Under the 2021 MMP, public access to the SGP area would be enhanced by the development of a new access road (Burntlog Route) compliant with current road standards... During closure and reclamation, activities including slope recontouring, facility removal, seeding and planting, and post-closure environmental monitoring..."	ACC	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative. A Traffic Management Plan has been prepared and would be in place throughout the life of the Project, which addresses public access along the Burntlog Route. Furthermore, the Recreation Specialist Report provides a full analysis of impacts to recreation under the 2021 MMP, Johnson Creek Route Alternative, and No Action Alternative, in which it is noted that changes in the recreation setting along the Burntlog Route construction corridor (road corridor and

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			The State concurs with the Forest Service’s analysis of closure and reclamation of the Burntlog route after the conclusion of mining activities under the preferred alternative. If the project moves forward under the preferred alternative with public access allowed along Burntlog, the Forest Service should develop official policy guidance documents to inform which recreational opportunities are and are not available along this route. Whether it be a travel plan amendment, a specific Burntlog Restoration and Access Management Plan (RAMP), an appendix of the FEIS and incorporated in the final rule, or some other kind of analysis, it will be imperative that the Forest provides clear guidance to the public on how the Forest plans to manage public access along this route.		surrounding areas) could lead to displacement of dispersed recreational use, particularly related to non-motorized activities, wilderness activities, wildlife-related recreation activities (due to wildlife displacement), and dispersed recreation camping at the Mud Lake and Burnt Log dispersed camping areas. Perpetua and the Forest Service would develop the relevant notices and documentation related to public access to recreation along Burntlog Road during construction, operations, and reclamation.
Giles, Robertt (Mayor McCall, ID)	17834	2	The first example of the Forest Service’s omission of study data for McCall is in the Access & Transportation analysis. The spatial boundary of the transportation and access analysis is improperly restricted. The SDEIS identifies the analysis area in Figure 3.16.1 (SDEIS, page 3-406) as terminating at the intersection of Hwy 55 as it reaches McCall but excludes local streets through McCall. Yet, the Access & Transportation Specialist Report states that one-third of all mine-related traffic will come through McCall and that mine-related traffic will use the Boydston-Deinhard route specifically; yet there is no analysis of the traffic volumes or impacts for this northerly route of the mine traffic coming either from the Port of Lewiston down Hwy 95 to Hwy 55 through the northern part of Valley County down to the Warm lake Road intersection, or for mine traffic traveling north on Hwy 55 from Warm Lake Road once it reaches and travels through McCall. Contrast that with the inclusion of an analysis of the southerly route coming up from Boise on Hwy 55 through Horseshoe Bend and Banks to the Warm Lake intersection. Why was the Northerly route omitted from study? Based on the one-third assumption, the AADT on this route will be 66 per day for the construction phase and 52 per day for the operations phase totaling 20 years of continuous traffic impacts through this corridor which should not have been ignored.	ACC	The Final EIS was revised to assess the effects of transportation related incidents along SH 55. A traffic impact analysis was conducted for the SGP. The analysis area for Access and Transportation was expanded due to the trip generation impacts anticipated along SH 55 north and south of the Warm Lake Road intersection. Current and future conditions were assessed and included the intersections of SH 55 at Deinhard and Boydston lanes. The analysis shows that these intersections are functioning at a level of service that indicates a relatively stable flow of traffic. These flows were estimated through 2040 and with minor improvements would continue to operate with minimal impacts resulting from SGP traffic. Impacts from the SGP are primarily localized and related to the main access routes to and from the mine where the bulk of mine-related traffic would occur during construction, operations, and closure and reclamation and therefore could result in potential traffic, access, and safety issues. The specific segments of primary access roads in the area of analysis are outlined in Table 6-1 of the Access and Transportation Specialist Report and Section 3.16 of the SDEIS, which describes the western boundary of the analysis area running from Cascade north to McCall, and from McCall connecting to Lick Creek Road east from SH 55. The Lick Creek Route Alternative was dismissed from analysis as described in Section 2.6.4 of the SDEIS.
Giles, Robertt (Mayor McCall, ID)	17834	3	Additionally, the SDEIS and Specialist Report use outdated AADT numbers for Hwy 55, from 2015 and 2016, making any analyses of traffic impacts to this corridor inadequate. Data is not only available for more recent years, but that data shows that there have been significant increases in AADT – 38 percent from 2015 to 2020. Hwy 55 is a major route for access to McCall, both for business purposes and for tourism. Using appropriate data to analyze the traffic impacts of mine-related traffic on Hwy 55 is imperative to assessing the true impacts to traffic and access the mine traffic may have on those who use the highway to access McCall and other communities in Valley County. The traffic analysis used in the SDEIS admits that the area’s population has grown rapidly and is predicted to continue at a “substantial rate”. However, the agency contradicts this conclusion by using a static growth population rate for generic rural areas at rate predicted to remain the same or increase at a slower rate (SEIS P. 4-484) in the model used to analyze transportation impacts.	ACC	As disclosed within the footnotes of Tables 6-3, 7-2, 7-3, 7-4, 7-5, and 7-6 of the SGP Access and Transportation Specialist Report, 2019 data from ITD was included as the most recently available traffic data for SH 55 to supplement the traffic data collected in 2015 and 2016. No large developments were anticipated in the study area in the near future. Therefore, the Traffic Impact Study applied an average annual growth rate to existing traffic volumes to account for regional growth and any redevelopment in the analysis area. After reviewing the longer-term historical growth rates beyond the five years used in the report and comparing them to the City of McCall estimated growth rate pending updates to the McCall Master Transportation Plan, the Traffic Impact Study applied an annual growth rate of three percent to forecast 2020, 2030, and 2040 background traffic volumes. This is consistent with McCall’s plan and with historic trends. The growth rate is a conservative forecasting method that accounts for future unknown development in the analysis area. AADT was compared against the 2017 data from the Traffic Impact Study and ITD data for 2020 and 2022 and has been incorporated into Section 3.16 of the Final EIS. Furthermore, the quantitative analysis using a static population growth rate per Forest Service rural area population growth predictions, which are most closely relevant to the area of analysis, provides a clearer understanding of the 2021 MMP and Johnson Creek Route Alternative direct contribution in relation to existing traffic and the transportation system.
Giles, Robertt (Mayor McCall, ID)	17834	4	The Northerly route coming through McCall requires analysis and identification of impacts prior to a final EIS and draft Record of Decision due to the following conditions: The Deinhard/Boydston route through McCall is a local city-owned street, not a state highway, and passes through a residential area along Boydston and then through residential/commercial/industrial property along Deinhard. The SDEIS did not analyze the traffic, socioeconomic, public health and safety, and environmental impacts of this route. The route contains a shared bike/pedestrian pathway system with multiple modes of users on the	ACC	A study of the access alternatives to the SGP was conducted in 2012 (HDR 2012). A portion of Volume 1 is attached as Appendix F to the Transportation Baseline Study (HDR 2017a). As a result of this study, it was concluded that access from McCall to the SGP along the Lick Creek route was not suitable. Detailed analysis and the basis for that recommendation is found located in that document. Therefore, the alternative that included what was originally known as the Lick Creek Route has been dropped from the analysis for the SGP. Two routes, both

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			roadway. McCall's Comprehensive Plan and Pathways Master Plan identify safe, efficient, and interconnected pedestrian and bicycle access and infrastructure as vital to maintaining the character, livability, and quality of life in our town. McCall has spent significant time and resources developing this infrastructure. The SDEIS failed to analyze the impacts to safety and community character of up to 66 significantly large mine-related trucks potentially carrying hazardous materials traveling through this corridor with shared bike/pedestrian access. Additionally, there is an "s" turn that is dangerous in the winter with multiple slide-offs and accidents due to winter weather conditions. (Dodson, D. Truck drivers prefer downtown over bypass, The Star News December 29, 2022). The Highway 55 intersections of this roadway, on the south at Deinhard and on the north at Boydston, were identified in the applicant's Traffic Impact Study submitted to Idaho Transportation Department and Valley County as recently as September 2020 as needing safety improvements to accommodate the turning geometry of their large vehicles.		exiting SH 55 were carried forward for the analysis in the EIS, both using the Warm Creek Road at the intersection with SH 55 in Cascade (the 2021 MMP Burntlog Route and the Johnson Creek Route Alternative). Perpetua would commit to meeting the ITD requirements for SH 55.
Giles, Robertt (Mayor McCall, ID)	17834	7	<p>The second example of the Forest Service's omission of study data for McCall is the secondary impact, or externality created, by the mine's traffic displacing/disrupting current public traffic volumes from the Warm Lake Route to the lesser traveled and less safe route of Lick Creek Road (McCall-Stibnite Road) to access backcountry recreation areas. The Specialist Report states: "As shown in Table 7-2, traffic volumes associated with the 2021 MMP construction would increase approximately 93 percent on Johnson Creek Road and approximately 216 percent on the Stibnite Road portion of McCall-Stibnite Road from Yellow Pine to the SGP. Over a third of the vehicles traveling on these one-lane, native surfaced roads would be comprised of heavy vehicles and would result in slower travel times for non-mine-related traffic and may deter travelers from using these roadways. Travelers may use alternative roadways, including McCall-Stibnite Road and South Fork Salmon River Road, to access the village of Yellow Pine."</p> <p>The mine's construction and operation will create additional traffic in McCall to access Lick Creek Road that otherwise would not have occurred in our residential neighborhoods and will cause faster deterioration of our local roadways causing maintenance and rehabilitation projects to occur sooner than our Transportation Master Plan has forecast. This raises the cost to our taxpayers to maintain our roadways and will degrade the quality of residential neighborhoods.</p>	ACC	<p>The Transportation Baseline Study found that the use of the Lick Creek Route through the town of McCall was not suitable for year-round access because of high avalanche potential and recommended other means of access. The Lick Creek Route through McCall, which closes in the winter, was dropped from the analysis in the SDEIS. A list of the access roads under the Action Alternatives is shown in Table 2.2.1 of the SDEIS.</p> <p>Non-mine traffic may elect to access the area using the Lick Creek Route in lieu of the Warm Springs Road, but it is a 30-mile additional drive for the northbound traffic on SH 55, and therefore not likely to be impactful to the capacity of either the highway or the town of McCall.</p> <p>Further, the comment mentions that the percent increase in traffic on Johnson Creek Road and Stibnite Road is large, but the carrying capacity of those roads would not be expected to be impacted by the 198 SGP related AADT as shown in SDEIS Table 4.6-2.</p>
Giles, Robertt (Mayor McCall, ID)	17834	29	<p>After review of the DEIS, it appears that the City of McCall is mostly excluded from the analyses. General references to McCall are made in many narrative sections but no impacts were specifically analyzed for our community. We believe this is in error based on section 2.3.5.19 Operations Traffic which states that: The estimated annual average traffic during mining and ore processing operations is provided in Table 2.3-7. Supplies and deliveries for the mine site during operations would access the SGLF using State Highway 55 to Warm Lake Road. Approximately two-thirds of all mine-related traffic would originate south of Warm Lake Road and would use State Highway 55 through Cascade and other communities along State Highway 55 south of Cascade including Banks and Horseshoe Bend.</p> <p>Approximately one-third of all mine-related traffic originating north of Warm Lake Road would use State Highway 55 through the communities of Donnelly, Lake Fork, and McCall. Through McCall, mine-related traffic would generally use Deinhard Lane and Boydston Street.</p> <p>Alternative 2, which is the preferred alternative of the applicant, proposes additional transportation impacts due to the Centralized Water Treatment Plant and includes a statement that: During mine operation, the Centralized WTP is expected to require the following chemicals and reagents on an annual basis. Sodium Hypochlorite – 15,000 gallons Ferric Sulfate – 125,000 gallons/year Hydrated Lime – 250 tons Organic Flocculant (polymer) – 1,900 gallons Sulfuric Acid – 2,400 gallons Sodium Bisulfite – 2,000 gallons Organic sulfide precipitant, if needed Transport of these chemicals and reagents would add approximately 40 round trips for delivery to the operational AADT presented in Table 2.4-3. An estimated 2 to 4 employees would be required to operate the Centralized WTP.</p> <p>In all alternatives, except the No Action Alternative, the estimate of one-third of all mine related traffic traveling through McCall remains the same. The DEIS further identifies the types of hazardous materials and explosives that will be transported on and off-site but does not identify which materials will come</p>	ACC	<p>Per the proposed EDF, for vehicle accidents involving other potential hazardous materials spills (e.g., gasoline, oil, vehicle fluids, etc.), Perpetua Emergency Response staff would be dispatched to the accident location to address any hazardous materials spills and local law enforcement would be contacted to control traffic until the route can reopen to travel. Additionally, all transport drivers would be required to have spill response, safety, and resource awareness training. In this program, drivers would be informed of the Idaho State Emergency Medical Service, first hazardous materials responder actions, and the importance of anadromous fisheries that must be protected. Spill kits would be included on all vehicles transporting hazardous materials. In addition, each driver would participate in a SGP safe-driver training course which would cover the operating procedures as well as discuss causes of accidents and how to minimize risks. Chemical use volumes would be reported under the United States Environmental Protection Agency Toxic Release Inventory program, as applicable and required by Section 313 of the Emergency Planning and Community Right to Know Act of 1986. Hazardous chemicals would be transported to the mine site in United States Department of Transportation (USDOT)-certified containers and by USDOT-registered transporters, who would comply with applicable USDOT, OSHA, and MSHA regulations. Transportation vehicles would meet the standards of USDOT requirements and carry required markings, labels, and placards. Transportation of hazardous materials (including explosives) and emergency spill response would be conducted in compliance with Idaho Water Quality Standards, the National Oil and Hazardous Substances Pollution Contingency Plan, and OSHA Hazardous Communication, and HAZWOPER.</p> <p>The Lick Creek Route Alternative utilizing roads through McCall to access the Operations Area Boundary was dismissed from detailed analysis as described in Section 2.6.4 of the</p>

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			<p>through McCall or at what volume. We therefore assume that one-third of all materials will come through McCall posing safety and transportation impacts on our community which should be addressed in your Final EIS.</p> <p>Mitigation measures to address these impacts should be included in the Record of Decision. Deinhard/Boydston impacts and proposed mitigation measures</p> <p>The Deinhard/Boydston route through McCall as identified in section 2.3.5.19 Operations Traffic is a local city street and passes through a residential area along Boydston and then through residential/commercial/industrial property along Deinhard. The City agrees that if mine traffic will come through McCall then Deinhard/Boydston should be the required route through McCall. The alternative route would be for the mine traffic to remain on State Highway 55 (West Lake Street/3rd Street) which travels along Big Payette Lake and through our downtown. This route contains dense residential and commercial neighborhoods, a narrow Right of Way with bike lanes, a 90 degree turn in the heart of downtown, numerous pedestrian crossings, and hundreds of driveway accesses, all of which creates a high number of potential conflicts and traffic delays. Additionally, Big Payette Lake is the sole source of drinking water for the City of McCall and we cannot afford a hazardous material spill into the lake.</p> <p>While the Deinhard/Boydston route is specifically identified in the DEIS, the DEIS did not analyze the socioeconomic, public health and environmental impacts of this route. The route contains a shared bike/pedestrian pathway system with multiple modes of users on the roadway. It travels through a populated residential area. There is an “s” turn that is dangerous in the winter with multiple slide-off’s and accidents due to winter weather conditions. The Highway 55 intersections of this roadway, on the south at Deinhard and on the north at Boydston, were identified in the applicant’s Traffic Impact Study submitted to Idaho Transportation Department and Valley County as recently as September 2020 as needing safety improvements to accommodate the turning geometry of their large vehicles.</p> <p>The DEIS is silent on the safety improvements required for the large vehicle mine traffic on this roadway and only addresses mine traffic impacts on State Hwy 55 much farther south of McCall. Even the applicant acknowledges that the McCall route is of critical interest to their operation as they are engaged in discussions with the Idaho Transportation Department (ITD) and the City for a cooperative agreement between the three parties to ensure intersection improvements are made in order to accommodate this traffic if the mine is permitted. However, the City does not hold any regulatory permitting authority in this matter and is relying on the good faith of the applicant to enter into an agreement to make these improvements. To ensure the safe movement of mine traffic through our community the City respectfully requests that the Forest Service include a mitigation measure in the Record of Decision that the applicant provide intersection improvements identified by ITD and the City of McCall on the Deinhard/Boydston route.</p> <p>Further, the City requests that no mine traffic with hazardous materials and explosives be allowed to travel through McCall until the mitigation measures for these intersections are constructed. The DEIS did not analyze the environmental impact of using the Deinhard/Boydston route. The route crosses the North Fork of the Payette River which is identified by Idaho DEQ as a section 303(d) impaired waterway under the Clean Water Act with multiple TMDL’s in effect. Significant investments have been made by the City, the Idaho Fish and Game Department, the Idaho Department of Environment Quality, the Valley County Soil and Water Conservation District, the National Park System, private non-profit groups and individuals to restore its health as an important part of the overall watershed in this area for fish habitat, recreation and downstream water quality of Lake Cascade. The water quality regulations imposed on the North Fork Payette by Idaho DEQ are so strict that even our community’s treated wastewater isn’t allowed to be discharged into it; 100% of our treated wastewater is land-applied on neighboring farmland. This is in stark contrast to the alternatives in the DEIS to allow treated water discharges into the EFSFSR.</p>		<p>SDEIS. Additionally, any stipulations of approval of the SGP issued by the Forest Service are enforceable and it is incumbent on the mine operator to adhere to them. This includes the routing of traffic through McCall and the safety commitments made by the proponent for implementation of the SGP.</p>

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Giles, Robertt (Mayor McCall, ID)	17834	33	The City respectfully requests that the alternative selected for the Final EIS retain the most access to the backcountry by the public as possible. The alternative should specifically disallow mine traffic on Lick Creek Road. Use of Lick Creek Road should be reserved for only the general public's use so as to prevent conflicts with mine traffic and provide the public an alternative to Warm Lake Road for backcountry access.	ACC	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative. The Lick Creek Route Alternative utilizing roads through McCall to access the Operations Area Boundary was dismissed from detailed analysis as described in Section 2.6.4 of the SDEIS.
Giles, Robertt (Mayor McCall, ID)	17834	34	The City respectfully requests that applicant provide Highway 55 intersection safety improvements identified through a cooperative agreement made with ITD and the City of McCall on the Deinhard/Boydston route. Further, the City requests that no mine traffic with hazardous materials and explosives be allowed to travel through McCall until the safety improvements for these intersections are constructed. The City respectfully requests that applicant provide HazMat response team resources in McCall or another nearby location to ensure timely containment and response to hazardous materials spills as recommended by the McCall Fire District.	ACC	The SDEIS and Access and Transportation Specialist Report mistakenly noted that the SGP would be accessed through McCall using the Deinhard/Boydston route to access Lick Creek Road for access to the SGP from the north. However, the Lick Creek Route was removed from analysis as described in Section 2.6.4 of the SDEIS after it was eliminated under the Transportation Baseline Study (HDR, 2012 and 2017). Mine traffic from the north would travel on SH 55 through McCall in order to reach the SH 55 and Warm Lake Road intersection for SGP access. Mine traffic would not utilize Lick Creek Road, connecting through McCall, as this access was dismissed from analysis as it was determined to not be a feasible alternative (Section 2.6.4.2). There would be a 1.6% increase in traffic on SH 55 (Section 3.16 and 4.16 of SDEIS) from existing conditions during closure and reclamation.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	48	Access and Transportation Context for Disturbance by Past Mining Activities The DSEIS states "[t]here would be a long-term loss of access to land for exercising treaty rights within the Operations Area Boundary while the lands are occupied for mining; however, lands within the Operations Area Boundary have been highly disturbed by past mining activities." EPA notes that the statement "lands within the Operations Area Boundary have been highly disturbed by past mining activities" does not serve a purpose in the context of public access and how it affects impacted Tribes without additional context. The first half of the sentence speaks to the loss of access to the land, and the underlined portion shifts to land disturbance and not access. As written, it seems to suggest that additional land disturbance will not be as impactful to Tribes because the land has already been disturbed in the past. For the FEIS, EPA suggests either removing the identified portion of the text, or providing additional context after it, to clarify that past impacts to the land do not justify or reduce the concerns associated with future land disturbances.	ACC	The text in Section 7.2.2.3 of the Access and Transportation Specialist Report and Section 4.16.2.2 of the SDEIS has been revised with clarifying language.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	19	The development of new transportation routes is glossed over in the SEIS as more of an ancillary impact of mining than one of the primary impacts, and likely one of the longest lasting on the landscape. The creation of new transportation routes in the associated topography will increase, and this is documented in the SEIS, mass wasting events and sediment delivery to sensitive watersheds where heavy traffic will be within 100 feet of ESA designated critical habitat for miles. In addition to the increased risk of catastrophic wildfire, invasive species spread, recreation vs. mining traffic collisions, etc. there will also be a permanent change in the character of the South Fork Salmon River with more vehicles, more routes, and increased damage to the ecosystems our species rely on. Finally, the actual routes (Burnt Log or Johnson Creek) will increase user conflicts, environmental damage for listed species, and will require long-term rehabilitation; all in order to facilitate a mining plan that will leave perpetual on-site damages. If the Project is in the best interests of the public, then the transportation routes should improve existing routes and be in full view of the public throughout the life of the operation.	ACC	The two action alternatives analyzed in full in the SDEIS are the 2021 MMP, which involves construction and use of Burntlog Route to access the Project, and the Johnson Creek Route Alternative, which involves use of the existing Johnson Creek Road to Stibnite Road to access the Project. As described within Chapter 2 of the SDEIS, transportation management functions would be implemented on existing and proposed roads, including road improvements and road maintenance. Each action alternative is analyzed for each present resource category that may be potentially affected, with impact determinations, within Chapter 4 of the SDEIS, including: surface water and groundwater quality and quantity; scenic resources; wildlife; fish resources and fish habitat; hazardous materials; and access and transportation. Furthermore, restoration activities would occur under the SGP to protect streamflows and protect water quality, including improvements to fish passage and habitat quality of the East Fork South Fork Salmon River, which would result in a regional beneficial effect. Additionally, anticipated traffic volume increases for construction and operations under both the 2021 MMP and the Johnson Creek Route Alternative are described in Section 4.16.2.2 and 4.16.2.3, respectively. Under the 2021 MMP, as analyzed in the SDEIS, impacts to traffic volumes would be short term and minor to major during construction, long term and minor to major during operations, and short term and minor during closure and reclamation. Under the Johnson Creek Route Alternative, impacts to traffic volumes would be the same as the 2021 MMP during construction; during operations, impacts to traffic volumes would be long term and major, and during closure and reclamation would be long term and negligible to minor.

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Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	26	Please consider using FR 440 as a route off of the Johnson Creek road and into the mine area, completely avoiding the Stibnite Road and the town of Yellow Pine.	ACC	The two alternatives analyzed in the SDEIS include the 2021 MMP, which would involve construction and use of Burntlog Route from Warm Lake Road to access the Operations Area Boundary, and the Johnson Creek Route Alternative, which would involve access to the Operations Area Boundary via Johnson Creek Road connecting to Stibnite Road from the Town of Yellow Pine. These two alternatives were deemed as the most environmentally, economically, and technically feasible to carry forward for analysis in the SDEIS. Other potential identified transportation and access road alternatives that were considered but eliminated from detailed analysis are discussed in Section 2.6.4.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	13	We are concerned about the dramatic changes to public access proposed in the SDEIS. Increases in motorized use seem inevitable and the risk for illegal use could have major impacts to both the roadless character of the area and wilderness characteristics found in the Burntlog, Black Lake, Meadow Creek and Horse Heaven Inventoried Roadless Areas, all of which are classified as Backcountry Restoration under the Idaho Roadless Rule. Additionally the close proximity of the Burnt Log route could affect wilderness characteristics in the Frank Church - River of No Return Wilderness area. The SDEIS proposes closing 14,221 acres of public access in the project area. These acres provide important public access for outdoor pursuits, such as hunting and fishing, and we question why the closure area proposed is so large.	ACC	The comment expresses concern first about the increase in access and that it may lead to increased motorized use. In Section 4.16 of the SDEIS, it is discussed that there would be an overall increase in road traffic that varies slightly between the 2021 MMP and the Johnson Creek Route Alternative. The concern in the comment is that motorized access that doesn't exist now, specifically the Burntlog Route, would have a detrimental impact on the area. The impacts associated with the Burntlog Route are discussed in relation to the Alternatives in the SDEIS (Section 4.16.2). Upon completion of construction, the Burntlog Route would provide main access to the SGP. Upon closure, the Burntlog Route would be returned to current existing conditions, including reclamation of newly constructed segments where it does not currently exist. Further the comment expresses concern about public access restrictions, which would be anticipated more so during mine construction. Public access would not be allowed on the newly constructed Burntlog Route segments; therefore, the public would need to utilize the public access route through the mine site to connect to Thunder Mountain Road once constructed. Public access would be reduced by road closures from half-day to multiple days during construction on the Stibnite Road, east of Yellow Pine.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	14	While the Idaho Roadless Rule does not prohibit road building in roadless as needed for access to claims related to the Mining Law of 1872 (36 CFR 294.25 (b)), the question of whether the proposed Burntlog route can be accessed by the public or be closed to administrative use only falls to general mining laws and should be considered by the USFS before approving this alternative. Additionally, any new claims for mineral development (i.e. gravel pits) within the four roadless areas affected by this alternative would seem to run contrary to restrictions to new mineral development set forth in the Idaho Roadless Rule for areas designated as Backcountry Restoration. Further, we have serious concerns about impacts to roadless characteristics that a road of this length and size will have if used for mining and/or public travel for the life span of the project. Additionally, the opportunity exists for the illegal pioneering of routes in such a remote area without a serious enforcement presence.	ACC	A mitigation measure has been added to the EIS regarding public use restrictions for newly constructed segments of the Burntlog Route. After construction is completed, public use would be allowed on Burntlog Route only when other public access roads are blocked by mine operations per 36 CFR 261.13 for public use exceptions. Impacts to special designation areas, including Idaho Roadless Areas, are fully analyzed for all alternatives under Section 4.23 of the SDEIS.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	15	The Johnson Creek route parallels Johnson Creek, a known bull trout stronghold. While disturbances to roadless character associated with the Burntlog route are not preferable, the Johnson Creek route could prove deleterious to resident bull trout. The SDEIS seems to downplay the risks of spills and sediment load associated with needed road improvements, would impact bull trout that are using this stream.	ACC	The 2021 MMP utilizing the Burntlog Route is the agency preferred alternative. As stated in the SDEIS Section 4.7.2, the use of the Johnson Creek Route rather than construction of the Burntlog Route would increase the risk of spills and sedimentation in Johnson Creek and the East Fork SFSR, as analyzed for fish resources and fish habitat in Section 4.12 and 5.12.
Jolie Drake	18929	5	Along with on-site use, the transportation of hazardous material is dangerous. The supply and export of mining materials will use the only rural road that accesses the mine: a narrow, treacherous 50-mile stretch of road that sits directly adjacent to the EFSFSR. The project estimates half a million round trips on this road, with many trucks requiring a HAZMAT vehicle escort, where even one spill into the river just feet away could sterilize all life for the foreseeable future.	ACC	The Project includes development of a new mine access route, the Burntlog Route, to limit the amount of traffic and material transportation adjacent to the East Fork SFSR.

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Joseph Pietri	19062	6	<p>New roads concern me and travel along current roads are already a risk, being increased with large vehicles carrying hazardous materials at the top of our watersheds.</p> <p>What are the assurances of those transports being safe?</p> <p>What are the Avalanche safeguards?</p> <p>In winter, snow, ice and avalanche conditions challenge the very best drivers; who may encounter other obstacles regardless of the time of year.</p> <p>Human Error is a serious factor in accidents</p> <p>How can Perpetua guard against that?</p> <p>What is the science that says it will work? Can more studies</p>	ACC	<p>The Burntlog Route would avoid environmental and human health and safety risks associated with the Johnson Creek Route which passes through identified areas for avalanches, landslides, and floods. The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative. Perpetua has prepared extensive safety plans to ensure access and transportation for the public and SGP employees, including a Vehicle Incident Emergency Response Plan and Transportation Management Plan.</p>
Paula Schappachet	19138	3	<p>Traffic – The Warm Lake Highway should be improved with passing lanes and turnouts to insure that passenger cars and recreational vehicles can safely pass slow moving trucks and require Midas Gold to repair and maintain the highway due to the damage that such excessive traffic will cause.</p>	ACC	<p>This concern for traffic safety is noted. The Transportation study: Alternative Access Road Warm Lake to Project Site Volume 1 (HDR 2013) Warm Lake Highway (Cascade to Landmark) predicts an increase of 5.5% to 5.8% above the current traffic. It is anticipated that the addition of between 65 and 68 vehicles per day (SDEIS Table 4.16-1 and 4.16-2) would increase the traffic to 1,242 trips per day (AADT). The traffic added would be mostly heavy, slower moving vehicles. A review of the design criteria used by Valley County indicates that Warm Lake Road is easily within the minimum design capacity (currently 2000 AADT) as mentioned in the Transportation Study: Alternative Access Road – Warm Lake to Project Site, Vol 1. Section 4. This indicates that widening of the roadway would not be warranted based on the additional SGP vehicles.</p>
Paula Schappachet	19138	4	<p>Midas Gold should REQUIRE its personnel to take buses to the site as mentioned in one part of their proposal, not merely ENCOURAGE bus transportation as is mentioned in another part of their proposal. 130 trips per day (11/1 hr. or 1/5 mins) will completely destroy the atmosphere of this area. If the winter weather limits work to May through November (as is suggested in Midas Gold’s proposal), those daily trips will double!!</p>	ACC	<p>As outlined in the proponent proposed EDFs related to Access and Transportation for the SGP, Perpetua would encourage employees to use company provided shuttle buses as transport to the SGLF from towns along SH 55. From the SGLF, to the degree practicable, Perpetua would mandate the use of busing and vans for employees and contractor transportation to the SGP site and worker housing facility. Therefore, to the extent practicable and feasible, employees would be bused to site from the SGLF parking area. Traffic volumes associated with the 2021 MMP construction would increase approximately 93% on Johnson Creek Road and approximately 216% on the Stibnite Road portion of McCall-Stibnite Road from Yellow Pine to the SGP. Impacts to traffic volumes during construction would be localized, short term, and minor to major. Operational AADT would be 156 vehicles (25 heavy vehicles and 131 light vehicles) between SH 55 and the SGLF and 50 vehicles (33 heavy vehicles and 17 light vehicles) between the SGLF and the SGP. Impacts to traffic volume on existing roadways during operations would be localized, long term, and minor to major. During closure and reclamation, the 2021 MMP would generate a total estimated AADT of 27 vehicles (15 heavy vehicles and 12 light vehicles) and post-closure monitoring activities would generate a total estimated AADT of six light vehicles. Impacts to traffic volumes during closure and reclamation would be localized, short term, and minor.</p>
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	403	<p><i>“public use would be allowed on Burntlog Route when other public access roads are blocked by mine operations “...Elsewhere in the SDEIS document, this condition is not indicated for public use of Burntlog.</i></p> <p>Please clarify.</p>	ACC	<p>A mitigation measure describing public use restrictions on newly constructed sections of the Burntlog Route has been added to the EIS to clarify road use.</p> <p>The newly constructed Burntlog Route would be temporary for mining purposes and would not be designated for public motor vehicle use under 36 CFR 212.50, therefore, for public motor vehicle use to be allowed on the road when other public access roads are blocked by mine operations, one of the other exceptions from the prohibited motor vehicle use on NFS land at 36 CFR 261.13 must be met. The approved plan of operations would meet the exception for written Forest Service authorization under 36 CFR 261.13(h) by including a provision in the mine plan for public use of the road when other public road access is blocked by mining operations. Text has been revised in the EIS and Access and Transportation Specialist Report to clarify the exception discussed for public access on the Burntlog Route.</p>

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	404	“Warm Lake Road traffic would increase by 11.9 percent and SH 55 traffic would increase by only 4.0 percent. Heavy vehicles would comprise less than 2 percent of the total traffic on these two roadways; however, due to the one-lane constraints on both roadways, non-mine- related vehicles may experience slower travel times .” Warm Lake Road and SH55 are both 2 lane roads, please correct.	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	405	“Reconstruction of the transmission line along Warm Lake Road and Johnson Creek Road to the Operations Area Boundary is estimated to occur in the third and fourth years of construction and would overlap at the end of the 2021 MMP construction period .” This is incorrect; it is currently anticipated that the transmission line construction will occur in the first year of construction.	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	406	Suggest clarifying the separation of the two segments SH55 to SGLF and SGLF to SGP; the reason being SH55 to SGLF captures the anticipated number of vehicles parking at the SGLF prior to boarding buses to SGP.	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	407	It seems that the cell with the 703 value is incorrect; 135 seems the correct AADT value (70 existing + 65 construction). Please review.	ACC	The correct value for anticipated construction AADT from the SGLF to the SGP is 70 with a footnote that is numbered "3" for the table. Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	408	The description of Burntlog Route as not being designated for public motor vehicle use is not consistent with other sections of the SDEIS which describe it as an “ <i>alternative public access route</i> “. Please clarify the status of the Burntlog Route for public access.	ACC	A mitigation measure describing public use restrictions on newly constructed sections of the Burntlog Route has been added to the EIS to clarify road use. The newly constructed Burntlog Route would be temporary for mining purposes and would not be designated for public motor vehicle use under 36 CFR 212.50, therefore, for public motor vehicle use to be allowed on the road when other public access roads are blocked by mine operations, one of the other exceptions from the prohibited motor vehicle use on NFS land at 36 CFR 261.13 must be met. The approved plan of operations would meet the exception for written Forest Service authorization under 36 CFR 261.13(h) by including a provision in the mine plan for public use of the road when other public road access is blocked by mining operations. Text has been revised in the EIS and Access and Transportation Specialist Report to clarify the exception discussed for public access on the Burntlog Route.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	409	“Approximately 13.5 miles of new private access roads would be created during the life of the mine.” Please clarify the location and purpose of the described “new private access roads”	ACC	The text has been revised to indicate that there would be 13.5 miles of new road managed by Perpetua rather than private access road.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	402	Rail air and water not discussed in Chapter 3. Outside of the analysis area. Please remove.	ACC	This text has been retained in the SDEIS and the Access and Transportation Specialist Report. Although rail, air, and water transportation options for access in the SGP vicinity are outside of the analysis area, the information is important to the analysis of end location impacts for antimony concentrate being hauled off-site. Other modes of transportation are included in the Access and Transportation Specialist Report affected environment.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	97	<p>“Access Roads – 15 miles new road on Burntlog Route Cabin Creek OSV route – 10.4 miles groomed OSV route Utilities – new utility access roads – 25 miles “</p> <p>This should include the JC Rd OSV route. Although it is temporary in nature. Also, the public access route around YP pit. Please review and revise.</p>	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	98	<p>“Access Roads – No new access road miles. No Cabin Creek OSV route. “</p> <p>This should be the same as the 2021 MMP except the Access Roads – Burntlog Route. Utilities and CC OSV route would remain under JCR Alt. Additionally, the JC OSV route would be needed construction through closure and should be included. Also, the public access route around the YP pit. Please review and revise.</p>	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	99	Utility access roads are the same in the baseline as the 2021 MMP – 25 miles for both. Please review and revise.	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	100	<p>“AADT – Construction through Post Closure:</p> <ul style="list-style-type: none"> •Warm Lake Road – 1,826 – 1,868 •Johnson Creek Road – 70 – 120 •Stibnite Road – 30 – 80 “ <p>C & Stibnite road traffic should be the same in the JCR alt as 2021 MMP since the construction traffic numbers are the same. JC Road - 70 to 135 and Stibnite Road – 30 to 95 since the baseline is 70 and 30 respectively, and the construction AADT is 65. Please review and revise.</p>	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	101	<p>“Access Roads – new roads – 28 miles Utilities – new utility access roads – 25 miles “</p> <p>Where does 28 miles come from? States 15 miles for BL Route above. Please review and revise.</p>	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	102	<p>Currently plowed:</p> <p>“Warm Lake Road – 26 miles Stibnite Road – 14 miles “</p> <p>Valley Co currently plows from Yellow Pine to Wapiti Ranch ~9 mi. Please refer to plowing of JC Road in Access and Transportation specialist report; Section 5.1.1, third bullet (page 25). Please review and revise.</p>	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	103	<p>Proposed (new) to be plowed:</p> <p>“Burnt Log Road – 21 miles (currently groomed). Burnt Log Road Extension – 15 miles (proposed new). “</p> <p>Only 2.3 miles of Burnt Log Road is permitted to be groomed. Also, new plowing of JC Rd during construction ~ 16 miles. Please review and revise.</p>	ACC	Revision complete.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	104	Proposed (new) to be plowed: <p>“2021 MMP: <i>Burnt Log Road – 21 miles (currently groomed). Burnt Log Road Extension – 15 miles (proposed new).</i> “</p> <p>“Johnson Creek Route Alternative: <i>Johnson Creek Road – 17 miles (conversion of existing OSV portion of Johnson Creek Road).</i> “ Should include 8 miles of Warm Lake Rd between Warm Lake and Landmark. Please review and revise.</p>	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	105	<p>“Burnt Log Road (plowed).</p> <p><i>Mine site public access during operations (not plowed).</i></p> <p>Loss of winter groomed OSV trail on Warm Lake Road to Landmark. Loss of winter groomed OSV trail on Johnson Creek Road from Wapiti Meadows to Trout Creek campground during construction of Burntlog Route. “</p> <p>“Burnt Log Road” should read “Burntlog Route”.</p> <p>These two statements about OSV losses (for both MMP and JCR alt) fail to describe how these losses will be mitigated, i.e. new OSV routes along CC and the west side of JC Rd to maintain access to Landmark. Should also include that as part of the MMP that following construction JC Rd will be groomed again between Landmark and Wapiti. Please review and revise.</p>	ACC	Table 2.8-1 of the SDEIS provides only a summary of the comparison of impacts under the three alternatives analyzed. Environmental protection measures and mitigation for these losses is described in full and analyzed in Section 4.16 of the SDEIS. Revision to "Burntlog Route" complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	106	<p>“2021 MMP: <i>Forest Service = no change; Valley County = 2.2 miles; State = no change; Private = 13.5 miles (with an additional 4 miles through the SGP)</i> “</p> <p>“Johnson Creek Alternative Route: <i>Forest Service = no change; Valley County = 2.2 miles; State = no change; Private = 4 miles through the SGP</i> “</p> <p>Please provide the source for this information as it differs from what is presented in Chapter 4.</p>	ACC	Section 4.16 of the SDEIS states that a permanent service road through the backfilled Yellow Pine pit would be established for public access, which would result in a total of approximately 2.2 additional miles of new road that would be accessible for public use following reclamation. This section also states that approximately 13.5 miles of new private access roads would be created during the life of the mine.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	677	<p>“Access and Transportation “ Access and transportation direct and indirect effects include air, water and rail. Please included in this subsection.</p>	ACC	Text explaining cumulative effects on other modes of transportation has been added to the cumulative analysis.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	678	<p>“<i>The contribution to traffic volumes of the action alternatives which include traffic generated from the reconstruction of the transmission line combined with these projects would likely have a greater cumulative effect on the roadways closer to the SGP .</i> “ Please clarify if there is an assumption that other projects will use Burntlog Route for access.</p>	ACC	The text has been clarified to note that this assumption does include the Burntlog Route, given that the Burntlog Route would allow for public access when other routes are not available, despite that it would be constructed as a temporary road that is necessary for mining purposes.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	679	<p>“<i>The ASAOC (EPA 2021) (Table 5.1-3) would be additive to anticipated SGP traffic.</i> “ ASAOC precedes SGP , which means it would not be temporally additive. ASAOC is also part of the No Action, in which it is additive to Golden meadows exploration and other geotech programs, NOT the SGP. Please revise.</p>	ACC	Because the ASAOC is considered a Reasonably Foreseeable Future Action as an authorized project that is anticipated to be constructed between 2022 through 2025 (Table 5.1-2 and 5.1-3), impacts of such would be additive to the SGP and is therefore considered a cumulative effect under all alternatives.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	680	<p>“<i>Projects that are currently undergoing reclamation or will in the future would likely cause further damage to any historic properties in the area. These projects would likely be closed, which involves the removal of some of the infrastructure and reclamation of the land to restore native wildlife and plant habitats that are important to Native American tribes. However, mature forest types wouldn't be available for decades. Several CERCLA Removal Actions were conducted by the Forest Service, EPA, and Exxon-Mobil Corporation. These actions also can impact historic properties by removing</i></p>	ACC	Revision complete.

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			<i>potentially hazardous, but also historic, tailings and capping historic dumps.</i> “ Please replace “ would likely ” with “ could possibly ”. Please delete sentence regarding mature forest types.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	47	<i>“Even though upgrades to Johnson Creek Road and Stibnite Road would be made, these roads would still have many curves and slopes.”</i> Recommend clarifying this statement to reflect that either mine access route would be upgraded to a design standard (width, curvature radius) to meet specific design criteria (WB-50, WB-67) to accommodate the vehicles that would traveling on them. Provided in RFAI-79.	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	48	<i>“To continue providing OSV access to Landmark , a 10.4-mile groomed OSV route between Warm Lake and Trout Creek Campground on Cabin Creek Road would be created as part of the 2021 MMP along with a parking area, resulting in a new winter access facility that would be maintained by Valley County.</i> “ This route doesn’t lead to Landmark. Please include discussion about the segment from Trout Cr. Campground to Landmark.	ACC	Revisions made to this discussion.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	49	<i>“For the duration of the SGP, the increase in total volume of mine- related vehicles, specifically heavy vehicles or trucks, on the Yellow Pine and Burntlog routes would result in an increased risk for accidents occurring between public and SGP-related traffic due to the one-lane constraints during construction, for passing slower moving vehicles, and degradation of the road with more frequent heavy vehicle travel.</i> “ Please replace “ Yellow Pine ” with “ Johnson Creek ”	ACC	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	16	Comments on applicable SDEIS sections include technical clarifications for Section 4.16.	ACC	Comment noted.
Jon Robison	19330	3	I am concerned that the Stibnite Gold Project as proposed, will have adverse impacts on my ability to safely enjoy that area with my family. First, I am worried about the safety of driving with my family with the large numbers of trucks carrying hazardous materials on Highway 55, Highway 95 as well as the backcountry roads to the mine site. The Forest Service needs to analyze the accident risks and develop additional measures to reduce risks. These include posting times for truck traffic, requiring pilot cars, organizing vehicles into convoys, and placing spill kits along state and federal highways.	ACC	As outlined in the proponent proposed EDFs related to Access and Transportation for the SGP, Perpetua would encourage employees to use company provided shuttle buses as transport to the SGLF from towns along SH 55. From the SGLF, to the degree practicable, Perpetua would mandate the use of busing and vans for employees and contractor transportation to the SGP site and worker housing facility. Therefore, employees would travel to the SGP by convoy. The possibility of the impacts on public health from potential large quantities of hazardous materials being spilled from a transportation incident is rated as “low,” because the public access would be restricted in the active mining area, public access would be limited during response actions along access routes, and the probability of a large spill would be low. Furthermore, Perpetua has prepared and would implement a detailed Vehicle Incident Emergency Response Plan as well as an Emergency and Spill Response Plan within the SGP Environmental Management Plan Framework. Impacts to public health and safety as well as impacts from hazardous materials are fully analyzed under Sections 4.18 and 4.7, respectively.
Siegel	19355	4	Study needs to be directed to transportation and traffic safety concerns, particularly as they pertain to our sensitive waterways along Hwy 55 and Hwy 95, Idaho’s major north-south corridors and their connecting roads. Approximately one-third of all mine-related traffic originating north of Warm Lake Road would use State Highway 55 through the communities of Donnelly, Lake Fork, and McCall. Through McCall, mine-related traffic would generally use Deinhard Lane and Boydston Street, passing through a residential area along Boydston and then through residential/commercial/industrial property along Deinhard. The route contains a shared bike/pedestrian pathway system with multiple modes of users on the roadway. There is an “s” turn that is dangerous in the winter with multiple slide-offs and accidents due to winter weather conditions. The Highway 55 intersections of this roadway, on the south at deinhard and on the north at Boydston, were identified in the applicant’s Traffic Impact Study	ACC	Section 3.16 and 4.16 of the SDEIS included an analysis of the existing and proposed traffic impacts. The volume of traffic on SH 55 varies slightly between alternatives. The largest is a 1.6% increase in the existing SH 55 AADT. The additional 68 vehicles were included in numerous studies. There are limits to the timing of the mine traffic to 5:00 am to 7:00 pm to further reduce impacts associated with noise, and to decrease the accidents caused by night driving. The alternative formerly referred to as the Lick Creek Route was not carried forward for analysis in the SDEIS (Section 2.6.4.2) as it was determined that the alternative was not feasible based on the Transportation Baseline Study (HDR 2012 and 2017). Two routes, both

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			submitted to Idaho Transportation Department and Valley County as recently as September 2020 as needing safety improvements to accommodate the turning geometry of their large vehicles. These concerns are not addresses in the DSEIS.		accessible via the SH 55 and Warm Lake Road intersection, were carried forward for the analysis in the SDEIS (2021 MMP Burntlog Route and the Johnson Creek Route Alternative). Perpetua would commit to meeting the ITD requirements for SH 55.
Ruth Lewinski	19378	9	A significant increase in traffic is also anticipated. For all road sections, it was unclear if/how Perpetua would be contributing for the burden of increased heavy truck traffic along any of the roadways they will be using.	ACC	Under the 2021 MMP, delivery of materials to the SGP would be planned in advance with established dates and times; therefore, vehicle traffic outside the Operations Area Boundary would likely occur between 5:00 am and 7:00 pm (daylight hours) everyday resulting in approximately five mine-related vehicles traveling on the Johnson Creek Route per hour during the two years the Burntlog Route is constructed. Overall, there would be less mine-related traffic on the road during operations than during construction; however, the driver experience would still be noticeably different than existing conditions with an increase in mine-related heavy vehicles and slower travel times. Similarly, during closure and reclamation, hauling materials would be planned in advance with established dates and times; therefore, vehicle traffic outside the Operations Area Boundary would likely occur between 5:00 am and 7:00 pm (daylight hours) resulting in approximately two mine-related vehicles traveling on the Burntlog Route per hour during closure and reclamation. The more traveled roadways would have a less noticeable change in daily traffic.
Jesse Lutz	19386	11	Average daily traffic counts are not available in the DEIS (or SDEIS). There should be data available on this subject within the document. Road counter data would show current user trends on country and forest service roads within the analysis area. It could also be used in reference to the use proposed on new or improved routes in the analysis area.	ACC	AADT is provided for the SGP access roads within the access and transportation analysis area, provided in Section 3.16 of the SDEIS. AADT increases under the 2021 MMP and the Johnson Creek Route Alternative are provided in Section 4.16 of the SDEIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	158	The Stibnite Gold Project also represents an activity that is not covered by the South Fork Salmon River Road EIS or Biological Opinion and needs to be analyzed for Forest Plan compliance and cumulative effects. The Burntlog Route will likely be impassable for periods of time in winter. Such closures are reasonably foreseeable and should not constitute an emergency and allow for a time-critical, emergency, or weather-related excuses to haul hazardous chemicals down the South Fork Salmon River Road. Instead, the Forest Service should ensure that the Johnson Creek Route is available as an alternative. In addition, the SGP should be designed from the beginning to factor in extensive and multiple delays in transporting materials as a normal part of its winter operations. The Forest Service needs to verify that transportation of hazardous materials, including diesel fuel, will not be allowed at any time on the South Fork Salmon River Road.	ACC	The Burntlog Route and the Johnson Creek Route Alternative are the only two action alternatives analyzed in the SDEIS. All previously analyzed and/or considered alternatives have not been carried forward for analysis (SDEIS Section 2.6). The 2021 MMP (Burntlog Route) is the preferred alternative as it would be the safest alternative for both the human and wildlife environment. Under the 2021 MMP, the Johnson Creek Route would be utilized during the 2 to 3 years of construction for the Burntlog Route, and those improvements would remain during the life of the mine. Further, the 83-mile South Fork Salmon River Route would not be used as access to the SGP (SDEIS Section 4.16.2).
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	166	To begin, the SDEIS is unclear about whether the Stibnite Road between Yellow Pine and the mine site will be maintained year-round as an alternative ingress/egress even if the Burntlog Route is chosen for primary mine site access. As discussed below, due to location and elevation, the Burntlog Route may be impassable for days to a week or more during winter/early spring. Indeed, the Burntlog Route would be the second highest road in the state of Idaho that is maintained year-round. And unlike Galena Summit on State Highway 75, the Burntlog Route travels for 30 miles over 7000 feet and 10 miles over 8000 feet in an area that receives twice the annual snow water equivalent as Galena. Alternate access, such as the Johnson Creek Road from Warm Lake to Yellow Pine and the Stibnite Road between Yellow Pine and the mine site, to allow for emergency services or uninterrupted mining operations, may be necessary.	ACC	Comment noted. Refer to Section 4.16.2 of the SDEIS regarding the Stibnite Road maintenance agreement, wherein it is stated that the existing maintenance agreement with Valley County would continue.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	186	Encouraging public motorized use along these routes may also reduce the opportunities for non-motorized recreation in the area. As such, we recommend that these routes remain closed to public motorized vehicle access, and that Perpetua and the Forest Service provide a more thorough description of measures to prevent unauthorized use, with Perpetua committing to compensate Idaho Power for additional gates and outreach, education and enforcement costs related to restricting access to these routes. The upgraded and newly constructed transmission lines may dramatically increase the amount of unauthorized motorized vehicle use and associated negative impacts, including human-caused wildfire ignitions. Additional outreach and education regarding travel management plans will help keep OHVs on designated routes and slow weed expansion. As part of this effort, we recommend partnering with user groups to help educate users on open routes. Signs and informational kiosks with maps should be placed	ACC	A mitigation measure has been added to the revised EIS describing public use restrictions for the newly constructed segments of the Burntlog Route. Under the 2021 MMP, there would be a public access route through the SGP during the operations, and closure and reclamation phases, however, public access would be intermittently interrupted during the construction phase. Public access through the SGP would provide motorized access to Thunder Mountain Road. Under the Johnson Creek Route Alternative, public access on Johnson Creek Road would be completely restricted for one full year during the first year of construction due to improvements to Johnson Creek Road. Periodic lane restrictions and appropriate signage would be posted to notify motorized vehicle users of construction activities and electronic signage and automated timed stoplights would be present at points of public access to inform the public of seasonal and temporary closures.

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			<p>at all trailheads and staging areas that communicate the Forest Service’s policies and regulations regarding the use of motor vehicles on public lands. Printed materials in maps and at kiosks should include the following points: taking a map and knowing the trail system, keeping vehicles clean, using spark arrestors to avoid wildfires, staying on designated trails, and staying off muddy trails. Photos in outreach materials should display recreationists using proper trail etiquette. These resources should also be available online, and perhaps be accessible using a QR code incorporated into all signs and information kiosks.</p> <p>The agency should indicate it reserves the right to close an area to motorized travel if recreationists do not follow the policies and regulations, or if recreationists participate in destructive riding practices on public lands. Outreach materials should include phone numbers for the relevant Forest Service or utility offices so that members of the public can report violations in a timely manner, thus increasing the capacity of user groups to encourage responsible use of the land.</p>		Overall, public access and motorized vehicle use in the analysis area would still be permitted. The development of recreational print and signage materials is not related to the Forest Service decision to be made on the SGP and is therefore outside the scope of this EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	187	We also recommend that all signs and trail markers should include an emblem of an American flag and the logo of local OHV groups that support the designated trail system in order to discourage theft and vandalism to help ensure that information remains readable and available. The Forest Service and Perpetua need to commit to additional trail rangers in the area for outreach, education, and enforcement actions.	ACC	The development of Forest Service recreational signage is outside the scope of this EIS. Neither the 2021 MMP nor the Johnson Creek Route Alternative propose agency employment within the proposed employee descriptions for construction, operations, and closure and reclamation.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	194	<p>7. The SDEIS fails to clarify public access along the Burntlog Route</p> <p>Adding to this confusion, the SDEIS is inconsistent regarding whether the new 15-mile section of the Burntlog Route will be open to the public or not. The SDEIS states that, “Approximately 13.5 miles of new private access roads would be created during the life of the mine,” (SDEIS, p. 4-490, emphasis added). This statement appears to align with the provisions of the Idaho Roadless Rule being cited for authorizing the extension of the Burntlog Route with new construction that will lead to the SGP mine site. Several Specialist Reports also say that the Burntlog Route will be closed to public access, whereas other documents inconsistently state that the route could be open, will be open when other access is closed or simply will be open. The analysis fails to describe how the Forest Service/Perpetua will ensure that the proposed new section of the Burntlog Route will remain “private” and only available for direct mine-related traffic. Because new road construction for public access is prohibited under the Idaho Roadless Rule, and the Forest Service has failed to identify potential methods enforcing this restriction, authorizing the construction of the route will represent a violation of the Roadless Rule and the Forest Plan. As it stands, increased traffic volumes associated with mine construction, operations, and closure activities will result in decreased wildlife security and impacts to roadless and wilderness values (see below and our specific comments regarding Special Designations). Allowing public access on roads proposed for authorization specifically for mine access will increase impacts to the roadless areas through unauthorized trail creation, increased sediment delivery, and will significantly increase Perpetua’s liability should a traffic accident occur between mine-associated trucks/equipment and a private citizen traveling within the mine site or along the Burntlog Route.</p> <p>Further, traditional closure methods such as Kelly humps or large boulders are obviously inappropriate for this application. Therefore, we recommend the Forest Service require Perpetua to construct and staff an “access control booth” at the point where the existing Burnt Log Road ends and where the proposed new construction of the Burntlog Route would begin during summer operations when the Burnt Log road is open to wheeled vehicles. If mine operations are to extend to 24 hour shifts with traffic potentially moving through this corridor potentially at all times of the day and night, then the booth should be staffed 24 hours/day, seven days/week unless the mine and all associated operations and transportation is closed. During those periods, the road should be heavily gated with all potential “drive around” opportunities closed and/or removed.</p> <p>The recommendation for a staffed access control point will adequately restrict summer traffic on the newly constructed portion of the Burnt Log Road; however, it does not address the increased traffic that will occur on the existing portion of the Burntlog Route during the winter when it is plowed and maintained for mine access. This portion is currently unavailable to the majority of summer motorized</p>	ACC	<p>As stated in the Transportation Management Plan (July 2021), the Burntlog Route would be a two-lane, all-weather, gravel-surfaced road. It would be required to meet all applicable Forest Service design criteria as well as criteria for semi-trailers (WB-50) and oversize deliveries of large equipment (WB-67) and (Parametrix 2018c).</p> <p>Following closure and the reclamation of the Burntlog Route, Stibnite Road from Yellow Pine to the SGP would be restored to the current alignment.</p>

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			<p>traffic (snowmobilers could use the unplowed surface and non-motorized backcountry travelers are known to use the route as well). Should the Forest Service allow public motorized access along the existing Burnt Log Road during winter months (due to increased access resulting from Perpetua's winter plowing and maintenance), the agency would be in violation of the Forest Plan unless this issue is addressed through Travel Management Planning or through a Forest Amendment. An alternative method would be to close the route from its current closure location near Landmark. The most consistent and protective approach would be to keep the current winter closures in place near Warm Lake and not allow new public motorized use on the newly plowed road to Landmark and the same on the Burntlog Route or Johnson Creek Route. As with the proposed Burntlog Route, this access control point should be staffed by Perpetua to ensure that mine-only traffic travels beyond these checkpoints.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	207	<p>16. SDEIS uses outdated population growth data to assess impacts to access and transportation</p> <p>The SDEIS states that the Forest Service/Perpetua used a static growth population rate to analyze the alternative impacts to access and transportation (SDEIS, p. 4-484), with Valley County assuming a four percent population growth throughout the county in the Master Transportation plan. Admitting that the area's population has grown rapidly and is predicted to continue at a "substantial rate," the agency and Perpetua refute these conclusions by saying that, "in general, rural areas have been static, and populations are predicted to remain the same or increase at a slower rate," (SDEIS, p. 4-484). All of Idaho's public lands have experienced exponential use increases throughout the past three years, in part due to the COVID-19 pandemic.</p> <p>The pandemic ushered in a new era of public land recreation with people visiting public lands more often than in years past and with new recreationists discovering and then "loving to death" many of our iconic recreation areas. Further, remote working became more common during the pandemic and many rural towns were severely impacted by sudden growth bursts which have yet to significantly slow. The SDEIS fails to take these considerations into account, resulting in an undervalued analysis of population growth and traffic patterns. The Forest Service needs to update these data, apply more realistic population growth estimates, including data available from the 2020 census, to determine a realistic value, and therefore realistic impacts to access and transportation throughout the region.</p>	ACC	The quantitative analysis using a static population growth rate per Forest Service rural area population growth predictions, which are most closely relevant to the area of analysis, provides a the most appropriate data for analysis of the 2021 MMP and Johnson Creek Route Alternative direct contribution in relation to existing traffic and the transportation system.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	208	<p>17. The SDEIS includes weak recommendations for improvements to the Warm Lake Road/SH-55 intersection</p> <p>Section 4.16.2.2 of the SDEIS describes the proposed improvements to the Warm Lake Road intersection with SH-55. The section also states that Perpetua "would" work with the ITD to improve the intersection to make it appropriate for high levels of heavy and light vehicle traffic. We believe that "would" represents weak language with room for Perpetua to move away from the proposed improvements. There are many instances of this passive language throughout the SDEIS and we recommend a global search and replace with more proactive language such as "will."</p> <p>Regarding the improvements, the SDEIS indicates that they, "may include the addition of a northbound right turn lane, a southbound left turn lane, a new southbound through lane or an acceleration lane on SH 55; modified striping to reduce the skew angle to better accommodate heavier vehicles without additional improvements; and relocation of the 35-mph to 50-mph increase in speed limit on SH 55 at Warm Lake Road farther north," SDEIS, p. 4-485). These proposed improvements are critical to making the intersection safe for increased traffic volumes, heavy vehicle traffic related to construction and supply chain fulfillment (including hazardous materials like fuel, potassium cyanide, and dynamite, to name a few), and transportation of processed materials to an off-site location. If these are the recommendations of IDT for increased safety, then the Forest Service must require Perpetua to complete all said improvements. Requiring these improvements is fully within the purview of the Forest Service being the project review and permitting authority for this project with a clear and undisputed federal nexus.</p>	ACC	<p>The use of future tense language in relation to NEPA analysis is standard in order to ensure that a NEPA document is not "pre-decisional" or assuming a project "will" occur. No revision made.</p> <p>Should the SGP be approved by the Forest Service, all potential improvements to the intersection of SH 55 and Warm Lake Road would be coordinated with the ITD and Valley County; any final improvement design plans would also require approval by Valley County prior to the improvements occurring.</p>

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	209	<p>18. The SDEIS misrepresents maintenance agreements with Valley County</p> <p>There are two locations within the SDEIS (pp. 2-17, 4-486) that indicate that “Perpetua has an existing agreement with Valley County for maintenance of Johnson Creek and Stibnite roads,” (SDEIS, p. 2-17). This is partly accurate. Perpetua has an existing agreement for winter maintenance only of the Stibnite road; there is no existing agreement between Perpetua and Valley County for the maintenance (winter or otherwise) of the Johnson Creek Road. The actual agreement between Valley County and Perpetua is correctly referenced in other locations, including the Access and Transportation Specialist Report. We recommend that the Forest Service complete a global search and replace to correct this error.</p>	ACC	As stated in the SDEIS and the Access and Transportation Specialist Report, Perpetua plows Stibnite Road from Yellow Pine to the SGP under an annual road maintenance agreement with Valley County to maintain access to their private land inholdings in the area. Perpetua also has an existing agreement with Valley County for maintenance of Johnson Creek and Stibnite roads, including performing maintenance measures to repair segments that have deteriorated. Appropriate revisions to the road maintenance agreement would be established for use of the Johnson Creek Route as a construction route and to ensure year-round access in accordance with Valley County’s public road easement stipulations.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	210	<p>19. SDEIS fails to analyze impacts and risks associated with the transportation system beyond the Warm Lake Road/SH-55 intersection</p> <p>Transportation analysis for the SGP effectively ends at the intersection of Warm Lake Road and SH-55. Because this project represents a federal undertaking, the Forest Service and Perpetua are mandated to complete a transportation analysis of the full transportation route. This should include routes for fuel transportation, hazardous chemicals and reagents used in ore processing, and dynamite and ammonium nitrate used for breaking the bedrock matrix and ore deposit matrix. We understand that this could include several routes along SH-55, SH-95 and roads that connect these two primary transportation arteries in West Central Idaho.</p> <p>This analysis should include potential risks associated with transporting materials through municipalities along those routes, assess vulnerabilities with each route, and develop mitigation measures and/or design features that would reduce or eliminate potential impacts from those risks or vulnerabilities.</p>	ACC	All potential SGP access routes within the analysis area are analyzed for direct and indirect effects in Section 4.16 of the SDEIS, with cumulative effects for the same analyzed in Section 5.16 of the SDEIS. The analysis includes traffic increases and access impacts for SH 55, Warm Lake Road, Johnson Creek Road, Stibnite Road, and Burntlog Road from SGP related transportation and access activities. The complete existing transportation network within the analysis area is provided in Table 3.16-1 of the SDEIS as well, including roads that are not proposed as SGP access roads. A complete analysis of public health and safety impacts and hazardous waste, including from potential spills along transportation routes, are analyzed in the SDEIS under Sections 4.18 and 4.7, respectively. Perpetua would also commit to all of the proposed design features listed in Table 2.4-13 of the SDEIS to minimize SGP impacts to the human and natural environment.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	223	<p>4. Burntlog Route public access unresolved</p> <p>Perpetua has stated it is interested in opening the Burntlog Route as a motorized route to the public, particularly when public access through the Operations Area Boundary to Thunder Mountain is closed due to mine construction or operations. The SDEIS is inconsistent as to whether the 15 miles of new construction on the Burntlog Route will be open to the public. Perpetua appears to be deferring to the Forest Service regarding whether or not the Burntlog Route is open to the public:</p> <p>ModPRO21: Same public access on Burntlog Route as Alternative 1 (at USFS discretion).(emphasis added, Refined Proposed Action, October 15, 2021, p. A-2).</p> <p>However, the SDEIS states that, “Approximately 13.5 miles of new private access roads would be created during the life of the mine,” (SDEIS, p. 4-490, emphasis added). This statement appears to align with the provisions of the Idaho Roadless Rule being cited for authorizing the extension of the Burntlog Road with new construction that will lead to the SGP mine site. Several Specialist Reports also say that the Burntlog road will be closed to public access, whereas other documents inconsistently state that the route, “could be open.” For example, SDEIS (2-20) states "Public use of the Burntlog Route would provide motorized access to Meadow Creek Lookout Road (FR 51290) and Monumental Summit."</p> <p>The analysis fails to describe how the Forest Service/Perpetua will manage public access or ensure that the proposed new section of the Burntlog Route will remain “private” and only available for direct mine-related traffic.</p> <p>As it stands, increased traffic volumes associated with mine construction, operations, and closure activities will result in decreased wildlife security and impacts to roadless and wilderness values (see below and our specific comments regarding Special Designations). Allowing public access on roads will increase impacts to the roadless areas through unauthorized trail creation, increased sediment delivery, and will significantly increase Perpetua’s liability should a traffic accident occur between mine-associated trucks/equipment and a private citizen traveling within the mine site or along the Burntlog Route.</p>	ACC	<p>A mitigation measure has been added to the revised EIS to describe public use restrictions on the newly constructed segments of the Burntlog Route.</p> <p>As analyzed in the SDEIS under Section 4.16, traffic volumes on SGP access roads would be increased above current conditions during all phases of the SGP.</p>

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	226	In the winter, non-OSV vehicles currently cannot go past the Warm Lake area. We recommend continuing this and stopping all road traffic at the normal winter turnaround point and not allowing non-OSV vehicles on the Landmark Road or the Burntlog Route in winter. OSV use could continue from Warm Lake as proposed in the SDEIS, following winter travel planning. Outside of winter, we recommend opening the Warm Lake to Landmark road and the Johnson Creek Roads and the normal section of the Burnt Log Road to public motorized vehicles on the usual schedule as conditions allow but keeping the new portion of the Burntlog Route closed to public motorized vehicle use.	ACC	The alternatives analyzed in the SDEIS would not impact existing Forest Service seasonal road closures for motorized vehicle access. The newly constructed Burntlog Route connecting to Meadow Creek Lookout Road and then Thunder Mountain Road would allow public access only when other routes (i.e., the public access route through the SGP) are not available.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	227	If the Burntlog Route is selected, it will be an unreliable transportation corridor in the winter and the Forest Service should keep the Johnson Creek Route available as an alternative access for wheeled vehicles route all winter long. In addition, the SGP mine project should be designed from the beginning to factor in extensive and multiple delays in transporting materials as a normal part of its winter operations. Burntlog Route or Johnson Creek Route closures should not be used as an excuse to haul hazardous chemicals down the South Fork Salmon River Road.	ACC	The 2021 MMP (the Burntlog Route) is the agency preferred alternative. The existing Johnson Creek Road would still remain available as a public Forest Service road and would be used for the first two to three years of the Project during construction of the Burntlog Route. Use of South Fork Salmon River Road to access the SGP, including for transportation of hazardous materials or other SGP materials and equipment, is not proposed. It is noted in the analysis in Section 4.16 that winter driving conditions do influence slower speeds and less traffic volumes and would in turn influence the amount of mine-related traffic on the SGP access roads compared to public traffic. During winter road maintenance, snow would be removed from the Burntlog Route plus its temporary construction access, haul roads at the SGP, and the Johnson Creek Route.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	333	13. Road construction and use are highly likely to affect wildlife species. The description of public road access is inconsistent in the SDEIS. In addition, the Forest Service appears to ignore the requirements of the Travel Management Rule when designating new motorized routes for the SGP. Hence, the analysis of effects to wildlife is also inconsistent and, therefore, flawed. The SDEIS inconsistently describes public access throughout the document. In some sections it is asserted that "After construction is completed, public use would be allowed on Burntlog Route when other public access roads are blocked by mine operations," while in other places it is assumed that the public may have unlimited access. Representatives for Stantec, the company that prepared the SDEIS, gave conflicting answers when asked; one said the analysis was supposed to assume the "worst case scenario" of unlimited public access, while the other individual said they assumed the road would only be used by the public when access was closed elsewhere. The portion of road to be closed to public use in winter was also unclear. See 2.4.4.3 Access Roads, Figure 2.4-5 (p. 2-18) and descriptions in ch. 4 under Access and Transportation (p. 4-486, 4-487, 4-490); Recreation (p. 4-533, 4-534). See Ch. 4 Recreation which initially says the road from Warm Lake to Landmark would be closed to the public in winter, and then states the opposite (p. 4-435, 4-454, 4-459).	ACC	A mitigation measure has been added to the revised EIS to describe public use restrictions for newly constructed segments of the Burntlog Route. Existing segments of Burnt Log Road would be closed to the public during construction of the Burntlog Route. After construction is completed, public use would be allowed on the newly constructed segments of Burntlog Route only when other public access roads are blocked by mine operations under the considerations under 36 CFR 261.13 for public use exceptions. Once completed, Burntlog Route would be plowed in the winter, potentially providing additional opportunities and access for winter motorized recreation, which may result in increased winter recreational use along the Burntlog Route corridor. Valley County does not plow Warm Lake Road from Warm Lake to Landmark; this section is a designated groomed OSV route. The Warm Lake to Landmark groomed OSV route and Johnson Creek Road groomed segment from Landmark to Trout Creek campground would be closed for the duration of the 2021 MMP. To replace this recreational use, a dedicated alternative OSV route would be established from the Warm Lake area to Landmark via the Cabin Creek/Trout Creek drainages and adjacent to the Johnson Creek Road on the west side. Establishing this replacement OSV route would minimize the interactions between SGP traffic and recreational traffic in the winter. The SDEIS has been revised accordingly where inconsistencies regarding public access were previously stated.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	334	Since this route will have a major impact on ESA-listed species, it is essential that the newly constructed portion of the route is permitted only as a temporary road used solely for mining purposes, with no public access and should not be part of the minimum road system as defined under the FS's Travel Management Rule as regulated by 36 CFR 212, 251, 261, and 295 – Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule. Information provided in the SDEIS Access and Transportation section (p. 4-490) does not fully address the concerns expressed above - that the Burntlog Route be permitted only as a temporary road used solely for mining purpose with no public access (except "when other public road access is blocked by mine operations"). The SDEIS states: The newly constructed Burntlog Route connecting to Thunder Mountain Road would be a temporary road necessary for mining purposes and would meet 36 CFR 228A requirements for environmental protection to assume that mine operations are conducted to minimize adverse environmental impacts to the extent feasible for roads. Accordingly, the road would not be designated for public motor vehicle use under 36 CFR 212.50 on the Motor Vehicle Use Map. Therefore, for public motor vehicle use to be allowed on the road when other public access roads are blocked by mine operations, one of the other	ACC	Although the newly constructed Burntlog Route connecting to Thunder Mountain Road would be a temporary road necessary for mining purposes, after construction is completed, public use would be allowed on Burntlog Route only when other public access roads are blocked by mine operations under the considerations under 36 CFR 261.13 for public use exceptions. The Burntlog Route would be needed through closure and reclamation at the SGP. After reclamation work is completed, the Burntlog Route would be decommissioned, and the existing upgraded segments of Burnt Log Road would be narrowed to their pre-mining widths while the new roadway segments of the Burntlog Route would be completely removed and reclaimed.

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			exceptions from the prohibitions on motor vehicle use on NFS land at 36 CFR 261.13 must be met. The approved plan of operations would meet the exception for written Forest Service authorization under 36 CFR 261.13(h) by including a provision in the mine plan for public use of the road when other public road access is blocked by mine operations. (p. 4-490).		
Samuel Penney (Chairman)	19396	148	3.16 Access and Transportation The details of the post-closure access through the proposed mine site to the Thunder Mountain road is still to be determined.	ACC	The construction of the Burntlog Route under the 2021 MMP would connect to the Thunder Mountain Road during construction and operations and then be reclaimed at the end of mining. The connection to the Thunder Mountain Road would then be restored (SDEIS Section 4.16) during closure. Under the Johnson Creek Route Alternative, a public access road through the SGP connecting Stibnite Road to Thunder Mountain Road would continue but require improvements to the Burnt Log Road through the SGP. This would be maintained for public use (Transportation Management Plan 2.3.3).

Heritage Resources

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19130	7	The overstating of SGP impacts in the SDEIS extends to discussions related to tribal heritage resources. There is a dearth of information provided to support and implement protective measures regarding any particular identified traditional cultural property ("TCP") locations at the SGP site. At this moment, there is insufficient information provided to warrant designation of a TCP District or a "Cultural Landscape." Perpetua Resources supports completion and implementation of the Programmatic Agreement ("PA") under the National Historic Preservation Act ("NHPA") and 36 Code of Federal Regulations 800 to provide SGP mitigation for cultural and other historic properties, as described in the SDEIS.40 As indicated in the previous sections above, Perpetua Resources welcomes broader engagement with the Tribes for continued access to and use of identified locations of cultural importance, consistent with health and safety protocols.	HER	The Forest Service is currently consulting and working with the Tribes regarding tribal resources that may be TCPs. Due to the confidential nature of this information, details are not currently available. However, as the Forest Service is aware that these potential TCPs exist, it must be disclosed in the EIS qualitatively. Once a tribal resource is defined and evaluated, continued access and use can and would be discussed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	681	"For all RFFAs on federally managed lands historic properties would be governed by the NHPA Section 106 process. " Please also reference the Section 106 process and Programmatic Agreement that will be finalized for the SGP, reducing the potential for cumulative impacts.	HER	The Section 106 process was referenced in the sentence. The project-specific PA is accounted for in the discussion of impacts in Chapter 4 and therefore does not need to be specifically called out in cumulative effects. However, a general sentence regarding PAs has been added to the paragraph.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	410	"The SGP would impact historic properties through ground disturbing activities during construction, operation, and closure and reclamation phases." An impact(s) has not yet been defined in the documents. Please replace " would " with " may ".	HER	The Forest Service has determined that the actions would have an impact if implemented as proposed. "Would" is conditional on whether the Proposed Action is implemented. Project design features may be developed to avoid impacts; however, avoidances are not in the Proposed Action as it stands but could be developed under the PA. Revision rejected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	411	"Number and location of above-ground historic properties, TCPs, and CLs that may have altered viewsheds as a result of the SGP activities." Please define " altered viewsheds " more specifically with respect to degree of alteration as this will inform whether it is negligible, minor, moderate or major.	HER	Altered viewshed would be something such as a natural, mostly undisturbed viewshed changing to an industrial mine viewshed, or a natural, undisturbed viewshed changing to include a roadway or transmission line. The degree of alteration is in part dependent on the integrity of setting of the resource.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	412	"The SGP would create noise and vibration that could impact the soundscape, solitude experiences, and fragile standing or partially standing historic properties, TCPs, and CLs. " Please provide a reference for the impact that noise and vibration would have to fragile standing or partially standing historic properties, particularly in contrast to the risk of weathering impacts, including snow loads. If there are none of these properties, please delete it from this list.	HER	Roberts, Cedric. 2009. Construction Noise and Vibration Impact on Sensitive Premises, Proceedings of Acoustics, 23-25 November, documents that heavy equipment use results in noise and vibration effects on fragile standing or partially standing historic properties. Comparison of vibratory impacts on historic properties from the SGP to those of weathering or snow loads is not appropriate as those natural processes are equal under any alternative and not dependent on the proposed Project. The Forest Service analyzes the impact of the Proposed Action and alternatives on resources.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	413	"The NEPA impacts definitions are provided in Table 4.17-1. " These are not "...NEPA impact definitions... ", they are NEPA impact descriptions developed specifically for Heritage Resources for this EIS. Please provide this clarification.	HER	Revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	414	"The assessments of potential effects to historic properties are presented in the context of Section 106 of the NHPA and focuses on the potential effects of each alternative on historic properties, which for purposes of this assessment includes those listed on or eligible for listing on the NRHP and those that have not yet been evaluated for listing on the NRHP and located within the defined APEs. " This sentence fails to mention the required mitigation under Section 106, and therefore is only telling the impact side of the equation. Please add " and required mitigation " after " on the potential effects ".	HER	Revision not made as required mitigation has not been determined at this time. The following sentence was added to the narrative: "If adverse effects are identified, then project design features and/or mitigation measures would be required to resolve adverse effects to historic properties and would be addressed in the SGP PA."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	415	"Ongoing activities associated with the CERCLA work per the current ASAOC would continue over the next few years would not affect any historic properties. " Suggest including a reference from the ASAOC permits to support.	HER	A citation to Hauer 2021 was added to the narrative.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	416	"Restricted access to the mine site area during construction, operations, and closure and reclamation would affect tribal access to important sites and resources, some that could be identified as TCPs and CLs." Please replace " would " with " may ".	HER	The Forest Service has determined that the actions would have an impact if implemented as proposed. "Would" is conditional on whether the Proposed Action is implemented. Project design features may be developed to avoid impacts; however, avoidances are not in the Proposed Action as it stands but could be developed under the PA. Revision rejected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	417	"Restricted access to the mine site area during construction, operations, and closure and reclamation would affect tribal access to important sites and resources, some that could be identified as TCPs and CLs. " Please define how "important" is determined.	HER	Clarification was made. Sentence now reads "...culturally significant tribal sites and resources, ...".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	418	"One site (10VY1488, the Stibnite Lithics site) could be adversely affected by the mine construction and operations. However, if the site could be avoided through siting redesign measures, the effect to the site would not be adverse. " The project design takes this site into consideration and has a 500ft buffer around the identified site for any infrastructure or construction activities. Therefore, the site is being avoided and the effect would not be adverse. Please revise.	HER	Sentence revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	419	"Included in this route is the road connector to the Meadow Creek Lookout where VHF repeater site installation would occur which would have the potential to affect historic properties. " There is already a USFS solar and antenna array at the site. The VHF repeater would not result in a larger effect on historic properties. Please revise.	HER	This sentence was revised to reflect a potential viewshed impact.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	420	"The proposed groomed OSV route on the west side of Johnson Creek Road between Warm Lake Road and Cabin Creek Road would require tree removal, which could potentially adversely affect culturally modified trees that may be present. " Please define "culturally modified trees".	HER	A culturally modified tree is a term used to describe trees that have been modified or scarred by humans either prehistorically or historically (Reiser and Huckaby No Date). Modifications can include bark/cambium removal, trail blazes, territorial or boundary markers, deliberately bent limbs or trunks, delimiting, and use of a living tree as a structural element. Additionally, culturally modified trees can include arborglyphs or tree carvings often made historically by shepherders and others passing through the area. The definition has been added to the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	421	"A total of 43 historic properties as defined for this assessment are located within the APEs for the access routes associated with the SGP, including the Burntlog Route and Johnson Creek Road. None of the identified archaeological sites are within the Physical APE." Please delete "archaeological sites" in this sentence. This is the only place it is used in the section and making a distinction between archaeological sites and historic properties (used 55 times in this section) is confusing.	HER	Archaeological sites has been revised to historic properties.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	422	"Although the resource would not be physically impacted, the addition of communications equipment could create an adverse visual effect. " This equipment would not create an adverse visual impact - it is installed adjacent to the larger existing Forest Service telecommunications facility located adjacent to the MC lookout. Please revise.	HER	Slight revision. The disturbance associated with adding a VHF repeater site and the equipment itself could create a visual impact.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	423	"However, the potential effects to potential TCPs and CLs should be evaluated if such historic properties are identified through future consultations with tribal partners. " This should be the determination of the PA not the NEPA document. Recommend changing language to match that used about regarding "addressed in the PA".	HER	As noted in the response to 19130.7, the Forest Service is consulting with the Tribes regarding TCPs and CLs. A sentence was added to the narrative stating: "This will be addressed in the PA."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	424	"Impacts to heritage resources would be short term to permanent, localized, and minor to moderate depending on avoidance and mitigation." Please include that the process would be in compliance with Section 106 and the PA.	HER	The following sentence was added to the end of the paragraph: "The PA would outline the process and procedures for mitigation for adverse effects to historic properties as described in Section 4.17.3."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	425	"Impacts to historic properties would be short term to permanent, localized, and minor to moderate depending on avoidance and mitigation. "impacts have not yet been defined in the documents. Please replace " would " with " may ".	HER	"Would" is conditional and not definitive. Revision rejected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	426	"Historic properties that could be impacted by the SGP constitute an irreversible commitment, regardless of mitigation . Once gone, only the data collected remains; the resources cannot be used for any additional purposes. " This is inconsistent with the fact that mitigation will occur. Data collection and curation has value. The documentation can be studied again and in the future more research can be done, just like any collection and curation of archaeological resources. So at most it would be a partial irreversible commitment in which the "context" of these resources are lost. Please revise.	HER	For archaeological sites that would be physically impacted or destroyed by the SGP and recommended for data recovery, the resources itself would in fact be lost. Archaeology is a destructive science and the data collected <i>is</i> the mitigation but does not equal the fact that the resources (its features, physical qualities, cultural significance, setting) are destroyed by the action of excavation.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	427	"Implementation of any action alternatives could result in an irretrievable commitment of historic properties if avoidance and mitigation measures of the SGP are not implemented . " Mitigation will be required under Section 106 and embodied in the PA. Please state that.	HER	Revision made. "...historic properties; however, avoidance and mitigation measures stipulated in the Project-specific PA would minimize these impacts and provide mitigation for the adverse effects to historic properties."

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	428	"If TCPs or CLs are identified, short-term use may be denied while protecting long-term productivity." Please provide a reference to CFR's or other regulation allowing such a denial.	HER	Denied was not the appropriate word. Revised to "restricted" as access to areas may be restricted by Project activities for safety reasons.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	17	Comments on applicable SDEIS sections include technical clarifications for Section 4.17.	HER	No response required.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	255	e. Johnson Creek Johnson Creek was determined to have an ORV of heritage and is deemed as an eligible Recreational segment from Bear Creek to Hansen Creek: "There are twelve to fourteen historic sites and ten prehistoric sites on Johnson Creek that are eligible for listing on the National Register. They consist primarily of homesteads and sites associated with the Thunder Mountain gold rush, circa 1900-1904. Two of these sites are Forest Service administered compounds: Johnson Creek Guard Station, built in the 1920s and Landmark Ranger Station, built in the 1930s by the Civilian Conservation Corps. One of the Forest's most spectacular sites, a biface cache 4,000 to 6,000 years old, is located in this area." (Appendix D, WSR Eligibility Report). The SDEIS also states, "Any historic properties located within the 2.9-mile eligible corridor would contribute to its Heritage ORV (Forest Service 10a, such as the existing Idaho Power Company Line 328 (transmission line) that is recognized as a contributing Heritage resource and would be replaced with a higher-capacity line as part of the SGP" (p. 3-488).	HER	According to current project data, along this particular segment of Johnson Creek (between Bear Creek and Hansen Creek), there are eight historic properties within the 1 mile VAV APE, three of which are within the Physical APE. There would be No Effect to five of them and No Adverse Effect through avoidance or mitigation to the other three; therefore, there would not be an impact to the heritage ORV of this segment. Since publication of the SDEIS, IPCo reevaluated Line 328 and recommended the site as not eligible for the NRHP. Idaho SHPO concurred with this recommendation; therefore Line 328 no longer contributes to an ORV of heritage for Johnson Creek.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	264	Q. Cultural Resources The SDEIS and Heritage Resources Specialists Report both make reference to the fact that for the purposes of this analysis and respective associated documents, the term "Heritage Resources" is used in the same context as "Cultural Resources." While this is based on findings in the 2003 Payette Forest Plan, and the desire to create a more inclusive environment, the term "Heritage Resources" is not recognized or present in Section 106 language nor is it found in other regulatory documents, rules, or codified law. Therefore, for consistency with NEPA, the National Historic Preservation Act of 1966 (as amended through 1992), the Archaeological Resources Protection Act of 1979, and the Native American Graves Protection and Repatriation Act of 1995, we continue to refer to archaeological, prehistoric, protohistoric, and historic-period historic properties as "Cultural Resources" or "Historic Properties."	HER	As noted in Section 3.17.1.1, the term heritage resource is used synonymously in place of cultural resource. This was done to alleviate confusion between resources that fall under the purview of Section 106 and tribal use of the term cultural resources that is more encompassing. Further, not all cultural or heritage resources are historic properties as only those eligible for the National Register of Historic Places qualify as historic properties. No revisions made.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	265	According to the SDEIS, 53 archaeological investigations, consisting primarily of Class III pedestrian surveys, were completed prior to 2012 (approximately 5,400 acres were subjected to intensive survey, while approximately 2,400 acres received reconnaissance-level surveys due to steep slopes, unsafe terrain, or extensive previous disturbance attributable to wildfire and past mining activities; SDEIS at 3.17-17). Additional archaeological investigations were conducted by AECOM Technical Services, Inc., and include a re-evaluation of the Stibnite Historic District, an intensive 38.2 mile survey of the proposed Burntlog Road, and another intensive 5.3 mile survey of the Riordan Creek Alternative alignment. AECOM also conducted limited testing of a precontact archaeological site to determine the presence or absence of artifacts and define an accurate site boundary (AECOM 2020). Finally, PNF staff requested a records search from the Idaho SHPO, which resulted in the identification of an additional 48 previous	HER	All areas within the Operations Area Boundary that would be disturbed by the Project have been inventoried for heritage resources. Guidance from the ACHP provides for phased identification for long-term and complicated projects. As no disturbance is proposed in the additional 2,000 acres, inventory does not need to occur in advance. Forest Service paused the Programmatic Agreement process until after the comment period on the SDEIS in order to consider any additional historic properties concerns provided by the public.

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			<p>archaeological surveys. In total, 101 surveys have been conducted in the analysis area, resulting in a total of 147 previously recorded archaeological sites and 95 historic sites including buildings, roads, and above-ground resources (Specialists Report, p. 27). Hauer (2021) conducted an archaeological survey of 124.6 acres associated with the CERCLA 2021 ASAOC for the mine site; three new sites and five previously recorded sites were identified.</p> <p>Following a reevaluation of the Stibnite/Meadow Creek Historic District (10VY262/85-335; NR Inventory #87001186) by PNF staff and the Idaho SHPO, the agencies determined that the Historic District no longer meets the criteria for eligibility for inclusion in the National Register of Historic Places (NRHP). Therefore, the proposed actions and the associated potential impacts from the SGP will have no effect on the District’s cultural resources. However, one site (10VY1488, the Stibnite Lithics Site) is located within the physical proposed mine operation area and, “could be adversely affected by the mine construction and operations,” (Specialists Report, p. 40). We discuss recommendations for this, and other NRHP-eligible or potentially eligible historic properties later in these comments.</p> <p>The Operations Area Boundary (OAB, defined as the area in which Perpetua would control public access) consists of 14,227 acres, of which over 12,000 acres have been inventoried for cultural resources, resulting in over 80 percent of the OEB has been inventoried (Specialists Report, p. 27). However, this leaves roughly 2,000 acres which have not been adequately inventoried either through intensive or reconnaissance survey methods. Even though the project proponent, the Forest Service, potentially impacted and affected tribal nations, and the Idaho SHPO are currently working to develop a Programmatic Agreement which will provide provisions for ensuring compliance with Section 106 of the NHPA and for identifying TCPs and CLs prior to ground disturbance activities associated with the SGP (SDEIS, p. ES-26, Specialists Report, Table 2-2, p. 11), this should not preclude Perpetua Resources and the Forest Service from completing Section 106 compliance surveys.</p> <p>The Forest Service and Perpetua Resources are obligated to complete surveys of all the potentially affected areas, and include those results in the project’s EIS. Since this has not been completed, we recommend that the Forest Service and Perpetua Resources conduct Class III pedestrian surveys in the remaining 2,000 acres that have yet to be surveyed and document the results of those investigations in a Supplemental EIS. While current Section 106 compliance allows for the completion of phased resource identification and mitigation, pushing resource identification and evaluation out to an unknown future date strips the public of the ability to make informed recommendations and suggestions based on potential impacts to said resources. Further, the Forest Service and Idaho SHPO cannot make reasonable assessments regarding the project’s cumulative impacts to cultural resources without knowing what resources are located within the physical APE, including transmission lines, roads, OSV routes, and off-site maintenance buildings.</p> <p>The forthcoming Programmatic Agreement should focus on newly discovered historic properties inadvertently uncovered or identified as a result of ground-disturbing activities, vegetation clearing or infrastructure build out, and on the process for protecting traditional cultural resources. The DEIS states that “a Stibnite Gold Project-specific Programmatic Agreement (PA) is being developed, and that legally-binding NHPA Section 106 document would include language that specifies how the United States Forest Service (Forest Service) will complete identification of the cultural resources Area of Potential Effects (APE), what the level of effort for identification of historic properties will be, how effects to historic properties will be assessed, and how specific effects will be resolved in consultation with SHPO, the Advisory Council on Historic Preservation, tribes and other consulting parties. Additionally, it will identify mitigation measures and how the Forest Service will ensure that they are carried out,” (DEIS at 4.17-2, 4.17-3). The SDEIS indicates that the Forest Service and Perpetua Resources have yet to fully develop the PA, which is unreasonable. This critical document should be finalized and include any forthcoming environmental analysis documents, including but not limited to the final EIS or any additional supplemental documents.</p> <p>The SDEIS cannot be considered complete and accurate without the inclusion of these important data and information. While the Forest Service and Perpetua Resources do proclaim that the information will</p>		

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			be included prior to the record of decision, this does not allow for the affected tribes nor the general public to adequately understand the potential impacts to these finite, yet long-protected and highly valued cultural resources. We recommend that the Forest Service withhold a determination until the full value of, and potential impacts to the Stibnite Gold Project cultural resources is known and documented in a supplemental or final EIS.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	267	<p>The SDEIS also makes reference to best management practices (BMPs) that will be implemented when and where appropriate and applicable (Specialists Report, p. 11). However, the BMPs referred to are the Best Management Practices for Mining in Idaho (Idaho Department of Lands, 1992). We are astounded that in the 30 years since the publication of this document that more updated and relevant information regarding mining BMPs, available technologies, and standards are not available to the Forest Service. In fact, we refer the agency and Perpetua to additional resources that should be considered and incorporated into the BMPs for the SGP.</p> <p>As of January 2022, 240 historic properties, including archaeological sites and above-ground resources, have been identified in the APEs. Of those 240 historic properties, 97 are determined ineligible for inclusion to the NRHP, 61 are documented as eligible for listing, three are National Register-listed properties, and 79 are unevaluated for eligibility for inclusion to the NRHP (Specialists Report, p. 27-28). While the forthcoming PA will provide guidance for the future management, avoidance, or mitigation of these resources, the Forest Service must determine the eligibility of these historic properties prior to issuing a Record of Decision and Final EIS for the SGP. This includes full documentation of unevaluated resources, consultation with affected tribes (if applicable), and consultation and concurrence with and from Idaho SHPO.</p> <p>Of the currently listed historic properties, one (10VY1488, the Stibnite Lithics Site), located within the physical APE for mine construction, is likely to be impacted by construction and operation of the SGP. While the Specialists Report refers to avoidance (p. 40), we do not believe that either direct or indirect impacts can be avoided due to the site's location and the likelihood of loss of eligibility criteria or indirect impacts through site visitation. We recommend that this historic property be fully mitigated prior to any ground-disturbing activities associated with mine construction. Additionally, the Meadow Creek Lookout Site (10VY365) may be physically or visually impacted by components associated with communications and the transmission line. Moving or relocating the lookout would remove context that informs the historic property's eligibility for the NRHP. Therefore, the Forest Service must mitigate these potential impacts by rerouting and/or relocating infrastructure components that may impact the site in a physical manner.</p>	HER	<p>The referenced IDL guidance document serves as an initial motivation and basis for the implementation of BMPs. Design measures and Forest Service requirements described in SDEIS Chapter 2 represent the project-specific management practices incorporated into the Project proposal. Additional information on these measures is available in the management plans provided by Perpetua as part of the Project proposal. Requirements beyond those proposed may be developed by the Forest Service as part of its consideration of the Project.</p> <p>There are not 250 historic properties in the APEs. There are 250 heritage resources, a subset of which are historic properties (i.e., NRHP-eligible). Since publication of the SDEIS, additional unevaluated sites were revisited in 2022 and 2023 to update their current status and evaluate them for eligibility for the NRHP. The Forest Service is consulting with the Idaho SHPO and the Tribes, as appropriate, on evaluation recommendations. As such, numbers of NRHP-eligible, not eligible, and unevaluated sites have been updated in the Final EIS.</p> <p>Regarding impacts to sites, the Forest Service, Idaho SHPO, and other consulting parties to the PA will work out the details of mitigation measures including avoidance as part of the PA process.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	271	The proposed groomed OSV route would require tree removal, which could potentially adversely affect culturally modified trees (arborglyphs), as well as impact surface or subsurface resources in the OSV ROW. As of November, 2022, this proposed route has yet to be subjected to Class III pedestrian surveys and resource inventory, which prevents the public, the Forest Service, and the Idaho SHPO from fully accessing the potential impacts of this proposed action. The Forest Service should require Perpetua Resources to complete Class III inventories for all proposed actions in the physical APE and access the NRHP eligibility for any identified resources. This includes roads slated for upgrades (such as major improvements proposed for the Horse Heaven Road, Trail 233, and approximately four miles of new spur roads proposed for construction), construction, or maintenance, and locations for infrastructure construction or installation. Further, these resources should be evaluated for potential impacts from visual, audio, or vibratory impacts related to mine construction, operation, or closure.	HER	<p>The groomed OSV route along Cabin Creek Road would be within the roadway itself and therefore would not require tree removal. The portion on the west side of Johnson Creek Road would require tree removal. As noted in comment response 17634.265, the ACHP guidance provides for phased identification for long-term and complicated projects. The PA would direct future project inventories.</p> <p>As part of the transmission line route, Horse Heaven, FT 233, and other access roads were subject to inventory for heritage resources and those resources were part of the analysis. If any reroutes or deviations from the inventoried areas are required, those areas would be subject to Class III (intensive level) pedestrian survey and subject to any additional requirements of the Project-specific PA.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	272	In the 2021 MMP Summary (Specialists Report, p. 48), the Forest Service Reports that there are 143 NRHP-eligible, listed, or unevaluated historic properties in both the physical and VAV APEs. While the breakdown of 46 sites within the physical APE and another 97 historic properties within the VAV matches the total of 143, the further sorting of properties into categories based on potential effects does not match the 143 site total. The Specialists Report states that, "19 (would) have physical impacts, 68 could experience visual effects, 15 may be susceptible to vibratory effects, and 16 whose integrity could be affected by noise," (p. 48). This latter string of numbers totals 118, 25 fewer than the reported 143	HER	These totals are reflected in Tables 7-2 and 7-3 that indicate which type of impact each site may experience. The totals of each are provided at the end of each table. These tables have been updated since publication of the SDEIS to reflect additional site evaluations for previously unevaluated sites. The Final EIS has also been updated.

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			listed historic properties. This inconsistency could be explained by a property being potentially impacted by more than one source (physical, vibratory, auditory, or visual). Conversely, the incongruity could result from a typographical error or miscalculation. We identified a similar inconsistency in the Johnson Creek Road Summary (Specialists Report, p. 53). The Forest Service and Perpetua Resources needs to rectify these statistics and provide a corrected number of known eligible, potentially eligible, and ineligible properties within the Stibnite Gold Project analysis area.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	273	The cumulative effects to cultural resources associated with the SGP exponentially increase the impacts to historic properties within the physical and VAV APEs when the potential impacts associated with transportation projects on the National Forest and within Valley County, the upkeep and maintenance of three airstrips located on NFS land, infrastructure development, vegetation treatments, water diversion and hydro power projects, and especially the potential exploration of the Horse Heaven area by Stallion Gold. The Forest Service must take into consideration the full impact of all these projects on historic properties in the area.	HER	Cumulative impacts to heritage resources were disclosed in Section 5.17 of the SDEIS. As noted, projects on federal lands are required to comply with Section 106 of the NHPA. Section 106 directs agencies to seek to avoid, minimize, or mitigate adverse effects to historic properties therefore reducing potential cumulative effects.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	275	These comments clearly demonstrate that the SDEIS inadequately documents the potential impacts and adverse effects to cultural resources in the Stibnite Gold Project analysis area. Most significantly, neither the Forest Service nor Perpetua Resources have completed intensive Class III pedestrian or Class II reconnaissance surveys for cultural resources in all the areas potentially adversely affected by project actions and undertakings, as described for each of the presented alternatives. The Forest Service/Perpetua Resources need to complete intensive pedestrian surveys of the acknowledged unsurveyed areas in the remaining 2,000 uninvestigated acres within the Physical APE, report the findings to the Forest Service and Idaho SHPO, and determine NRHP eligibility for any identified cultural properties. Only then can the potential impacts to cultural resources in the Stibnite Gold Project analysis area be fully reviewed and determined.	HER	All areas within the Operations Area Boundary that would be disturbed by the Project have been inventoried for heritage resources. Guidance from the ACHP provides for phased identification for long-term and complicated projects. As no disturbance is proposed in the additional 2,000 acres, inventory does not need to occur in advance. If any additional areas are proposed for disturbance, or reroutes or deviations from the inventoried areas are required, those areas would be subject to Class III (intensive level) pedestrian survey and subject to any additional requirements of the Project-specific PA.

Public Health and Safety

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Wade Olsen (OK Gravel Works)	1000	1	My name is Wade Olson I own a small business called OK Gravel Works, I live in Cascade Idaho, and I have provided my services, mostly excavation work, trucking and delivery, to Stibnite for Perpetua Resources and I have a few things to say. Perpetua is a group that really does care about our environment and they take every step to ensure that things are done by the book. I know this because I have done numerous small projects for them over the course of the last 10+ years. For a small construction company like us, it's almost annoying how many hoops we must jump through just to complete some small projects sometimes. They require that we have all the safety equipment of course but above that we must be trained to deal with any small environmental hazards we may cause or encounter before we can do anything on site. We have performed many projects over the last 17 years in Valley County, including 15 for the Forest Service, 10 for the State of Idaho, 5 for Valley County, and hundreds of other small projects. No other "Project Owner" has held us to stricter safety standards and environmental awareness than Perpetua Resources. They are an amazing group of people that really do care. I can't say enough about the precautions they take to ensure it's done right. From helping them dig out avalanches off the Stibnite Road to transporting drilling equipment to Stibnite, their dedication to safety and environmental excellence in all aspects is commendable.	HAS	Comment noted. No response required.
Steve Hull (Fire Chief, Cascade Rural Fire Protection District)	10178	1	My comments are going to focus on the geographic location of Stibnite in relation to CRFPD's boundary. Cascade Rural Fire Protection District provides Fire/Rescue and EMS services to the southern half of Valley County. The EMS district boundary that CRFPD contracts service with Valley County is 1300 square miles. The EMS district starts at Mile Marker 84.5, Boise County/Valley County line, on Highway 55 and goes north to Mile Marker 125 on Highway 55. The western boundary is the Adams	HAS	Agreements between CRFPD and the SGP along with assurances from the project operator are outside the purview of the Forest Service.

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			<p>County/Valley County line on top of West Mountain and the eastern boundary is the Middle Fork of the Salmon River.</p> <p>Based on information from the Executive Summary p. es-26 where you indicate that “Emergency Medical Technicians and emergency equipment and supplies would be on-site, including an ambulance, first aid, and medical supplies. These facilities would minimize the demand on the local services and provide medical services for workers and site-visitors in an otherwise remote area”. The CRFPD wants to be assured there are sufficient communications and agreements in place since the Stibnite Gold Project is within our EMS District.</p>		
Giles, Robert (Mayor McCall, ID)	17834	5	The SDEIS is silent on the safety improvements required for the large vehicle mine traffic on this roadway and only addresses mine traffic impacts on State Hwy 55 much farther south of McCall. Even the applicant acknowledges that the McCall route is of critical interest to their operation as they are engaged in discussions with the Idaho Transportation Department (ITD) and the City for a cooperative agreement between the three parties to ensure intersection improvements are made in order to accommodate this traffic if the mine is permitted. However, the City does not hold any regulatory permitting authority in this matter and is relying on the good faith of the applicant to enter into an agreement to make these improvements. To ensure the safe movement of mine traffic through our community the City respectfully requests that the Forest Service identify this impact in a second supplemental DEIS with a mitigation measure that the applicant provide intersection improvements identified by ITD and the City of McCall on the Deinhard/Boydston route, and other safety improvements to mitigate impacts to access and safety to pedestrian and bicycle traffic. Further, the City requests that no mine traffic with hazardous materials and explosives be allowed to travel through McCall until the mitigation measures for these intersections and travel corridor are constructed.	HAS	Use of Idaho public roads in McCall is currently regulated by IDT which sets requirements for road usage and for the transportation of hazardous materials. These types of activities are currently conducted on these roads under IDT requirements. The Forest Service does not have authority over road improvements which are within the purview of IDT.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	44	<p>Impact Assessment of Public Access of Burntlog Route</p> <p>According to the DSEIS, Burntlog Route will be open to public use⁴⁴and it is not apparent that the 2021 MMP Alternative will necessarily promote the separation of the general public and heavy mining equipment during operations along Burntlog Route when compared to Johnson Creek Route Alternative. Accordingly, during operations the public will potentially have access and use the same roads as large mining equipment for both Action Alternatives. Therefore, EPA recommends that potential public safety risks and potential accidents resulting from public use of these road networks are assessed similarly for both Action Alternatives. EPA also recommends that this assessment accounts for the effects of proposed improvements to the road network that are described for the Johnson Creek Route Alternative (i.e., “wider roads, more cut/fill sections, and more switchbacks”) when comparing these two alternatives.</p>	HAS	<p>The assessment of public health effects from road traffic are included in SDEIS Table 4.18-3. The assessment did include proposed road improvements along the Johnson Creek route. Despite road improvements and other traffic control factors, the SDEIS did conclude that the overall impact of road traffic on public health would be major.</p> <p>Additional analysis of traffic safety and accidents is presented in Access and Transportation, specifically Section 4.16.2.</p>
Joseph Pietri	19062	7	<p>The safety of my children and grandchildren being on those heavily traveled roads for a pleasant outing in the backcountry to fish, hunt or soak in a hot spring or photograph will become an added source of anxiety for many families.</p> <p>A mining veteran of thirty two years stated " accidents happen, not a matter of “if ” but “when ” and how severe? Will Perpetua assume any responsibility for the safety of the recreational community when incidents occur as a result of Perpetua operations?</p>	HAS	A Transportation Risk Management Plan has been included as part of the Project to minimize the potential for road accidents to the extent possible. Assumption of responsibility for accidents would be governed by traffic laws and regulations in place for the use of public roadways and roads on Forest Service lands.
Karen Balch (North Fork Veterinary Service)	19228	11	In addition, how would this mining operation fair in the face of a massive forest fire? Our area has historically been subject to forest fires, and in 2020 the Buck Fire was just a few miles from Johnson Creek which has been proposed as one access possibility. And the fire was even closer to the proposed Burnt Log Road route which just skirts the wilderness boundaries. While forest fires are a natural phenomenon, what happens when a holocaust fire burns right over the top of a mining operation with filled with toxic chemicals or over giant vats filled with cyanide? And where are the financial liabilities if a fire is started from heavy equipment sparks as is common in summer. What is the liability of the USFS if citizens recreating in the forest are injured by activities associated with Perpetua’s mining?	HAS	<p>Fire protection and evacuation procedures would be in place to protect people and property in the event of a forest fire's encroachment on the mine area. Areas containing chemicals including cyanide are contained within structures equipped with fire protection. Ground disturbance around these areas also results in the removal of vegetation from the vicinity of areas containing chemicals, reducing the fuel for forest fires in their immediate location.</p> <p>Assumption of responsibility for accidents and injuries resulting from interactions between recreationists and mining activities would be governed by laws and regulations in place for the use of public roadways plus Forest Service roads and lands.</p>

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	108	"Issue: The SGP may affect public safety on the roads used by mine vehicles during construction, operations, and closure and reclamation activities. Indicator: Approximate miles of roads used by mine vehicles. " This summary does not accurately reflect the analysis for this indicator and provides new information that is not stated in Chapter 4. Please review and revise.	HAS	This issue and indicator is included in the Access and Transportation Section (Section 4.16) and the miles of roads used by mine vehicles are described in Section 4.16.2.2. The road lengths were considered when assessing the potential for accidents that affect public health and safety as described in Section 4.18.2.2. Additionally, citations to Section 4.18.2.2 have been added to Section 4.16.2.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	682	"Public Health and Safety" Table 5.1-1 calls out "particularly the residents of the village of Yellow Pine, the nearest residential community to the mine site area, as well as recreational visitors who frequent the area." These are not discussed in the cumulative impacts. Please include or delete from table.	HAS	The entry in Table 5.1-1 has been revised to "Valley County" to better reflect the geographic area for the cumulative effects analysis.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	683	"Existing and RFFAs have the potential to result in cumulative impacts by increasing variables related to public health and safety." Please specifically identify which impacts have the potential for cumulative impacts.	HAS	Text has been added to describe the increased variables, i.e., "... by increasing variables related to public health and safety such as effects on air quality, soil quality, water quality, economy, public services and infrastructure, and demographics."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	429	"Changes in health metrics such as soil, air, and water quality." Soil, air, and water quality are not health metrics. Please re-word this indicator.	HAS	The text has been revised to read "Changes in soil, air, and water quality."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	430	"Changes in soil, air, and water quality." This indicator is too broad as it has no geographic or health related limits. Please add "relative to health thresholds from SGP activities" to end of sentence.	HAS	The description of the issue states that the indicator is related to SGP related effects, thus no revisions were made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	431	"Psychological effects due to noise." Not listed as an indicator in Table 1.10-1. If not analyzed, delete from here.	HAS	Effects of noise exposure are described at the end of Section 4.18.2.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	432	"No impacts are anticipated to Public Health and Safety from the No Action Alternative as related to air quality, ground water, terrain, economy, public services and infrastructure, and demographics." Existing condition impacts will prevail. Please replace "No impacts" with "No change to impacts"	HAS	Revision accepted. The text has been revised accordingly.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	433	"The IDEQ may also identify goals towards developing a water quality improvement plan/total maximum daily loads for the East Fork SFSR." Speculative in nature - please remove.	HAS	The statement is not speculative as IDEQ assesses water quality bi-annually. From the IDEQ website: Integrated Report, Using data from the BURP crew and the methods described in the Water Body Assessment Guidance (WBAG), Version 3, we determine if water bodies meet water quality standards and support beneficial uses. We document our findings through the Integrated Report, which is

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					submitted to EPA approximately every two years. The report describes the quality of all of Idaho's water bodies and identifies and prioritizes the state's water quality problems. Where water quality fails to meet state water quality standards (as documented in the Integrated Report), we evaluate the water body to determine the causes and sources of pollutants. Additional data are collected to develop a water quality improvement plan, known as a total maximum daily load (TMDL).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	434	"The highest combined pollutant annual emissions (including fugitive dust) were predicted to occur in Mine Year 7 (after up to 3 years of construction and pre-production activities and during the 4th year of mining)." The Specialist Report (page 94): The year of peak mine throughput, LOM Year 6, was found to have the highest aggregate pollutant emissions, including haze precursors, airborne dust, and HAPs. Table 7-31 of the specialist reports says: Emission inventories for construction through LOM Year 18 indicated that the peak year for aggregated pollutant emissions would be LOM Year 10, also the peak year for mine throughput. Please correct these inconsistencies.	HAS	The text has been revised to read "The highest combined pollutant annual emissions (including future dust) were predicted to occur in Mine Year 6 (after up to three years of construction and pre-production and during the third year of mining)."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	435	"Magnitude of Impact: Construction and Operations: High; Closure and Reclamation: High; Possibility of Impact: Construction and Operations: Medium; Closure and Reclamation: Medium Overall Impact on Public Health: Construction and Operations: Major; Closure and Reclamation: Major " These values don't match up with the impacts of hazardous materials spills as outlined in section 4.7. Please reconcile.	HAS	The major effect is associated with the increased potential for traffic accidents. The table entry "Overall Impact on Public Health:" has been revised to read "Increase Potential for Traffic Accidents (including increased potential for hazardous waste spill):"
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	436	"SGP Specifics: Increased power demand to support mine operations " Please add a line for rebuilt and more resilient power distribution, leading to reduction in service interruption intervals.	HAS	Improvements to the power transmission system are discussed in Section 4.21.2.2; no revisions made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	437	"Thus, additional soil contaminants may be exposed during the construction and operation phases of the SGP." Please include an acknowledgement of the soil contaminants that would be cleaned up as part of mine operations.	HAS	The removal of soil contaminants is described in the SDEIS in the third paragraph following the statement noted in the comment; no revisions made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	438	"The IDEQ may also identify goals towards developing a water quality improvement plan/total maximum daily loads for the East Fork SFSR. " Speculative in nature - please remove.	HAS	The statement is not speculative as IDEQ assesses water quality bi-annually. From the IDEQ website: Integrated Report, Using data from the BURP crew and the methods described in the Water Body Assessment Guidance (WBAG), Version 3, we determine if water bodies meet water quality standards and support beneficial uses. We document our findings through the Integrated Report, which is submitted to EPA approximately every two years. The report describes the quality of all of Idaho's water bodies and identifies and prioritizes the state's water quality problems. Where water quality fails to meet state water quality standards (as documented in the Integrated Report), we evaluate the water body to determine the causes and sources of pollutants. Additional data are collected to develop a water quality improvement plan, known as a total maximum daily load (TMDL).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	439	"However, existing groundwater in those areas typically does not meet regulatory criteria for use as drinking water due primarily to arsenic and antimony concentrations (Water Quality Specialist Report, Forest Service 2022f)." Please include information regarding the POC (Point of Compliance) for groundwater that would be permitted by IDEQ, as other permits are included.	HAS	IDEQ's description of the Point of Compliance is provided in SDEIS Section 3.9.3; no revisions made.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	440	"Because groundwater is not currently used as a public drinking water source at the SGP and is assumed to be unlikely to be used as a drinking water source in the future, " This is inconsistent with statements in the same paragraph above this sentence. There is currently a drinking water supply well at the current camp, running through arsenic and antimony ion exchange resin columns. There will be groundwater wells associated with the worker housing facility to supply drinking water.	HAS	The text was clarified to read "Aside from project-related drinking water supplies equipped with water treatment, groundwater at the SGP is not currently used as a public drinking water source and is assumed to be unlikely to be used as a drinking water source in the future. Therefore, the ATSDR..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	441	"The IDEQ would further regulate groundwater quality standards under its IPDES permit " Inaccurate statement. Please replace " IPDES permit " with " POC program ".	HAS	Revision accepted. IPDES Permit replaced with POC Program.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	442	"The SGP is not expected to exacerbate any of these existing hazards, but could increase the risk of damage, injury, or loss of life from the hazards due to the increased number of people traveling through the area to the SGP. " The magnitude of risk is not increasing, but the frequency of something occurring. The project would actually reduce the risks to avalanches & landslides as a result of operational BMP's. The analysis should look at 2021 MMP wholistically and include the operational aspects that would actually reduce the hazard during operations over baseline conditions. Please revise this sentence, taking this information into consideration.	HAS	Text has been added to reflect risk management with respect to avalanches, i.e., "Risk associated with avalanches would be reduced through avalanche control measures associated with the project (see Section 4.2.2.2)." See also the response to comment 17634.369.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	443	"Conversely, the "boom and bust" related decrease in mine-closure related local employment and labor income also could have significant adverse effects on the local economy. " Please provide a source for this information.	HAS	The citation to AECOM's 2018 report on scoping issues has been added to the text.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	18	Comments on applicable SDEIS sections include technical clarifications for Section 4.18.	HAS	Comment noted. No response required.
Ruth Lewinski	19378	1	the Stibnite Project will have direct public health effects on my potential patient population, as well as my personal health as I plan to continue recreating in the area and surrounding drainage basins.	HAS	Public health effects of the SGP are described in Section 4.18.2.2. and summarized in Table 4.18-3.
Ruth Lewinski	19378	2	I do not believe that the Stibnite SDEIS has adequately factored in the potential health impacts of proposed mining infrastructure. The current project proposal presents undue risk hazards for Perpetua employees, Federal Employees, and the general public.	HAS	Risks associated with proposed mining infrastructure are captured in Table 4.18-3, primarily associated with road usage and the proposed transmission line. While the impacts on public health associated with infrastructure range from negligible to major, the affects are not undue because these infrastructure components (e.g., road access) are necessary for fulfilling the Project's purpose and need.
Ruth Lewinski	19378	8	The SDEIS focuses on the transport section from Cascade/McCall to the Stibnite Gold Project, with stated preference for the Burnt Log Route. While there is an emergency plan discussed, it is relatively vague. Large sections of this route do not have cellphone service and satellite communication is also difficult due to the nature of the geography. The proposed routes exist along known avalanche corridors. As year-round transport is planned, road maintenance and construction needs to have a consistent routine for risk reduction and consistent means of communication. Emergency response responsibility for this section was not clearly outlined. Current resources in Cascade are not adequate for a response and an incident along the route would deplete what is available for community members, i.e. ambulances, firetrucks and responders. I suggest having stations in the Warm Lake Meadows, at Yellow Pine, and the Stibnite site that could adequately respond to a mass casualty accident with potential fire involvement. The corridor of HW 55 also has limited cell phone service and satellite outreach is often distorted due to	HAS	As described in Chapter 2, the SGP includes repeater towers to allow radio communication for mine-related traffic along the access routes. The Landmark Maintenance Facility is incorporated into the SGP to facilitate planned maintenance and emergency response along the Burntlog Route. Emergency response personnel and equipment would also be attendant at the mine. Emergency response to accidents along SH 55 would be conducted by the established emergency responders along that public highway. The Project's Transportation Risk Management Plan includes avalanche control measures to reduce the avalanche risk as noted in Section 4.2.2.2.

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			the canyon. These roads lie along rivers that are heavily used for recreation and irrigation. There is no clear outline for emergency Perpetua trucking events along the highway 55 corridor. There is greatly increasing traffic along this roadway and a response plan is needed.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	162	3. On-site carcinogenic exposures ¹⁹³ All of the arsenic-focused air quality analyses in the SDEIS and IDEQ permit to construct are limited to off-site ambient air. On-site workers and visitors will be exposed to concentrations, potentially, orders of magnitude greater than these criteria. Neither Perpetua, nor the Forest Service, nor IDEQ have publicly disclosed estimated on-site airborne arsenic concentrations. In the interest of worker, site resident and visitor health, the Forest Service should estimate on-site airborne arsenic levels and assess the risk of on-site exposures.	HAS	Onsite air quality for workers would be regulated under MSHA air quality standards that are protective of worker health (https://arlweb.msha.gov/s&hinfo/opramp/opramp.htm). In some project areas such as chemical storage areas, personal protective equipment would be required to manage worker exposures. Exposure of site visitors to air quality conditions would have limited duration compared to worker exposures and would be covered by the MSHA air quality standards. Visitor access to areas requiring personal protective equipment would be restricted.
Samuel Stone		3	Fish aren't the only ones reliant on the South Fork Salmon, people are. We rely on these tributaries for clean drinking water, recreation, and our health. This project holds substantial risk for water contamination. Mineral leaching is an inevitable process which feeds various metals, salts and processing chemicals into waterways. Mercury poisoning, lung cancer, digestive system disorders, and decreased life spans are all possible for those who mine or those who live near the mine (Stephens & Ahern, 2001).	HAS	Section 4.9.2.2 describes Project effects on surface water quality. The SGP is expected to improve or maintain surface water quality conditions that would affect downstream water usage.
Samuel Stone		5	In addition to utilizing the water for drinking, people recreate in these ecosystems. They fish, hike, forage, mountain bike, kayak, rock climb, and backcountry ski just to name a few. It has been proven time and time again how important connection with nature is for maintaining mental health (Bratman et al. 2012). Communities surrounding the proposed mining site depend on the intact forest for recreation, positively impacting physical and mental wellbeing. Community health will suffer if the Stibnite Gold Project is completed.	HAS	The EIS describes effects of land use for recreation in Section 4.18.2.2 and Table 4.18-3 on public health. Effects of the SGP are expected to be negligible because as an unreclaimed historical mine site, current recreational use of the site is limited, the extent of noise related effects is limited, and there are alternative locations within the area for recreational use.

Recreation

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Ellis, Lori (Secretary Idaho State Snowmobile Association)	16861	1	The Idaho State Snowmobile Association (ISSA) is an organization committed to the future of snowmobiling in Idaho and protecting Idahoans right to ride. Access to, and preservation of, Idaho's natural areas is paramount to our organization. To date Perpetua Resources has been a valuable partner. The company has worked to keep access to Idaho's backcountry open and kept our community and member's safety a top priority in the design and operation of the proposed Stibnite Gold Project. Therefore, we would like to submit our comment of support for the U.S. Forest Service to move forward with permitting Perpetua Resources' project. Access to the historic Stibnite Region was still limited just a decade ago, with sections of backcountry in the region inaccessible as a result of environmental damages left by mining projects that took place the century before. Before Perpetua Resources began exploration and study of the area, snow was piled too high on Stibnite Road to drive a car or truck all the way up to the mining site during the winter months. The company has worked to make these roads once again passable, opening up this section of Idaho backcountry not just to company vehicles, but snowmobilers and recreationalists during more months of the year.	REC	No further response required. General in nature or position statement.
Ellis, Lori (Secretary Idaho State Snowmobile Association)	16861	2	One of the favored areas for snowmobile operators is Profile Creek Bridge. Passages like this are important to local communities, given the financial benefit that Valley County experiences from the motorized recreational community. Perpetua Resources has worked with the ISSA and other groups to ensure that access areas like Profile Creek Bridge remain passable by cars and snowmobiles throughout the duration of the Stibnite Gold Project. By working with organizations like ours and maintaining an	REC	No further response required. General in nature or position statement.

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			open dialogue, Perpetua Resources created an environment of transparency and a symbiotic relationship between economic growth and environmental preservation/land access.		
Ellis, Lori (Secretary Idaho State Snowmobile Association)	16861	3	The SDEIS indicates "Plowing of the Burntlog Route and Warm Lake Road would cutoff direct OSV access to the Horn Creek Road, Sand Creek Road, and Warm Lake Road (east/south of Landmark) OSV routes from Johnson Creek Road, which would be the only publicly available winter route to the Landmark area as Warm Lake Road would be closed to public winter use (Winter, 4th paragraph, page 4-535). I understand Perpetua included an OSV trail along the south side of Warm Lake Road connecting Johnson Creek Road to Landmark-Stanley Road which is not described in this section. They proposed this connector to maintain access to the Landmark-Stanley Road. Maintaining this access is extremely important to the snowmobile community. Also, plowing of Burntlog Route does not cut off access to trails east and south of Landmark. It's not ideal but snowmobile users can access these trails as long as there is a snow floor on the Burntlog Route.	REC	There would not be an OSV trail on the south side of Warm Lake Road, rather, access from Warm Lake to Landmark would be provided by an OSV trail from Warm Lake north along Cabin Creek road to Trout Creek Campground and then south along the west side of Johnson Creek Road to Landmark. The Landmark-Stanley connector would provide OSV access to additional trails south and east of Landmark or alternatively, trails south and east of Landmark could be accessed by trailering OSVs past Landmark.
Ellis, Lori (Secretary Idaho State Snowmobile Association)	16861	4	As a result of this dialogue, Perpetua Resources updated their Plan of Restoration and Operations to reflect the concerns and requests of surrounding communities and stakeholders. Access to places like Thunder Mountain Road was not always part of the design plan, with project planners citing safety concerns as their reason for not allowing public access through the site during operations. But during the public scoping process, the company heard the requests of organizations like ours and worked with us to identify a solution to this important community issue.	REC	Correct. Perpetua is proposing to provide public access through the Operations Area in their revised and current 2021 MMP.
Clouser, Ludmila	17581	3	<p>The South Fork Salmon River watershed and the project area provide some of the best access to recreation in the western US. West Central Mountains Economic Development Council (WCMEDC), who's goal is "the creation and maintenance of a climate that fosters economic growth and viability in Valley County", supports recreational opportunities as one of the most viable economic resource in the region. The proposed mine will impact negatively all of the recreational economy resources listed by the council here: https://wcmedc.org/recreation/ Many recreational activities are not sufficiently analyzed in the SDEIS. Both action alternatives will have impacts on recreation: "localized, long term, and major." Public access routes are to be controlled by Perpetua company. Road closures will affect the ability of outfitters and guides to provide access and will degrade the customer's experience. Under either alternative, access to the project area would be impacted by increased mine related traffic. This increase would degrade remoteness that makes recreating in this area desirable. Recreation in the 14,211-acre operations boundary will be eliminated for the life of the mine and future generations. (SDEIS 2-160. The map shown in Figure ES-1.) This area is larger than the 2,500 acres where vegetation will be cleared for the mine and roads. The 14,000+ acres operations boundary is the ambient air boundary from the air permit. That means recreational activities will be affected because of pollution.</p> <p>The mine's facilities will displace wildlife-based and non-motorized recreation opportunities. As a small business owner who concentrates on recreational cycling opportunities, I feel threatened about having to cross out the South Fork of Salmon River off the tour map. The nationally recognized and popular cyclist's "Idaho Hot Spring Route" will need to be canceled as well as the recently developed "Cascade Adventure Routes". These routes are bringing hundreds of recreationists to the area every season. Each participant supports Valley County economy while visiting!</p>	REC	<p>The South Fork Salmon River Road would not be used by the SGP and there would not be any mine related traffic on it. As presented in Section 2.4.4.5, additional traffic on the roadways during construction would increase by 199 on highways and local roads to the Stibnite Gold Logistics Facility and 65 vehicles between there and the operations area. Traffic during operations would be less than that.</p> <p>The regulatory definition of ambient air (40 CFR 50.1(3)) is "that portion of the atmosphere, external to buildings, to which the general public has access." There would be no recreational use within the Operations Area Boundary for public safety and therefore, would not result in a new effect on recreational use because the mining activity would be excluding recreational use inside the boundary due to the mining activity.</p> <p>Use of the Johnson Creek Route during construction could result in temporary impacts to bicyclists and bicycle events that use these roads, due to potential delays, traffic, and safety-related issues from mine-related traffic (Section 4.19.2). Potential impacts to biking events was disclosed in Section 4.19.2 under Recreation Use and Users subsections. These would be temporary impacts while the Burntlog Route is being constructed. Once constructed, mining traffic would switch to the Burntlog Route.</p>
Idaho Regulatory Agencies	17718	184	<p>IDPR supports the Burntlog Route (Preferred Alternative) as reconfigured in the current SDEIS for its net-positive benefits for recreational access. Consultation with IDPR stakeholders reveals the current route configuration is a good compromise addressing several concerns while providing desirable access opportunities for both Summer and Winter recreation. Analysis shows after route construction, year-round recreation access will improve to areas and trailheads including Thunder Mountain (Monumental), Meadow Creek Lookout, Riordan Lake, and Frank Church-River of No Return Wilderness.</p> <p>Updated from the 2020 DEIS to the 2022 SDEIS, a reconfiguration of the Burntlog Route's planned alignment appears to have resolved a significant conflict within the Riordan Creek drainage -- roadbed overlaying a motorized trail route. Had this conflict been left unaddressed, it could have resulted in loss</p>	REC	No further response required. General in nature or position statement.

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			of portions of public <50" trails (097 and 297) and a steel truss ATV bridge over Riordan Creek installed with grant aid through IDPR 10 years ago.		
Idaho Regulatory Agencies	17718	185	Strike this sentence "In the winter, the Idaho Department of Parks and Recreation grooms over 96 miles of OSV trails in the analysis area."	REC	Sentence deleted.
Idaho Regulatory Agencies	17718	187	<p>"Under the 2021 MMP, the Burntlog Route would overlap about 2 miles of the 25-mile long Old Thunder Mountain Road...[which] is currently part of FR 440 (an all-terrain vehicle road) and would not be realigned by the SGP."</p> <p>The above statement appears to be incorrect, needing to be clarified to reflect the current, revised routing per descriptions and maps determined under the 2021 MMP. Under the 2020 DEIS (pre-ModPro2/2021 MMP road plan), a portion of Thunder Mountain jeep trail 440, and <50" Trails 097 and 297 appeared to be possibly concurrent with the planned route, which alignment would have resulted in loss of portions of those trails and possibly the loss of a steel truss ATV bridge funded through IDPR.</p> <p>However, alignment changes per 2021 MMP and 2022 SDEIS resolved this conflict by placing the roadbed higher up the Riordan Creek drainage and therefore entirely away from trails 440, 097, and 297. The new alignment is characterized in multiple locations in the 2022 SDEIS, EG page 2-18 , paragraph 4, and illustrated by the map on page 2-19 .</p>	REC	The Burntlog Route was rerouted to avoid a portion of FR 440, FT 097, and FT 297, as well as a trailhead. However, the Burntlog Route would still utilize a portion of the Thunder Mountain Road further northeast, which is about a two-mile section. Revisions have been made to the narrative to better clarify.
Giles, Robert (Mayor McCall, ID)	17834	14	<p>McCall's local economy (as also described in the Social Economic Specialist Report) is dependent on two primary sectors, the tourism/recreation industry and the service industry (financial, construction, medical, real estate, government). The SDEIS recognizes that access to the Idaho backcountry is of important value to this area's culture and economy. The City is highly concerned by findings included in the Recreation Specialist Report such as:</p> <ul style="list-style-type: none"> " .. beginning at construction, approximately 13,441 acres of NFS lands (and approximately 780 acres of private patented lands within the Operations Area Boundary) would be inaccessible to dispersed recreation (Figure 7-la)." "Impacts to recreation from the construction of the SGP would be localized, long term, and major." "Wildlife in the analysis area would be affected by construction noise, traffic, and activities likely resulting in displacement of wildlife to areas away from the analysis area. Therefore, opportunities to participate in hunting, fishing, wildlife, and bird watching would be displaced as well, relocating use related to these activities to locations away from the SGP within the analysis area, or possibly outside of the analysis area." "Due to the changes in the recreation setting from SGP operations, some visitors may choose to participate in recreation opportunities elsewhere in the analysis area or the surrounding management areas where SGP operations would not be visible or audible. Impacts on recreation opportunities at and around the SGP would begin during construction and continue until the mine was decommissioned and the area reopened to dispersed recreation use. Some visitors may choose to remain at their displacement location rather than return to the SGP area due to permanent changes in the recreation setting within the Operations Area Boundary." "All action alternatives would result in impacts to recreation access, settings, opportunities, use, facilities, and recreation-related special use permits. SGP would remove this area from recreation use and alter the recreation setting in the surrounding area due to visual changes and noise." <p>"The SGP also would affect access to operating areas of three outfitters and guides, affect their ability to provide activities, and may degrade customer's recreation experiences."</p>	REC	<p>The impact statement regarding recreation impacts during construction should have been "short term" as opposed to "long term" as construction activities would conclude within three years.</p> <p>Otherwise, comment is a restatement of information in the SDEIS. No further response required.</p>
Giles, Robert (Mayor McCall, ID)	17834	31	<p>Recreation economy impacts</p> <p>McCall's local economy is dependent on two primary sectors, the tourism/recreation industry and the service industry (financial, construction, medical, real estate, government). The City is a launching point to the backcountry via Lick Creek Road, Warren Wagon Road, and multiple charter air services from our local airport. The alternatives analyses identify the recreation resources of the Stibnite Mine study areas</p>	REC	Lick Creek Road is not included as a route to the SGP under ANY alternative. The majority of employees would travel to the SGLF on Warm Lake Road and be bused to the SGP from there. As presented in the EIS, under the 2021 MMP, the travel route would be the Johnson Creek Route during construction and the Burntlog Route during operations and reclamation.

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			<p>and recognizes that access to the Idaho backcountry is of important value to this area's culture and economy.</p> <p>The City respectfully requests that the alternative selected for the Final EIS retains the most public access to the backcountry as possible and preserves as much of the natural resources in the area as possible. While the DEIS does not identify Lick Creek Road as a primary access for mine traffic, it is being used now for mine access by Stibnite Gold employees. For mine traffic to utilize Lick Creek Road, it must travel off of State Hwy 55 through densely populated residential areas past two public schools along roads not designed for this type/volume of traffic. The consequences of an accident or spill in this area are high. The City respectfully requests that the alternative selected for the Final EIS specifically does not allow for mine traffic on Lick Creek Road. Use of Lick Creek Road should be reserved only for the general public's use so as to prevent conflicts with mine traffic and provide the public an alternative to Warm Lake Road for backcountry access.</p>		Under the Johnson Creek Route Alternative, access would utilize Warm Lake Road to Johnson Creek Road to Stibnite Road for all phases of the Project.
Giles, Robert (Mayor McCall, ID)	17834	36	Table of Direct Travel Impacts and Visitor Volume for Valley County 2011-2020	REC	Thank you for this data. It will be reviewed and utilized as appropriate.
Amelia Weber	18155	8	<p>Recreation, in any form, within the general area of the mine will be negatively impacted. The analysis of impacts on recreation is arbitrarily limited to a 5-mile radius from major mine features and does not include any discussion of traffic displaced to the South Salmon Road and Lick Creek Road that will logically result from this project.</p> <p>As a whitewater kayaker I of course have the obligation to protect all rivers as I see myself as a steward, but especially ones I haven't gotten to see yet. I am definitely not the only one who has dreams and aspirations of running the South Salmon. Not for its difficulty but for its beauty and remoteness. This project will completely ruin that aspect of the drainage. Call me selfish but how could you allow this to be permanently altered more than it already is? Forgive my language when I say come to your senses and SAVE THE SOUTH FORK!!</p>	REC	<p>SDEIS Section 4.18.2.2 describes Project effects on recreation while Section 4.16.2.2 describes effects on access and transportation.</p> <p>Project effects on access and transportation are expected to have limited duration. Measures to inform the public about traffic delays have been added to the Final EIS.</p> <p>The Project is not expected to affect current or future kayaker use of the South Fork Salmon River.</p>
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	16	The Boise and Payette National Forests and the South Fork of the Salmon River watershed as a whole provide tremendous recreational opportunities for Idahoans. Access routes proposed from either alternative are adjacent to or on public lands, for which a large and diverse group of recreationists uses throughout the year. Many of our members and supporters hunt, fish, hike, backcountry ski, ride OHVs, and horseback ride in this area.	REC	No further response required. General in nature or position statement.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	18	Our groups raised concerns about the threats to existing recreational opportunities in previous comments. Additionally, the State of Idaho requested that future studies include "an assessment of the potential effects of new roads and road closures on hunting, fishing, and trapping including effects of new roads on stream channel and wildlife habitats." In general, our groups feel that the SDEIS lacks analysis on the impacts to existing recreational opportunities and public access.	REC	No further response required. General in nature or position statement.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association),	18871	19	Both alternatives will result in a significant increase in mine related travel along Johnson Creek Road. Given that the Preferred Alternative uses Johnson Creek Road as the primary access route to the project area throughout the construction phase, we expect a significant increase in mine related traffic, travel delays, and road closures. Realizing that recreationists utilize Johnson Creek Road extensively throughout the Summer, our groups are concerned about the potential for negative experiences with a significant increase in mine related travel. Recreationists may avoid these delays or closures by seeking	REC	Under both action alternatives, the public would share the Johnson Creek Route with mine traffic during construction and under the Johnson Creek Route Alternative for the life of the Project. Under the 2021 MMP, closures of Johnson Creek Road are not anticipated. As noted in Section 2.5.4.1, during construction of the Johnson Creek Route Alternative there would be periodic temporary closures of the Johnson Creek Road.

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Garret Visser (Idaho Wildlife Federation)			different routes into the area, possibly via the South Fork Salmon River Road and Lick Creek Road. Both of these routes lead to many public access points that are also popular for recreationists. The SDEIS does not seem to analyze this prediction in traffic and recreational patterns. The SDEIS also does not consider how large of an impact the SGP would have on adjacent lands used for recreation, as current recreational opportunities would be eliminated with the 14,211 acre operations boundary closure, shown in Figure ES-1.		Minor to moderate effect determinations for recreation were based in part on the existing condition within the Operations Area Boundary as an unreclaimed historical mine site, where current recreational use of the site is limited and the fact that there are alternative locations situated outside the Operations Area Boundary for recreational use.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	20	When in season, anglers flock to the South Fork of the Salmon River to pursue adult returning hatchery-origin chinook salmon. Upstream, anglers can encounter westslope cutthroat trout and bull trout along Johnson Creek and the East Fork South Fork Salmon. In addition to local users and tribal interests, many recreationists come from the Treasure Valley (Boise, Nampa, Caldwell), about 100 miles to the south. We believe the Forest Service fell short in its analysis on the impacts to recreational fishing that the surrounding area currently provides.	REC	Impacts to fishing were summarized in Section 4.19.2 Recreation Use and Users and discussed in more detail in the Recreation Specialist Report (Section 7.2.2.3). This discussion was qualitative as the Forest Service does not track recreational fishing.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	21	We appreciate the brief synopsis on hunting as a recreational value in the SDEIS. We ask that you continue to utilize IDFG's expertise to understand how the SGP may impact hunter opportunity, hunter success, and hunter satisfaction in IDFG Game Management Units 24, 25, and 26 over the long term. As noted in the SDEIS, much of the hunter opportunity in this area is possible through the purchase of over the counter general tags. This experience is becoming increasingly rare throughout the West and in Idaho. The overwhelming majority of Idahoans rely on this opportunity to pursue elk and deer each year through this system. Risk to this general tag structure is heightened by increased human pressure and access as well as over harvest. Hunting is a large part of Idaho's culture- we ask that you seriously consider the long lasting threats to this culture. Additionally, we ask that you consider the direct and indirect impacts to Bighorn Sheep (summarized above), and how these impacts may change the already extremely limited opportunities for sportsmen and women to pursue these animals if they draw a tag.	REC	The SDEIS summarized data from the Recreation Specialist Report. IDFG conducts yearly population and classification surveys for big game species such as deer and elk and regulates how many tags are available for big game hunting and SDEIS Sections 4.13.2.2 and 4.13.2.3 Big Game Species subheadings analyzed impacts to big game species as a result of this Project. Impacts to Bighorn Sheep were presented in Sections 4.13.2.2 and 4.13.2.3 Focal Species/Habitat Family 5- Forest and Range Mosaic/Rocky Mountain Bighorn subheadings. The hunting season for Bighorn Sheep in Idaho is between August 30 and October 13, which is only allowed in GMU 26 (of the GMUs in the analysis area). As noted in Section 4.13.2.2, impacts may include potential changes in abundance and distribution of bighorn sheep, and therefore could result in impacts to bighorn sheep hunting opportunities in the surrounding area if fewer individuals are available and/or have moved to more remote areas or beyond GMU 26. A decrease in an already limited species like Bighorn Sheep could result in a decrease in the number of available tags/licenses for a particular area. Since rare big game species like Bighorn Sheep require hunters (which is typically a very large number due to the desire to hunt a rare and unique species) to enter a drawing to get a tag, odds are already limited to draw a tag; therefore, if fewer tags are available due to a lower population in a particular GMU, it would further limit hunting opportunities for this species. Additional narrative was added to the Final EIS.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	22	The 2021 MMP would add additional year-round motorized access onto a landscape that is roadless. We are concerned that the construction of the Burntlog Route would significantly increase illegal offroad motorized use in this remote area, impacting the recreational experiences that currently exist. Additionally, we still do not have a clear picture on public access to the Burntlog Route, as the Forest Service and Perpetua have given conflicting answers.	REC	The landscape is not roadless as there are several Forest Service roads and motorized trails throughout the area such as FR 440, 440A, and 447, as well as FT 089, 090, and 097 (Figure 6-3b in the Recreation Specialist Report). That said, the SGP would create additional motorized access; however, public access restrictions would be implemented along the newly constructed segments of the Burntlog Route if approved. If illegal offroad motorized use occurs, it can disturb and displace wildlife and degrade habitat as well as the outdoor experiences of other recreationists. Forest Service law enforcement personnel play a critical role in ensuring compliance with applicable laws and regulations, protecting public safety, and protecting NFS resources. The Forest Service also maintains cooperative relationships with many State and local law enforcement agencies that provide mutual support across jurisdictional boundaries. Education and cooperative relationships with users support enforcement efforts by promoting voluntary compliance.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association),	18871	23	The Forest Service provides a brief overview of the impacts to outfitting in the SDEIS: "The IOGLB issues state licenses to commercial outfitters and guides in the state of Idaho and is responsible for the administration of the Idaho Outfitters and Guides Act (Title 35, Chapter 21, Idaho Code), while the Forest Service authorizes outfitter/guide services and facilities on NFS lands. There are 24 outfitters and guides permitted in GMU 24, 14 permitted in GMU 25, and 37 permitted in GMU 26	REC	Access restrictions for the public and the outfitters would be the same and for the duration of the Project, outfitters that have historically used the areas within the Operations Area Boundary and some adjacent areas would need to relocate to other areas as feasible. If recreationists are displaced from one area, that could create increased use in another area. The

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Garret Visser (Idaho Wildlife Federation)			<p>(IOGLB 2020a-c). GMU 26 is primarily in the FCRNRW and includes a portion of PNF MA 13. Only BNF MA 17 is in GMU 24. BNF MAs 19, 20, and 21, and most of PNF MA 13 are in GMU 25. In all three GMUs, activities permitted by the IOGLB, which vary by outfitter, include trail rides/pack trips, mountain bike touring, backpacking, photo trips, day hikes, snowmobiling, and fishing. In GMUs 24 and 25, permitted activities also include llama packing and skiing/snowshoeing. The IOGLB also has permitted kayaking and float boating in GMUs 24 and 26. In GMU 24, wagon/sleigh rides, zip line tours, mountaineering, and power boating also are permitted. In the three GMUs, several of the permitted outfitters also are permitted for hunting (five in GMU 24, nine in GMU 25, and 26 in GMU 26). In all three GMUs, outfitters are permitted to hunt bear, cougar, predators, wolf, elk, deer, moose, and forest grouse (species vary by outfitter). In 2019, there were several recreation-related special use permits issued by the Forest Service for the PNF and BNF portions of the analysis area. Appendix A of the SGP Recreation Specialist Report (Forest Service 2022m) describes each of the current recreation-related special use permits that have been issued within the analysis area.”</p> <p>Our groups are concerned by the implications of the outfitter effects enumerated in the SDEIS (p. 4-552) associated with “construction and operation of all the 2021 MMP components,” including but not limited to construction and operation of the new transmission line to the Operations Area Boundary, road improvements along the Burntlog Route, closure of Stibnite and Thunder Mountain roads through the Operations Area Boundary, communication facilities, and Operations Area Boundary facilities, in particular as they stand to [negatively] impact those outfitter operations identified by the SDEIS (Elks Springs Outfitters, Idaho Wilderness Company, and Juniper Mountain Outfitters).</p> <p>As a result of the aforementioned construction and operations, said outfitters stand to lose access to between 25% and 50% of their operating areas, while simultaneously providing unprecedented access to non-outfitted recreationalists in the remainder of their respective operating areas. Given the strictly limited nature of hunting outfitter operating areas in the State of Idaho—as licensed by the Outfitters and Guides Licensing Board (OGLB)—which precludes the expansion or creation of new hunt operating areas, such restrictive impacts to outfitter access combined with expansive impacts on non-outfitted access, could deliver irreparable and irreversible harm to those impacted outfitter operations.</p>		public would not have an advantage in hunting as it would still require a tag and be specific to the GMU.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	24	<p>The SDEIS also acknowledges impacts to East Fork South Fork fish habitat and water quality that have the potential to negatively affect outfitted angling well downstream of the proposed project site. According to the Idaho Outfitters and Guides Licensing Board, there are 57 businesses permitted to conduct guided angling for steelhead and salmon below the confluence of the South Fork Salmon and Salmon rivers: this includes the Wild and Scenic section of the Salmon River, the Lower Salmon, and Hell’s Canyon of the Snake River. These outfitters contribute a significant amount of economic activity to their local, largely rural municipalities. High-quality spawning habitat and thermal refugia are critical to the abundance and resilience of these outfitters’ target species, and as such are often factors that limit availability of returning fish stocks. Due to the SDEIS’ aforementioned spill risk of hazardous materials, increased stream temperatures, decrease in high-quality habitat, and questionable efficacy of an untested bypass tunnel, it is reasonable to expect a negative impact on the abundance of migrating adult fish in the river sections downstream of the South Fork Salmon, and a subsequent negative impact on outfitted angling.</p>	REC	Water quality of surface flow departing from the Operations Area Boundary would be the same or better than baseline conditions (EIS Section 4.9 and Water Quality Specialist Report. Surface water available for recreation use (i.e., fishing, kayaking, etc.) in the area would not be impacted above human drinking water standards by the SGP. The potential for the SGP to cause changes in surface water quality from increased erosion and sedimentation, changes in temperature, and changes in general water chemistry (i.e., pH, temperature, major ions, total dissolved solids and dissolved metals, and organic carbon) are discussed in detail in EIS Section 4.9 and the Water Quality Specialist Report. Impacts to fish and fish habitat are presented in detail in the Fisheries and Aquatic Habitat Specialist Report.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	25	<p>In addition to the concerns regarding the impacts to outfitted hunting and angling operations, much of the recreational use in this area of the FCRNRW is concentrated along the Middle Fork Salmon River corridor and as such stands to negatively impact State Licensed river-based outfitters with Special Use Permits for the Middle Fork of the Salmon River and the Main Salmon River. A Middle Fork permit is often considered to be the “Holy Grail” for whitewater boaters with over 17,000 applicants competing for just 387 permits in 2020. While most river runners travel in outfitted or private groups, there is still the expectation of a primitive wilderness experience with no lights, sounds or impacts of civilization imposed on the group. The SDEIS fails to describe how a river trip and guiding services may be impacted by the Stibnite Gold Project. For example, the Supplemental SDEIS needs to analyze which camps along the Middle Fork Salmon are most likely to be affected by noise, light pollution and by plumes. There is also likely to be a compounding effect at night by which dust clouds exacerbate light</p>	REC	The Middle Fork is more than 20 miles east of the SGP and would not be affected.

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			pollution by reflecting the light back downward that warrants more discussion. (This comment and concern bears on the [models used to calculate] visual effects to the wilderness, which are insufficiently developed in the SDEIS.)		
Pam Wissenbach	19213	5	The loss of access for recreation to approximately 14,000 acres is unacceptable. Why does Perpetua have control of the access to this large area? There are so many issues this brings along with it: air quality, wildlife disruption, loss of hiking terrain are just a few. The area analyzed extends five miles from any major Stibnite Mine feature which is too small of an area to account for multiple trailheads and campgrounds that will be impacted. It is likely that if the mine is approved, Thunder Mountain, an area accessed by the Stibnite Road will be restricted or closed for the life of the mine.	REC	Access to the Operations Area Boundary would be restricted due to safety concerns with an active mine site. The analysis area that extends beyond that would not be restricted. Although there may be some temporary or short-term impacts to accessing trailheads or campgrounds during construction, these would be available during operations and reclamation. Thunder Mountain would be accessed either by the access route through the SGP or on a limited and restricted basis using the Burntlog Route.
Kira Tenney	19247	9	It is noted in the DEIS that the local communities rely heavily on tourism to support their economies” and that “[t]he analysis area is a popular area for a variety of recreation activities on both private and public lands,” yet there is no report, information, or analysis on how the Stibnite proposal will affect tourism, recreation, or the related economic benefits to local communities. A supplemental report and information are needed accordingly.	REC	The Social and Economic Conditions Specialist Report analyzes the economic impacts and benefits to local communities, and this was summarized in the Section 4.21 of the SDEIS.
Kira Tenney	19247	13	3. Cited on pg. 615 “Recreation is considered a major use in the Big Creek area of PNF MA 13 (Forest Service 2003a),” is cited using a 2003 reference (17 years out of date). Per the National Forest Management Act and ROS, the FS is required to provide recreation opportunities. As Idaho is currently the fastest growing state in the nation since 2016 and it is noted that current and inbound residents value recreation highly (a motivating factor in their move to this state) (census.gov, 2020; Foy, 2020; Raphelson, 2017; Men’s Journal, 2019), please include and disclose more recent resources for recreation use analysis of this area in a supplemental DEIS in order to inform substantial and informed comments.	REC	The 2003 reference is the Payette National Forest Resource Management Plan that directs and guides all uses of the PNF including recreation. The Forest Service has not updated it since 2003.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	110	Issue : Change in OSV access. " Column 3: Replace "Groomed OSV trail along Johnson Creek Road from Trout Creek campground north to Wapiti Meadows" with "Groomed OSV trail from Landmark to Wapiti Meadows." Columns 5 & 6: Both do not contain mention of the Paradise Valley connector, North Shore lodge connector, and JC to FS Rd 579 connector. All 3 apply to both alternatives. Column 5: "OSV from Trout Creek Campground to Wapiti Meadows closed through construction of Burntlog Route. " Please add "Groomed OSV route will be re-established on JC Rd between Landmark and Wapiti following construction."	REC	Revisions made. The table was updated to include the three OSV connectors.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	112	"Construction, operations, and reclamation activities would affect access to operating areas of three of the outfitters and guides, affect their ability to provide licensed activities, and may degrade customer's recreation experiences . " Please provide more information about how and where this would happen.	REC	Clarification has been added to the narrative.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	684	"Present actions include mining projects and their related activities (i.e., exploration, reclamation) that are currently underway and are causing impacts . " Please specify the impacts.	REC	Additional narrative added to specify.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	685	Please define ROS in this section.	REC	Acronyms are spelled out the first time the term is used and then the acronym is used for the entirety of the document.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	50	"In addition, under the Johnson Creek Route Alternative, the Johnson Creek OSV route would be longer (up to Wapiti Meadow Ranch) ." Under the JC route alt, OSV access would be cut off to Wapiti Meadow Ranch between Trout Cr campground and Wapiti Ranch from construction through closure. Please correct.	REC	This narrative has been corrected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	444	"Recreation Setting " Please clearly state that this only applies to the National Forest and not the state/private lands within the analysis area.	REC	Statement added to clarify.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	445	"Special Recreation Use Permits " This is not an indicator. Please remove.	REC	This section describes the recreation use associated with special recreation use permits, no edits made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	446	"Changes in recreation physical setting characteristics and related ROS class (by season) measured in acres ." Where are acres presented? Not in Chapter 3 or 4. Please provide.	REC	The acreages were presented in Tables 7-2 and 7-3 in the Recreation Specialist Report. These were added to the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	447	"Effects on the physical ROS in the analysis area focus on two impacts: (1) identified inconsistencies with the existing designated ROS classes due primarily to changes in where motorized use would be allowed, or increased development/landscape modification with implementation of the action alternative; " This infers an inconsistency with the LRMPs. Because the ROS is established in the LRMPs with areas mapped, along with standards and guidelines, modifications that don't fit in, such as those identified throughout this analysis are not consistent with the LRMP. A better explanation of how the ROS are still met is necessary along with a clear statement that Forest Plan standards would be met.	REC	The analysis of whether the SGP meets the Forest Plan standards is provided in Section 4.15 of the SDEIS. Appendix A of the EIS provides the consistency review and amendments. ROS was not identified as being inconsistent with the LRMP.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	448	"Under the No Action Alternative there would be minimal changes to the existing environment; therefore, no changes to the ROS classes and physical setting are anticipated ." Please provide a measurement of acres for ROS classes.	REC	The acreages were presented in Tables 7-2 and 7-3 in the Recreation Specialist Report. These were added to the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	449	"Given the closeness of the SGP to the FCRNRW boundary, portions of the FCRNRW would have unobstructed views of the SGP, including nighttime lighting, at superior viewing locations such as mountain tops or ridgelines ." Please clarify what portions of the FCRNRW are being referred to in this passage and reference the Scenic Resources analysis accordingly. There are no views from the FCRNRW that can see <i>directly</i> into the SGP...certainly there are no unobstructed views. The majority of the FCRNRW boundary (and thus the FCRNRW) is located on the opposite side of the ridge from the SGP.	REC	Section 4.20.2 provides the analysis of scenic resources that would occur from the Project, including where potential components of the Project could be seen from within the wilderness areas. Cites to the Scenic resources section and Scenic Resources Specialist Report were added.
Alan Haslam (Vice President, Permitting, Perpetua	19325	450	"Visual impacts for recreation would be negligible to minor, long-term, and regional ." Please define the assessment of regional impact.	REC	Regional is defined in the Impact Definitions table in both the SDEIS (Table 4.1-1) and the Recreation Specialist Report (Table 7-1). Impacts would extend beyond the Operations Area Boundary and local area boundaries.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	451	"Wildlife in the analysis area also would be affected by operational noise, traffic, and activities, likely resulting in displacement of wildlife away from the analysis area. " Please relate this directly to recreation.	REC	The following was added: "These changes in distribution of wildlife may impact hunting opportunities in the surrounding region."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	452	"Fish adjacent to the Burntlog Route may be affected by increased sediment and could be affected if a spill were to occur (Section 4.12); therefore, there may be decreased recreational fishing success immediately along the Burntlog Route " Please provide information to support the claim of an increase in sediment, and please also note the measures that would be taken to reduce potential sedimentation, including replacing a native surface with a gravel surface, enhancing drainage to reduce erosion, and the application of dust suppressants. The same verbiage on potential impacts from sedimentations is presented in the description of the Johnson Creek Route on page 4- 577 (paragraph 4). This equates potential impacts from sedimentation between the Burntlog Route and the Johnson Creek Route, which is inaccurate. It does not recognize the Burntlog Route's increased distance from adjacent waterways relative to the Johnson Creek Route.	REC	Section 4.8 provides the analysis regarding increased sediment and makes the statement that based on permit-related design requirements, use of BMPs, and required maintenance activities, the potential for access road-related erosion and sedimentation would be minimal (limited to periods of substantial overland flow, such as from very large rainfall events). Section 4.19 does disclose that potential impacts to fishing from the Burntlog Route and the Johnson Creek Route as a result of potential spills and sedimentation would be minor.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	453	"The OSV trail on the west side of Johnson Creek from Wapiti Meadows to Trout Creek campground would be closed during construction (9 miles) . " An OSV route doesn't currently exist along the west side of Johnson Creek Rd between Trout Cr and Wapiti. The existing OSV groomed trail is located within the existing JC roadbed. Please revise.	REC	Narrative revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	454	"To replace the Warm Lake to Landmark OSV route that would be closed from construction through reclamation, there would be a groomed OSV trail from Cabin Creek, near the Knox Ranch parking area, to the Trout Creek campground (11 miles). OSV riders would then use the route on the west side of Johnson Creek to head south to Landmark. " This description needs to include the segment south of Warm Lake Road connecting JC Rd to Landmark-Stanley Rd that is described in Table 2-3 of the specialist report.	REC	Statement added as requested.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	455	"Access would be restricted on roads and OSV routes during avalanche control . Avalanche control may make slopes in the area attractive to skiers and OSV riders due to the perception of lower risk. " Perpetua is not proposing avalanche control along OSV routes. They are not currently controlled. Please delete from SDEIS.	REC	This does not state that there would be avalanche control on OSV routes, but rather roads. Access on OSV routes along roads would be restricted during avalanche control. Slight revisions were made to narrative to clarify.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	456	"Plowing of the approximately 38-mile Burntlog Route would result in the loss of 9.8 miles of infrequently groomed OSV route along the existing Burnt Log Road ." The description of OSV grooming in this paragraph is incorrect and there is no reference to where this information was sourced. I'm assuming it came from the Valley County Groomed Snowmobile Routes Website (https://experience.arcgis.com/experience/a92a825e3af44c4a94da9cf6460455e0/) I suggest the author reach out to the Valley Co Recreation Director for details. They have provided the following information to Perpetua Resources: Valley Co only grooms 4.0 miles of Burnt Log Rd to the Junction with USFS Rd 447E. They only groom approximately 600 ft of Sand Cr Rd (USFS Rd 437). Valley Co does not groom Horn Creek Rd (They quite grooming that as part of the "no net gain" policy. They do groom Sulphur Creek and Landmark-Stanley Rd (referenced as Warm Lake Rd east/south of Landmark). Additional mileage gained along the Cabin Cr Rd/JC Rd OSV would need to be offset by other OSV routes; namely those east of Landmark. Please verify.	REC	This paragraph is discussing plowing of the Burntlog Road in the winter for vehicle access, not for OSVs, although it does mention the loss of the existing portion that is used as an OSV route currently. It does not state that Horn Creek Road is groomed. Narrative has been edited for clarification.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	457	" <i>Plowing of the Burntlog Route and Warm Lake Road would cutoff direct OSV access to the Horn Creek Road, Sand Creek Road, and Warm Lake Road (east/south of Landmark) OSV routes from Johnson Creek Road, which would be the only publicly available winter route to the Landmark area as Warm Lake Road would be closed to public winter use.</i> " This naming convention is likely from the Valley County Groomed Snowmobile Routes website, but is incorrect. Other maps call this road USFS Rd 579, the Landmark-Stanley Rd. Please revise.	REC	Revision made
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	458	" <i>Plowing of the Burntlog Route and Warm Lake Road would cutoff direct OSV access to the Horn Creek Road, Sand Creek Road, and Warm Lake Road (east/south of Landmark) OSV routes from Johnson Creek Road,</i> " Also " <i>Lack of access to the Warm Lake Road OSV route south of Landmark also would affect access to the North Fork Sulphur Creek Road OSV route.</i> " This OSV route would not cut off from the JC OSV Route. The 2021 MMP has a connector along the south side of Warm Lake Rd providing access to Landmark-Stanley Rd. Therefore, it is incorrect to say that Landmark-Stanley Rd would be "cut off from public winter use." Please revise.	REC	The narrative was revised to include: Access to the North Fork Sulphur Creek Road OSV route would be provided by a 0.3-mile connector (Landmark-Stanley OSV connector) located south of Warm Lake Road connecting the southern end of Johnson Creek Road to the Landmark-Stanley Road.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	459	" <i>Until the decommissioning of the Burntlog Route and reverting the remaining road back to a groomed OSV route, winter impacts to OSV use along the Burntlog Route would be major, long-term, and localized.</i> " The proposed OSV route along Cabin Cr Rd/Johnson Cr Rd(west side), and the JC Rd/Landmark-Stanley Rd connector south of Warm Lake Rd was to maintain "in-kind" access for OSV users to the Landmark-Stanley Rd and beyond. Thus, we would suggest that the impacts are not major. Also, this analysis should acknowledge and describe the "no net gain" policy adopted by the Payette/Boise NF.	REC	Additional narrative was added regarding the specifics of the OSV connectors and the in-kind OSV route mitigation. The impact statement was modified as appropriate. The no net gain policy description was added to the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	460	" <i>To continue providing OSV access to Landmark during Burntlog Route construction, a groomed OSV route would be created adjacent to the western side of Johnson Creek Road between the proposed Cabin Creek Road groomed OSV route and Landmark and maintained until construction activities are completed.</i> " Please include the segment of OSV connecting JC Rd to Landmark-Stanley Rd in this description.	REC	Description added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	461	" <i>However, plowing and construction traffic on Johnson Creek Road and Warm Lake Road (described below) and the location of the temporary groomed OSV route along the western side of Johnson Creek Road may make it difficult and/or unsafe for OSV's to cross Johnson Creek Road or Warm Lake Road to reach other OSV routes in the Landmark area, resulting in reduced OSV opportunities and use.</i> " Please remove as this is a speculative assumption that is not provided with any supporting information. Valley County Recreation could be consulted to determine if their users consider this a safety hazard. The assumption that it would reduce OSV opportunities is not correct, and the assumption that it would reduce use is speculative. Please revise or remove.	REC	Narrative was revised to discuss the Landmark-Stanley OSV Connector.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	462	" <i>During construction (prior to the completion of the Burntlog Route) access through the Operations Area Boundary would continue, but there may be half-day to multiple day road closures of Stibnite Road and Thunder Mountain Road.</i> " During construction, the through site public access road would take one year to complete. Following its completion, partial to multi-day closures may be required to ensure public health and safety. Please clarify this description to be consistent with other Sections of the SDEIS which accurately characterize the periods of restricted access through the site.	REC	Narrative revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	463	" <i>The upgraded transmission line would be wider and taller (by 30 feet) with an expanded ROW</i> " While the ROW may be wider, the transmission line and structures would not be wider. Please delete "wider".	REC	The narrative was revised.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	464	"The upgraded transmission line from Lake Fork to Johnson Creek substation would be retained and used by IPCo. The associated facilities along the upgraded transmission line (i.e., switching station, substations) would remain in place and would not be decommissioned; " The Johnson Creek substation would be removed. Please revise.	REC	The narrative was revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	465	"The anticipated acres of disturbance within each ROS physical setting are also provided in the Recreation Specialist Report (Forest Service 2022m). " If it's an indicator, this info needs to be included and explained, or the indicator needs to be modified to match.	REC	ROS acres were added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	466	"Construction and operation of the new transmission line to the Operations Area Boundary, road improvements along the Burntlog Route, closure of Stibnite and Thunder Mountain roads through the Operations Area boundary , communication facilities, and Operations Area Boundary facilities would temporarily affect the ability of Elk Springs Outfitters to access approximately half of their operating area , provide IOGLB licensed activities, and may degrade recreation experiences for customers participating in guided activities near construction of these components due to construction and mine operations noise and activity, construction and mine traffic, new motorized use, and reduction of acreage for available recreation. " AND "Construction of road improvements along the Burntlog Route, closure of Stibnite and Thunder Mountain roads , and Operations Area Boundary facilities would affect the ability of the Idaho Wilderness Company to access approximately 25 percent of the southern portion of their operating area, provide IOGLB licensed activities, and may degrade recreation experiences for customers participating in guided activities near construction of these components due to construction and operations noise and activity, mine traffic, and reduction of acreage available for recreation . " AND "Construction and operation of all the 2021 MMP components would affect the Juniper Mountain Outfitters operating area either directly or indirectly, specifically the ability to access approximately 50 percent of their operating area , " Access through the site is provided via the construction of a new road. It is stated in other sections of the SDEIS, access through site could be temporarily affected from several hours to up to one year while the	REC	The narrative was revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	467	"Impacts during construction and operations from the plowing of Johnson Creek Road would be similar to those described for construction under the 2021 MMP; however, the groomed OSV route along the western side of Johnson Creek Road would run from Trout Creek campground to Landmark (approximately 8 miles) under the Johnson Creek Route Alternative, allowing continued use of the Ditch Creek Road groomed OSV route ." The Ditch Creek Road would no longer be accessible in this alternative. Ditch Creek Rd is north of Trout Cr Campground. There would be no OSV route between Trout Cr and Wapiti under this Alt from Construction through Closure. Please revise.	REC	The narrative was revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	468	"OSV trail on west side of Johnson Creek from Wapiti Meadows to Trout Creek campground closed during construction (9 miles). " This section of OSV trail (currently) is Johnson Creek Road itself, not a trail on the west side. Please correct.	REC	The narrative was revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	469	"OSV trail from Warm Lake to Landmark closed during construction through operations (8.5 miles). " Please replace " operations " with " reclamation and closure " to make this statement correct.	REC	Revised to reclamation and closure.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	470	"During construction, approximately 13 miles of groomed OSV trail would be maintained along Cabin Creek Road (FR 467) ." Please reconcile this value with what is reported in chapter 4.19 (11 miles).	REC	Mileage corrected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	471	"Therefore, beginning at construction, approximately 13,441 acres of NFS lands (and approximately 780 acres of private patented lands within the Operations Area Boundary) would be inaccessible to dispersed recreation (Figure 7-1a). " Please provide a source for this information.	REC	Narrative revised for clarification with citations.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	472	"Given the closeness of the SGP to the FCRNRW boundary, portions of the FCRNRW would have unobstructed views of the SGP, including nighttime lighting, at superior viewing locations such as mountain tops or ridgelines. " Please qualify this statement with supporting information from the Scenic Resources analysis or remove.	REC	Section 4.20.2 and the Scenic Resources Specialist Report provide the analysis of scenic resources that would occur from the Project, including where potential components of the Project could be seen from within the wilderness areas. A citation to this information was added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	473	"Presumably, if the plume would be visible within the FCRNRW, it also would be visible from other nearby NFS lands outside the Operations Area Boundary, thus affecting the recreation setting for both wilderness and non-wilderness users. " Please remove presumptive phrases from this analysis.	REC	Deleted sentence.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	474	"The Burntlog Route would generally be visible 2 to 3 miles east of the route, including some areas within the FCRNRW , and less than 1 mile west of the route and would introduce nighttime lighting to areas that currently do not have such lighting. " Please support such ambiguous and unsupported statements with Scenic Resources analysis data or remove.	REC	Section 4.20.2 and the Scenic Resources Specialist Report provide the analysis of scenic resources that would occur from the Project, including where potential components of the Project could be seen from within the wilderness areas.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	475	"The 13.5 miles of Burntlog Route would increase the area with a semi-primitive motorized recreation setting. " Please clarify the section of Burntlog Route that is being referred to here The BL Route is 38 miles long.	REC	The narrative was revised to clarify that the 15 miles of new road constructed for the Burntlog Route would increase the area with a semi-primitive motorized recreation setting.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	476	"The Burntlog Route, including 20 miles of improved Burnt Log Road (FR 447) and 13.5 miles of new Burntlog Route roadway (Figure 7- 3b), would be open to the public when other public access routes are closed. " It's been established that it is 15 miles in other sections. Please revise.	REC	Revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	477	"Access would be restricted on roads and OSV routes during avalanche control . Avalanche control may make slopes in the area attractive to skiers and OSV riders due to the perception of lower risk. These paths could become more popular as ski zones if they are controlled. This could add an uncontrolled random factor into highway safety programs ." Please revise; Avalanche control of the OSV route is not in the MMP and no avalanche control occurs along OSV routes currently.	REC	This does not state that there would be avalanche control on OSV routes, but rather on roads. Access on OSV routes along roads would be restricted during avalanche control. Slight revisions were made to narrative to clarify.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	478	" <i>Plowing of the approximately 38-mile Burntlog Route, which includes the existing Burnt Log Road, would result in the loss of 9.8 miles of infrequently groomed OSV route along the existing Burnt Log Road. Horn Creek Road (FR 414) is a groomed OSV route for 4 miles and is accessed from Johnson Creek Road (CR 10-413) and Burnt Log Road (FR 447).</i> " This is not accurate and does not consider the full context of OSV route adjustments and the Forest Service's "no net gain" policy. Please revise in accordance with other comments provided in this Section and Section 4.19.	REC	Revisions made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	479	" Warm Lake Road east and south of the junction with Johnson Creek Road is a groomed snowmobile route for several miles and provides access to the North Fork Sulphur Creek Road (FR 442) 3.2-mile groomed route. " AND " <i>Plowing of the Burntlog Route and Warm Lake Road would cutoff direct OSV access to the Horn Creek Road, Sand Creek Road, and Warm Lake Road (east/south of Landmark) OSV routes from Johnson Creek Road (CR 10-413), which would be the only publicly available winter route to the Landmark area as Warm Lake Road would be closed to public winter use .</i> " " Warm Lake Road " should be replaced with " Landmark-Stanley Rd ". This description of OSV route management is not accurate and does not consider the full context of OSV route adjustments and the Forest Service's "no net gain" policy. Please revise in accordance with other comments provided in this Section and Section 4.19.	REC	Revisions made. Added: Access to the North Fork Sulphur Creek Road OSV route would be provided by a 0.3-mile connector located south of Warm Lake Road connecting the southern end of Johnson Creek Road to the Landmark-Stanley Road.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	480	" <i>Direct OSV access to other OSV routes could be cutoff because any overland travel or OSV travel across or on the plowed Warm Lake Road and Burntlog Route would have to share the roadway with mine operation traffic also using this roadway.</i> " This is incorrect. The ModPro2 proposed OSV traffic will merge for 150ft before using a dedicated OSV route to connect with Landmark-Stanley Rd. See Table 2-3 in this report, row 2. Changes to this sentence would require editing of the remainder of this paragraph.	REC	The narrative was revised to add the Landmark-Stanley OSV connector, as well other edits to correct.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	481	" <i>Impacts to winter recreation opportunities, facilities, use, and access from use of the Burntlog Route during operations would focus on the Burntlog Route corridor and connecting OSV routes and would continue until the Burntlog Route was decommissioned (and therefore no longer plowed); Burnt Log Road (FR 447) returned to a groomed OSV route; and public access to Stibnite Road (CR 50-412) was reopened. The impacts would be long term, localized, and major .</i> " Please clarify this statement. In doing so, it should be recognized that per the Payette Forest Plan, the concept of "no net gain" applies to OSV access. An increase in OSV access in one location must be offset by removing OSV access elsewhere. This would apply to the additional OSV mileage gained by using the 2021 MMP proposed OSV access route. OSV access east of Landmark (including Burnt Log Rd, Sand Creek, and Horn Creek) would likely be removed from the grooming schedule to offset the previously mentioned increase per the Forest Service's "no net gain" policy. Additional information on this topic is available by contacting the Valley County Recreation Director. We suggest that the "no net gain" concept is important and of interest to the reader; it should be included in descriptions of proposed changes in OSV access .	REC	Added narrative regarding that the 2003 PNF Forest Plan adopted a no net increase in groomed or designated OSV routes or play areas, with exceptions (Standard TEST34). However, it also states that "permits, authorizations or agreements could expand into baseline routes and baseline areas of existing snow compaction, and grooming could expand to routes of existing snow compaction and routes that have been designated but not groomed in the past and still comply with this standard." This standard supports the use of the existing Cabin Creek Road and Johnson Creek Road corridors for in-kind groomed routes to replace the Warm Lake Road and Trout Creek to Wapiti Meadows OSV segments.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	482	" <i>Ditch Creek Road (FR 410) is a groomed OSV route for 2 miles and is located off Johnson Creek Road (CR 10-413) just north of Trout Creek Campground .</i> " Please replace " groomed " with " infrequently groomed " for accuracy.	REC	Revisions made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	483	" <i>Impacts to recreation access, opportunities, settings, experiences and use from mine construction traffic use of Warm Lake Road (CR 10-579) would be similar to those described above for the Johnson Creek Route (Johnson Creek and Stibnite Roads); however, Warm Lake Road (CR 10- 579) would have a less substantial increase in traffic compared to Johnson Creek Road (CR 10-413) increasing by 11.9 percent from 1,670 to 1,868 AADT (Forest Service 2021b).</i> " The increase of 198 AADT would be from SH55 to	REC	Revisions made.

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			the SGLF only. From the SGLF to SGP the increase in AADT would be 65 during construction for a total of 1735 (3.9% increase) , see table 4.16-2 from Chapter 4.16. Please revise to reflect this.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	484	"From Trout Creek Campground, OSV users could continue down Johnson Creek Road (CR 10-413) to Landmark on a groomed OSV route. " Users would continue down a groomed OSV route parallel to Johnson Creek Road to Landmark , not on the road during construction. Please replace " Johnson Creek Road " with " a groomed OSV route parallel to Johnson Creek Road ".	REC	Revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	485	"The re-routed portion along the road would not be in a recreation area . " In paragraph 1, Page 76, it is stated that: " <i>In addition, the re- routed portion of the transmission line along the NFS and State lands around the Thunder Mountain Estates, would alter the recreation setting of these lands</i> ". These statements are conflicting. Please revise either statement to reflect which is accurate.	REC	The first statement is correct as the re-routed portion would be along an existing road. The second statement was revised. The narrative was revised to better reflect the location on private lands.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	486	"The upgraded transmission line would be wider and taller (by 30 feet) with an expanded ROW (average of 50 feet wide in relatively flat areas and 100 feet wide in mountainous and forested areas) " While the ROW may be wider, the transmission line and structures would not be wider. Please delete " wider ".	REC	The narrative was revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	487	"In addition, the 13.5 miles of new roadway would be recontoured; with culverts and bridges removed, and 6 inches of growth media placed on the roadway and seeded." The new roadway is 15 miles. Please replace " 13.5 " with " 15 "	REC	Revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	488	"Potential impacts to recreation from the reclamation activities are long term, localized, and moderate. " In the 5th paragraph on the previous page is the statement " <i>Impacts from reclamation are anticipated to return to the baseline conditions</i> ." Please edit the statement on this page to reflect the previous statement that " impacts are anticipated to return to baseline conditions ".	REC	These two sentences are related to different impacts. The first sentence is referring to mine traffic related impacts, while the second is discussing the road itself which could not be reclaimed back to baseline conditions. Clarifications were made to the narrative.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	489	"The new transmission line, transmission line access roads, and metering station at the SGP would be decommissioned. " Please add that the Johnson Creek Substation will be removed.	REC	Added removal of the Johnson Creek Substation.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	490	"The 2021 MMP components that would affect the Idaho Wilderness Company operating area during construction include Burntlog Route (Thunder Mountain Road improvements), closure of Stibnite and Thunder Mountain roads through the SGP, and SGP facilities. Construction of these components would affect the ability of the Idaho Wilderness Company to access approximately 25 percent of the southern portion of their operating area, " AND "Construction of the 2021 MMP components would affect the ability of Juniper Mountain Outfitters to access approximately 50 percent of their operating area;" Access through the site is being provided via the construction of a new road. Please revise the statements regarding the loss of access by outfitters and the loss of access through the site.	REC	These statements were made in relation to the construction phase only; however, the narrative was clarified to be more specific.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	491	"Impacts would persist throughout the 2- to 3-year mine construction period and are anticipated to be short term, localized and moderate ." Johnson Creek Alternative construction would be 5 years. Please replace "2- to 3-year" with "5-year"	REC	Revision made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	492	"However, the groomed OSV route along the western side of Johnson Creek Road would run from Trout Creek campground to Landmark (approximately 8 miles) under the Johnson Creek Route Alternative (Figures 7-11), allowing continued use of the Ditch Creek Road (FR 410) groomed OSV route ." Under the JC alt, access to Ditch Creek Rd during winter would be inaccessible. In fact, OSV access between Trout Cr Campground and Wapiti would be inaccessible from construction through closure. Ditch Creek is north of Trout Cr. Please revise.	REC	Correction made for the Ditch Creek OSV route.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	493	"In terms of facilities, the only recreation facility that would be closed until SGP access was reclaimed would be the Stibnite Mining District Interpretive Site ." Under the JC alt, OSV access from Trout Creek north to Wapiti would be inaccessible. Please revise.	REC	Narrative revised to add the closure of the OSV trail between Trout Creek north to Wapiti Meadows.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	495	"The Burntlog Route may have an increased impact on the ability of the two permitted outfitters to provide permitted activities due to the impacts on wilderness activities ." Please specify the impacts on wilderness activities.	REC	Narrative was added regarding impacts to wilderness activities and a cite made to the Special Designations Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	496	"In addition, under the Johnson Creek Route Alternative, the Johnson Creek OSV route would be longer (up to Wapiti Meadow Ranch) ." This OSV route would be not extend up to Wapiti. Please correct.	REC	The narrative was revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	497	"Access to the areas/facilities accessed from Thunder Mountain Road (FR 50375) east of the SGP would be modified due to closure of Stibnite Road (CR 50-412) and creation of the Burntlog Route, which would provide motorized access (year-round) to areas that currently do not have motorized access ." Please revise. This passage appears to ignore the fact that through site access on Stibnite Road is being replaced, not closed. Also please reconcile the description of unrestricted Burntlog Route access with other sections of the SDEIS which describe this as alternative access.	REC	Narrative revised to state that public access through the mine would be provided. Public access along the Burntlog Route was updated as well. Public access restrictions would be implemented along the newly constructed segments of the Burntlog Route if approved.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	498	"These components include the mine and facilities at the SGP, Burntlog Route, upgraded transmission lines, new transmission line to the SGP, Johnson Creek substation, cell tower on Meadow Creek Lookout Road , use of Warm Lake Road, and temporary use of the Johnson Creek Route. " Cell tower isn't located on MC LO Rd. It's located next to the transmission line north of Hangar Flats Pit.	REC	Cell tower location has been revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	499	"Impacts to outfitters and guides from the closure of Stibnite Road (CR 50-412) would not occur ." Stibnite Road would be replaced in the Johnson Creek Route Alternative. Please replace " closure " with " replacement ". For both alternatives, through site access on Stibnite Road is being replaced, not closed.	REC	Narrative revised.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	494	"This would represent an irretrievable commitment of this resource ." Access would be re-established during closure.	REC	Irretrievable commitments of resources are not losses in perpetuity. In this case, the loss of access for the duration of the SGP would be irretrievable because no mitigation measure would make this particular access possible during mining. However, after closure and reclamation, access would be possible again. In contrast, if, for example, access could never take place again (loss in perpetuity), that would be an irreversible impact. Clarification to this statement to include re-establishment after closure.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	19	<p>Comments are provided for SDEIS sections 3.19, 4.19 and the Recreation Specialists Report. These include technical clarifications, and recommended changes in wording to more accurately describe the Project alternatives. To offer additional context for some of these comments, information provided below clarifies these descriptions.</p> <p>Section 4.19.2.2 2021 MMP - The description of the proposed 2021 MMP over snow vehicle (OSV) route between Warm Lake and Landmark is incomplete and therefore overstates the impacts. For example, the description of the OSV route includes the Cabin Creek Road/Johnson Creek Road segments but omits the segment that connects Johnson Creek Road to the Landmark-Stanley Road (Warm Lake Road-south of Landmark; page 4-535). With the omission of this OSV segment, the author incorrectly states "Plowing of the Burntlog Route and Warm Lake Road would cutoff direct OSV access to the Horn Creek Road, Sand Creek Road, and Warm Lake Road (east/south of Landmark) OSV routes from Johnson Creek Road, which would be the only publicly available winter route to the Landmark area as Warm Lake Road would be closed to public winter use. Perpetua Resources has always intended to maintain access to the Landmark-Stanley Road (incorrectly named the Warm Lake Road south of Landmark). This has an influence on the impacts analysis stated as "major, long-term, and localized." With the correct route description and length applied, the impacts would be minor, short-term, and localized.</p> <p>Additionally, in Section 4.19.2.2 (p 4-535, paragraph 5) and in the Specialist Report (p 69, paragraph 3) the impacts to groomed OSV routes east of Landmark and on the Burntlog Route corridor are overstated and don't provide a full picture of how these routes will be managed as a result of the proposed changes to OSV access. It should be recognized that per the Payette Forest Plan, the concept of "no net gain" applies to OSV access. In short, an increase in OSV access in one location must be offset by removing OSV access elsewhere. This would apply to the additional OSV mileage gained by using the 2021 MMP proposed OSV access route. OSV access east of Landmark would likely be removed from the grooming schedule to offset the previously mentioned increase per the Forest Service's "no net gain" policy. Additional information on this topic is available by contacting the Valley County Recreation Director. We suggest that the "no net gain" concept is important and of interest to the reader; it should be included in descriptions of changing OSV access.</p>	REC	Applicable revisions and edits have been made as addressed in early and similar comments. Thank you for this additional information as it will be reviewed and utilized as appropriate.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	211	<p>N. New motorized vehicle routes 1. Baseline and projected recreation information missing</p> <p>The SGP would result in dramatic changes to motorized access and recreation patterns. The additional roads and trails open for public motorized access include the following:</p> <ul style="list-style-type: none"> ● Burntlog Route (at USFS discretion according to the 2021 MMP), ● OHV Connector Trail from Horse Heaven/Powerline to Meadow Creek Lookout Road FR 51290 (dropped from 2021 MMP but still is referenced in SDEIS), ● Johnson Creek Road temporary OSV route, ● Cabin Creek OSV route, ● Public access road through the SGP to connect Stibnite Road to Thunder Mountain Road. <p>It is unclear in the SDEIS if and how the Forest Service responded to our previous comments in the DEIS regarding OSV and OHV issues. There continue to be a number of substantive issues with these proposals. The SDEIS incorrectly describes the competing SGP activities and expanded motorized routes as "short term" which is misleading and inaccurate for a 20+ year mine life. The Forest Service has not done its due diligence regarding baseline recreational use in the area and cannot provide a</p>	REC	<p>There would be no OHV connector trail from Horse Heaven to Meadow Creek Lookout. This was dropped from the Project between the DEIS and the SDEIS. The two references to the OHV Connector in the transportation and socioeconomic sections were an oversight and now have been deleted.</p> <p>Comments on the DEIS were responded to and revisions made to the SDEIS in response to those comments. In Section 4.19.2, it describes recreation access impacts to Johnson Creek Road as short term because they would last 1-2 years during construction of the Burntlog Route. Further, impacts to roadways and trails during construction of the transmission line upgrade would also be short term. Otherwise, recreation impacts were stated to be long term.</p> <p>Qualitative analysis of impacts is acceptable where quantitative data is not available.</p>

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			quantitative estimate of impacts. Because there are no specific recreational use and demand estimates for the analysis area, the discussion of changes to recreational use is qualitative, and describes potential changes in recreational use due to displacement, increased access, reduced acreage for recreation, and changes in the recreation setting. Tools such as road counters, trail cameras, and public surveys could be used to obtain this data. Without a quantitative baseline of recreational use and demand estimates, the Forest Service will not be able to anticipate effects or know how to best avoid, minimize, or mitigate impacts. In addition, members of the public who value recreating in this area will not know how their recreational experiences will be affected if the project proceeds.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	212	<p>2. OSV Routes</p> <p>The SGP proposes to convert two groomed OSV routes (Warm Lake to Landmark and Landmark to Wapiti Meadows Ranch) to year-round mine access routes. The SGP proposes to provide two new groomed routes as a form of mitigation for the loss of these motorized recreation opportunities during mining activities. The SGP proposes to end trail grooming on these routes following completion of mining activities.</p> <p>The Forest Service’s Over-Snow Vehicle (OSV) Rule 241 - Subpart C of the Travel Management Rule - provides a framework for winter travel planning efforts on all National Forest lands. The OSV Rule requires National Forests with adequate snowfall to designate and display on an “over-snow vehicle use map” a system of routes and areas where OSV use is permitted based on resource protection needs and other recreational uses. OSV use outside the designated system is prohibited. While the project in question here is not specific to winter travel management, it is still necessary that the Forest Service abide by the requirements of the OSV Rule in making any decisions concerning the designation – and grooming - of new OSV routes.</p>	REC	<p>The Cabin Creek OSV route and the Johnson Creek OSV route (between Trout Creek and Landmark) will not be additional groomed OSV routes but rather in-kind groomed routes that mitigate the loss of the groomed Warm Lake and Johnson Creek (between Trout Creek and Wapiti Meadows) OSV routes during the life of the SGP. Further, on the PNF 2019 Winter Travel Map, the area where the current OSV routes and the proposed replacement routes are located is designated as open for winter travel use. Therefore, there would be no change to the current Semi-Primitive Motorized winter designation.</p> <p>The reroute of Stibnite Road and the designation of a temporary OSV route to replace an existing OSV route are actions that fall under the Travel Management Rule (36 CFR 212), Subparts B and C respectively (FSM7715.03(5)). These actions require consideration under the Travel Management Rule Minimization Criteria (36 CFR 212.55(b)). The Travel Management Rule analysis was added to Section 4.19 of the Final EIS.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	214	The Cabin Creek Route will consolidate recreational traffic into an area that is almost twice the AHI as the existing route up the Warm Lake Road, increasing a public safety risk. The SDEIS noted that the proposed Cabin Creek OSV route from Warm Lake to Trout Creek has a 40% higher avalanche potential than the Warm Lake to Landmark OSV route. (SDEIS p. 4-538). Yet, DAC (2021) states that “[a]valanche control is not necessarily recommended for this route” because it increases risk to Perpetua in terms of decisions to open/close this terrain, and in the timing of temporary closure and avalanche control.” DAC (2021), at 52. Moreover, DAC (2021) notes that “[a] control program along this route would also significantly increase the cost of [Perpetua’s] avalanche safety program.” Id. Thus, the direct and foreseeable cumulative impact of the Cabin Creek OSV route—that recreational use will be concentrated in an area that poses substantially increased risk to human health and safety—must be addressed, especially to resolve the apparent conflict between the recommendations in DAC (2021) and the SDEIS’ proposal to shunt recreational traffic onto the Cabin Creek OSV route.	REC	Comment noted. Under either action alternative, OSV users would be moved from the Warm Lake OSV route to the Cabin Creek OSV route. The SDEIS disclosed there would be a higher avalanche risk. Avalanche.org and more specifically the Payette Avalanche Center (payetteavalanche.org) provides current avalanche risk for recreationists.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	216	Another indirect effect of maintaining new winter access routes that the SDEIS fails to consider is the limited backcountry skiing access in the area that does not require an OSV. Big Creek Summit and the areas adjacent to the Warm Lake Road past where Valley County snow plowing currently stops are popular car-access backcountry skiing areas. An indirect effect of avalanche control in the Cabin Creek or Warm Lake area may be increased backcountry skier use concentrated in these areas. The ability to drive a car between Warm Lake and Landmark creates a host of new, highly accessible backcountry ski terrain that would be controlled for avalanche hazard. Perception that avalanche control makes steeper ski terrain safe is a documented heuristic trap for travelers in avalanche terrain. SDEIS 4-535 The SDEIS should consider the direct, indirect, and cumulative effects that the SGP will have in creating new easily accessible backcountry skiing areas, and it should consider whether measures should be implemented to restrict access to these areas.	REC	As noted in Section 3.19.4.4, winter use, neither the BNF nor PNF require permits for backcountry skiing. In Section 4.19.2.2 (winter), as noted in the comment, the EIS states that access would be restricted on roads and therefore parallel OSV routes during avalanche control. Avalanche control may make slopes in the area attractive to skiers and OSV riders due to the perception of lower risk. These paths could become more popular as ski zones if they are controlled. There is inherent danger and risk associated with backcountry skiing.
Bonnie Gestring (Northwest Program Director,	17634	220	Furthermore, the SDEIS states that the Cabin Creek route will be in an area that the Forest Plan has designated as Semi-Primitive Motorized in the winter. Contrary to the statement on page 4.19-27250, FSM 2300, Chapter 2310 - Sustainable Recreation Planning states that semi-primitive motorized settings	REC	The Cabin Creek OSV route and the Johnson Creek OSV route (between Trout Creek and Landmark) will not be additional groomed OSV routes but rather in-kind groomed routes that mitigate the loss of the groomed Warm Lake and Johnson Creek (between Trout Creek and

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Earthworks) and seven others			have ungroomed, but marked, OSV routes. Thus, contrary to the SDEIS, the addition of this groomed route will alter the estimated ROS physical setting of the area in winter.		Wapiti Meadows) OSV routes during the life of the SGP. Therefore, there would be no change to the current Semi-Primitive Motorized winter designation.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	222	<p>3. OHV Connector Route</p> <p>The MMP2021 states that the proposed new OHV connector trail from Horse Heaven/Powerline to Meadow Creek Lookout Road was dropped from consideration:</p> <p>No OHV Trail from Horse Heaven/Powerline to Meadow Creek Lookout Road (FR 51290) (see MMPA2021 p. A-2). However, this new OHV connector trail still appears in the SDEIS as part of the proposed action: Public access would be expanded from baseline conditions temporarily to additional roads and trails including Burntlog Route, the OHV Connector Trail, Johnson Creek Road temporary OSV route, and the Cabin Creek OSV route; (emphasis added, SDEIS Section 4.16.5.2, p. 4-501) More specifically, SGP construction would affect access to the operating areas of three outfitters and guides as a result of the development of Burntlog Route and the OHV Trail, as well as the closure of Stibnite Road and the Operations Area Boundary, discussed further in Section 4.19 (emphasis added, SDEIS p. 4-613) The OHV connector trail also appears in the SDEIS on Figure 3.2-2. If the Forest Service is still considering this trail, please refer to our 2020 comments on why this route should not be constructed.</p>	REC	These references to the OHV connector were an oversight and have now been deleted from the EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	224	The existing Burnt Log Road and numerous other roads and motorized trails on the Boise National Forest are open to dispersed camping in which the public can drive 300' off the trail to camp. The nearby Payette National Forest does not allow the same off trail motorized use due to fisheries and other resource concerns and members of the public are instead allowed to drive one vehicle length off the road to camp. Should the new section of the Burntlog Route be constructed, there would be strong interest in driving a motor vehicle away from the route to camp away from mine traffic. However, there are several desirable but sensitive camping areas within 300' of this route including Black Lake, Burnt Log Creek and the Chilcoot Peak Research Natural Area which could be severely degraded by motorized vehicles. See Special Designations below. If the Burntlog Route is selected and public access is permitted, the Forest Service should utilize the protocols of the Payette National Forest and not allow cross-country motorized travel for dispersed camping along the newly constructed route.	REC	Regulations concerning dispersed camping along the Burntlog Route would fall under the associated Forest's Land and Resource Management Plan. In addition, public access restrictions would be implemented along only the newly constructed segments of the Burntlog Route if approved.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	228	<p>5. Closure of the 14,221-acre Operations Area to all access</p> <p>We are concerned about proposals to both dramatically increase and decrease public access patterns in the area. These changes include the significant and unnecessary expansion of motorized use which will have deleterious impacts on a number of natural resource issues. We are also concerned about the complete elimination of all public access in the 14,221-acre Operations Area, including for dispersed activities such as hunting and berry picking. We note that several other large scale open pit mining projects in southeast Idaho have smaller closure areas. The Forest Service and Perpetua need to provide additional justification for eliminating all public access in such a large area and not just at the perimeter of likely disturbance (accommodating a safety margin for blasting, etc.).</p>	REC	<p>The Operations Area Boundary was established as part of the Air Quality Analysis Modeling and is synonymous with the Ambient Air Boundary. This boundary was established to encompass an active industrial site where hazardous activities would occur, such as explosives handling, blasting, drilling, and heavy equipment operation. To mitigate hazards from these activities, most areas of the mine would require strict safety protocols and controlled access and public access would be excluded. Public access inside the operations boundary would be restricted for the life of the mine. This would include physical barriers at points of potential access, including the current Stibnite Road point of entry and proposed site access via the Burntlog Route, as well as natural features that prevent access.</p> <p>Perpetua is proposing to provide public access through the Operations Area.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	232	c. The SDEIS fails to properly evaluate impacts to Middle Fork Salmon River river users Much of the recreational use in this area of the FCRNRW is concentrated along the Middle Fork Salmon River corridor. A Middle Fork permit is often considered to be the "Holy Grail" for whitewater boaters with over 17,000 applicants competing for just 387 permits in 2020.266 While most river runners travel in outfitted or private groups, there is still the expectation of a primitive wilderness experience with no lights, sounds or impacts of civilization imposed on the group. The SDEIS fails to describe how a river trip and guiding services may be impacted by the Stibnite Gold Project. For example, the Supplemental SDEIS needs to analyze which camps along the Middle Fork Salmon are most likely to be affected by noise, light pollution and by plumes of pollution. There is also likely to be a compounding effect at night by which dust clouds exacerbate light pollution by reflecting the light back downward that warrants more discussion.	REC	The Middle Fork is more than 20 miles east of the SGP and would not be affected.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	365	<p>X. Recreation Resources</p> <p>1. Overview of recreation in the analysis area and impacts of the SDEIS action alternatives. The public lands and waterways in, near, and along the access routes of either alternative for the Stibnite Gold Project and beyond the analysis area, are of immense value to Idahoans and recreational tourists. In a brief summary, this region, within the Payette and Boise National Forests, represents a diverse array of recreational assets providing a broad range of opportunities for the public. Hunting, fishing, whitewater paddling, cycling, backcountry skiing, dispersed camping, hiking, bird watching, wildlife viewing, mushroom picking, OHV use, and horseback riding are a few examples of activities that are enjoyed in the area year-round.</p> <p>Scoping comments submitted on the Stibnite Gold Project included many requests to address impacts to specific recreation resources. General comments requested that the Forest Service address the following in analyzing recreational use; “The Salmon River draws thousands of rafters and kayakers from all over the country and internationally each season. Whitewater enthusiasts are concerned about the impacts to the river and river basin for paddling; The South Fork of the Salmon River is one of the key locations in Idaho to which anglers travel to fish for salmon and steelhead. Most of the fishing activity is on the South Fork of the Salmon River, but the mine threatens to impact that activity from traffic and by threatening the health of fish; concern for how the project could impact hunting and trapping, both access and wildlife habitat”.⁴⁰⁷ In addition, the State of Idaho requested the following, “An assessment of potential effects of new roads and road closures on hunting, fishing, and trapping including effects of new roads on stream channel and wildlife habitats.”</p> <p>In general, the analysis of impacts to recreation resources is lacking in the SDEIS, and the Forest Service failed to consider and analyze the impacts to whitewater paddling and fishing recreational resources specifically. The SDEIS does not provide sufficient characterization of recreational use in the area affected by action alternatives in the SDEIS, nor a broad enough scope of analysis to accurately examine likely impacts, and thus impacts to recreation are underestimated and lack analysis of alternative comparison.</p>	REC	<p>Impacts to recreation access to the South Fork of the Salmon River and Johnson Creek were analyzed in Sections 4.19.2.2 and 4.19.2.3 (subheadings Recreation Opportunities, Facilities, Access, and Use). In the narrative, recreational impacts were put in the context of the access road (Stibnite Road, Johnson Creek Road) rather than the stream itself. Clarifications were added in the Final EIS to rectify this. Discussion of the health of fish was detailed in Section 4.12 Fish Resources and Fish Habitat. Impacts to hunting were presented under Recreation Use and Users, as well as under Recreation Special Use Permits in relation to guides and outfitters. Wildlife impacts were analyzed in Section 4.13 Wildlife and Wildlife Habitat. The impacts to recreation from construction and use of new roads, specifically the Burntlog Route, was analyzed in Section 4.19.2.2 Subheading Recreation Opportunities, Facilities, Access, and Use. Recreational river use and fishing were described and analyzed in Sections 3.19.4.4, 4.19.2.2 and 4.19.2.3 under the subheadings of Recreation Use and Users. Additional baseline information and details on potential impacts to recreation resources can be found in the Recreation Specialist Report.</p> <p>Alternative comparison by resource and alternative is provided in Table 2.8-1.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	366	<p>2. The SDEIS analysis area for recreational impacts does not adequately encompass potential impacts resulting from the Stibnite Gold Project.</p> <p>As shown in SDEIS figure 3.19-1, the analysis area for direct and indirect impacts to recreation consists of a 5-mile radius from the major SGP components. This analysis area is too narrow in scope and misses numerous trailheads, access points, and campgrounds that will be impacted by the alternatives presented in the SDEIS. In particular, the analysis area does not encompass much of the East Fork of the South Fork Salmon River, South Fork Salmon River, or the South Fork Salmon River Road (FR 50674) from the intersection of Warm Lake Road (FH22) to the Lick Creek Road (CR 50-412), and the Lick Creek Road (CR 50-412) itself.</p> <p>Under either alternative there will be a significant increase in mine related traffic, delays, and closures along Johnson Creek Road (CR 10-413). Under the preferred alternative, Johnson Creek Road will be used as the primary access route to the project site for the duration of construction. Under the Johnson Creek Alternative, this route will be utilized for the duration of construction, operations, and closure. During summer months in particular, this road is a primary travel route to access numerous recreation destinations and attractions in the area. Given this increase in mine related traffic, one would assume that recreationists will pursue alternative routes to access the area to avoid these delays and will likely travel along the South Fork Salmon River Road and Lick Creek Road when it is open. Both the South Fork Salmon River Road and Lick Creek Road are already popular routes for recreationalists with numerous trailheads, campgrounds, and access points to rivers and dispersed camping. This likely increase in traffic and congestion must be analyzed and addressed by the Forest Service and is lacking in the current SDEIS.</p>	REC	<p>Traffic and additional access routes are analyzed in Section 4.16 (Access and Transportation). As presented in Section 4.16.2.2, there would be approximately five mine-related vehicles traveling on the Johnson Creek Route per hour during the 2 years the Burntlog Route is constructed. Non-mine-related vehicles may experience slower travel times as mine-related vehicle transport would occur during the morning and evening peak hours and typical commute or travel times. However, once construction of Burntlog Route is completed, the Johnson Creek Route would no longer be used by mine-related traffic, and the AADT on Johnson Creek and Stibnite Road would return to the baseline AADT traffic volume. The Access and Transportation Specialist Report does state that other roads in the area including the South Fork Salmon River Road and the McCall-Stibnite Road (which includes the Lick Creek Road) would likely have an increase in traffic; however, as current traffic levels are low on Johnson Creek Road (70 AADT) and Stibnite Road (30 AADT), displacement of that traffic is unlikely to cause congestion on area roadways.</p> <p>As stated in Section 4.16.2.2, impacts to traffic (including recreational traffic) volumes during construction and operations would be localized, short-term, and minor to major for the 2021 MMP. Major impacts would be associated primarily with the mobilization of materials and equipment to commence facility construction projects. As stated in Section 4.16.2.3, under the Johnson Creek Route Alternative, impacts to traffic (including recreational traffic) volumes during construction and operations would be localized, long-term, and major with approximately four mine-related vehicles traveling on the Johnson Creek Route per hour.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	367	<p>3. The SDEIS lacks adequate characterization of river related recreational use, and relies on too narrow of a scope of analysis.</p>	REC	<p>Impacts to recreation access to the South Fork of the Salmon River and Johnson Creek were analyzed in Sections 4.19.2.2 and 4.19.2.3 (subheadings Recreation Opportunities, Facilities, Access, and Use).</p>

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Program Director, Earthworks) and seven others			<p>The SDEIS fails to recognize the significant amount of whitewater paddling and recreational angling use on rivers within the project area vicinity that would be impacted by both action alternatives in the SDEIS. In scoping comments submitted on July 17th, 2017, Idaho Rivers United included that “IRU would like the Forest Service to specifically consider the impact this proposed mine will have to the boating (and other recreation) community of the South Fork of the Salmon River basin, and all those downstream of this operation.” The Forest Service did not fulfill IRU’s request in the DEIS or the SDEIS. There is essentially no qualitative or quantitative assessment of river related recreational use or impacts in the document. The SDEIS at 3.19.4.1 describes existing conditions for recreation in the analysis area and only mentions river recreation without any additional information or analysis. The narrow scope of analysis also excludes river segments with recreation opportunities that would be impacted by both action alternatives. Figure 3.19-1 in the SDEIS illustrates the Recreational Analysis Area, and this boundary excludes a vast portion of the East Fork South Fork Salmon River, and the South Fork Salmon River, a river segment managed as a Suitable Wild and Scenic River with recreation as an Outstandingly Remarkable Value (ORV). In their Wild and Scenic suitability report, the Forest Service states that “the SFSR has outstanding white-water boating and nationally recognized fishing opportunities during premier steelhead and chinook salmon seasons. The river corridor also provides recreation opportunities that include hunting, hiking, camping, and snowmobiling. The many hot springs along the river corridor are beautiful and provide the visitor with a remote soaking experience.” Both of the above sections of river would be impacted by this project. This analysis is nowhere to be found within the SDEIS and should be addressed by the Forest Service.</p> <p>Downstream, the South Fork Salmon River feeds into the congressionally designated Wild and Scenic Main Salmon River. The SDEIS largely ignores impacts to downstream reaches, including potential impacts to the 32 permitted commercial outfitters that operate on the Wild and Scenic Main Salmon River. Direct, indirect, and cumulative impacts to these river segments are described in the sections to follow and should be incorporated into any analysis related to recreational impacts associated with the Stibnite Gold Project.</p> <p>At 4.19.1, the SDEIS states that “Because there are no specific recreational use and demand estimates for the analysis area, the discussion of changes to recreational use is qualitative, and describes potential changes in recreational use due to displacement, increased access, reduced acreage for recreation, and changes in the recreation setting.” However, the qualitative discussion in the SDEIS is limited to certain recreational activities, and completely neglects whitewater paddling within the analysis area.</p> <p>A simple review of literature, internet trip reports, and member-based recreation advocacy group websites such as American Whitewater, reveals that whitewater paddling within the area of concern is world renowned and cherished by this recreational user group. These resources are readily available to both the public and the USFS officials responsible for conducting the recreation analysis in the SDEIS, to provide a more robust characterization of this recreational resource and adequate analysis of impacts to users.</p> <p>Grant Amaral’s book Idaho: The Whitewater State has long been the primary resource for information on whitewater recreation within the state. River stretches listed in this book that would be directly impacted by action alternatives in the SDEIS include the following:</p> <ul style="list-style-type: none"> ● South Fork Salmon River - Goat Creek Run ● South Fork Salmon River - Canyon ● Johnson Creek ● East Fork South Fork Salmon River - Upper ● East Fork South Fork Salmon River – Lower <p>These same river segments that are prized for whitewater paddling are listed in online databases such as American Whitewater, Whitewater Guidebook, Oregon Kayaking, California Creeks, Blue River Expeditions, and Camping by Kayak. This is not an exhaustive list, as there are many more trip reports describing the quality and uniqueness of the recreational resources available on the South Fork Salmon River and tributaries (East Fork South Fork Salmon, Johnson Creek). Outside Magazine published an</p>		Access, and Use). In the narrative, recreational impacts were put in the context of the access road (Stibnite Road, Johnson Creek Road) rather than the stream itself. Clarifications and additional narrative were added in the Final EIS to rectify this. Additional baseline information and details on potential impacts to recreation resources can be found in the Recreation Specialist Report.

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			<p>online article and film in 2018 titled “The Best Big Whitewater in Idaho”, referring to the South Fork Salmon River. American Whitewater’s web page highlighting the South Fork Salmon River states that “Following the pioneering descent in 1971, Cal Giddings reported in the American Whitewater journal that “we feel we have uncovered a superb wilderness kayaking river.”</p> <p>“The South Fork has stood the test of time as a great 2-3 day self-support trip in central Idaho. The put in is at the confluence where the Secesh River joins the South Fork Salmon River and the road ends. The trip can be combined with runs on the South Fork Salmon River, East Fork South Fork Salmon River, or Secesh River that all have access points along the forest road network in the basin.” From 2020-2022 the annual number of permits issued for this stretch ranged from 414 to 209421, with actual user numbers likely much higher due to the voluntary nature of the permits and lack of monitoring.</p> <p>Whitewater floaters come from all across the region to paddle Johnson Creek, the East Fork South Fork Salmon River and the South Fork Salmon River. Some of the remarkable values of this area include the relatively pristine water quality conditions, world-class whitewater interspersed with deep emerald green pools, and proximity to Inventoried Roadless Areas. The most often used guidebook for the area states the following regarding the East Fork South Fork; “This is an outstanding whitewater run...There are good campsites at both the put-in and take-out. Food and drink as well as gas and groceries can be found a mile up from the start in the little mining town of Yellow Pine.” Kayakers may choose to put in on the East Fork South Fork Salmon River about one mile upstream of Yellow Pine and can float the entire stretch down to the Main Salmon River and beyond.</p> <p>From a fishing perspective, large westslope cutthroat trout and the occasional huge bull trout draw anglers to Johnson Creek, the East Fork South Fork Salmon River and South Fork Salmon River. From McCall, this watershed represents some of the closest waters for anglers to target these species. As detailed in the fisheries section, these species still persist here because of cold, clear, clean, and complex watershed conditions. The segment of the East Fork South Fork Salmon River along Stibnite Road, in between Johnson Creek and Stibnite, is a cherished catch and release bull trout fishery. Downstream, the South Fork Salmon is world renowned for its Chinook Salmon and steelhead runs, and when returns allow, recreational fishing season. According to Payette National Forest, “The South Fork Salmon River contains the most important remaining habitat for summer Chinook salmon in the Columbia River basin. The fish were once the largest, most valuable segment of the world's largest runs of Chinook salmon.” The SDEIS vastly underestimates the recreational value of the fisheries in the analysis area and downstream. As a result, the impacts to fishing as a recreational resource are underestimated in the SDEIS.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	368	<p>4. The SDEIS fails to consider direct, indirect, and cumulative impacts on river recreation resources.</p> <p>a. Increased project related traffic and access roads will negatively impact river recreation resources and users.</p> <p>While kayakers and rafters value river stretches away from roads, one of the benefits of floating the East Fork South Fork Salmon and Johnson Creek is the ability to put in and take out at different places that suit a paddler’s ability given the whitewater conditions at that time. Log jams and other hazards may require portaging or scouting from the river bank. As such, it is helpful to be able to pull over and park at different places along the river road. Mine-related traffic will be directed to the Johnson Creek corridor for different amounts of time depending on the alternative chosen. Many members of the public headed towards Yellow Pine utilize the Johnson Creek road when it is open. Due to concerns about or actual experiences with mine-related congestion, delays, and accidents, members of the public who would otherwise use the Johnson Creek Road are likely to increase use along the South Fork Salmon River and East Fork South Fork Salmon River Road, impacting the recreation experience of individuals camping, boating, hiking, or biking. Road construction, increases in mine-related traffic, and increased public traffic may result in fewer access points, increased safety concerns, access to river put-ins and take-outs, decreased water quality, and a generally degraded experience for all recreationists within this analysis area and along the entire stretch of the East Fork South Fork Salmon River Road and the South Fork Salmon River Road.</p>	REC	Impacts to recreation users along Johnson Creek Road are presented in Sections 4.19.2.2 and 4.19.2.3 under Recreation Opportunities, Facilities, Access, and Use/Construction and Operations/Johnson Creek Route subheadings.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	369	<p>b. River access will be negatively impacted by both action alternatives in the SDEIS.</p> <p>Like most outdoor recreation activities, river related recreation depends upon access for enjoyment of these activities. The SDEIS fails to acknowledge the numerous negative impacts to river access from project activities during construction, operations, and closure/reclamation. With whitewater paddling in particular, the put-in and take-out access points are essential to enable recreational users the opportunity for down river paddling experiences (the value of which is emphasized in preceding comments).</p> <p>The SDEIS acknowledges that construction of the upgraded transmission line, Burntlog Route construction and operation, and use of the Johnson Creek Route for mine access, will impact public access at various points in time, with varying duration of road closures. However, these descriptions of project related road closures are overly simplified, and fail to draw a connection to the resulting negative impacts upon recreation access. Multiple whitewater paddling river access points will be adversely impacted by construction related delays. This vague description of effects of road delay on these essential recreation corridors in the SDEIS highlight the need for a more detailed analysis of impacts. The SDEIS should state the estimated duration of delays, and include a mitigation measure to notify the public of such issues.</p> <p>In addition, river access along Johnson Creek Road and Stibnite Road may be adversely affected during site construction. The SDEIS states at 4-536 that “use of Johnson Creek Road and the Stibnite Road portion of the McCall-Stibnite Road as the primary route to the SGP during the construction of the Burntlog Route could result in short-term impacts (1 to 2 years) to motorized recreation access due to potential delays, traffic, and safety-related issues from mine construction-related traffic”. Why would only motorized recreation be affected by these issues? Johnson Creek Road and Stibnite Road are used for many different recreational opportunities, most notably camping, fishing, and whitewater paddling. Any temporary closure could inhibit the recreational access to the Vibika Creek put-in and Johnson Creek take-out on the EFSF Salmon, and the Ice Hole Campground put-in and Yellow Pine take-out on Johnson Creek, depending on where the closure is taking place.</p> <p>Anglers utilize Johnson Creek Road and Stibnite Road upstream to the Yellow Pine pit lake to fish for westslope cutthroat trout, mountain whitefish, and bull trout. Temporary closures would directly impact this recreational resource. The SDEIS should include an analysis of impacts to river recreation access, and provide a sufficient comparison of alternatives.</p>	REC	<p>Access impacts are presented in Section 4.16 of the SDEIS.</p> <p>Access impacts would not only affect motorized recreation but motorized access to points utilized for other types of recreation including fishing, hunting, hiking, and river recreation. Under the 2021 MMP, the Johnson Creek Route would be utilized for a period of about two years during which there may be temporary road closures or delays due to minor improvements within the road prism, oversized loads traveling to the SGP, and increased traffic. The Transportation Management Plan for the SGP states that under the Johnson Creek Route Alternative, public access on Johnson Creek Road would be completely restricted for one year. Public access to Yellow Pine during this time would be on the South Fork Salmon River Road. Public access points beyond Yellow Pine would be partially restricted for the next three years of construction but daily periodic access would be provided. These closures would impact river put-ins and take-outs during that time.</p> <p>Under either action alternative, the Yellow Pine pit lake would not be available for fishing as it is within the proposed active mine area. Once closure and reclamation are complete and the Stibnite Lake, a feature similar in size to the present Yellow Pine pit lake, were established, it would replace the fish habitat of the existing Yellow Pine pit lake.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	370	<p>c. Impacts to water quality and fisheries will impact recreation resources.</p> <p>River recreation, especially whitewater paddling and rafting, involves primary contact with river water through splashing, swimming, flipping/rolling, and occasionally accidental drinking of untreated water. Any impacts to water quality from proposed mining activities could directly, and indirectly, affect recreational opportunities. The SDEIS vastly underestimates impacts to water quality from Stibnite Gold Project Activities, and provides little support for the lack of hazardous material spill analysis and the likely impacts to water quality. For recreational fishing, healthy fisheries are essential. The SDEIS vastly underestimates the impacts to fisheries in the watershed.</p> <p>For detailed comments on impacts to water quality, fisheries, and analysis of transportation spill risk, see the included reports by Lubetkin (2022), O’Neal (2020), Gregory (2022), Zamzow (2020), and Maest (2020 and 2022).</p>	REC	<p>Impacts to water quality in relation to recreational users was presented in Sections 4.19.2.2 and 4.19.2.3 under the Recreation Use and Users/Fishing and Recreation Use and Users/Recreation River Users Subheadings. Impacts to fish and fish habitat were discussed in Section 4.12 and additional detail provided in the Fish Resources and Fisheries and Aquatic Habitat Specialist Report. Impacts to water quality were presented in Section 4.9.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	371	<p>5. Impacts to other recreation resources are underestimated and lacking robust analysis.</p> <p>One of the draws to the area are the opportunities for camping at both developed campsites and dispersed campsites next to or a short distance away from the road. The quality of these camping experiences will be degraded by traffic, noise, dust, light, and exhaust from mine related traffic, and general increases in mine related traffic. Additionally, there is no analysis regarding the likely increase in traffic volume along the South Fork Salmon River Road or Lick Creek Road. Recreationalists attempting to avoid delays and mine related traffic along Johnson Creek Road will seek other access routes, likely the South Fork Road or Lick Creek Road. As a result, the numerous trailheads,</p>	REC	<p>The SDEIS noted that recreationists may be displaced to other areas during construction and operations.</p> <p>The Main Salmon River is over 40 miles from the closest project component (Johnson Creek Route - intersection of Johnson Creek and Stibnite roads). There would be no impacts to recreation use of or to the values of the designated Wild and Scenic Main Salmon River.</p> <p>The Final EIS includes a mitigation measure that would restrict public access to newly constructed portions of the Burntlog Route except for times when project activities on the Stibnite Road preclude access to the Thunder Mountain Road and the Meadow Creek Lookout</p>

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			<p>campgrounds, and access points along these routes will be negatively impacted and should be addressed by the Forest Service.</p> <p>Recreation impacts by alternatives are difficult to analyze in the SDEIS. The SDEIS states at 4-533 that "motorized public use (not including special use permit holders) of the Burntlog Route would only be allowed when the public access route through the mine site was closed, which would occur during some mining activities that would be considered public safety hazards (e.g., high wall scaling, blasting)." This seems to mean that recreation opportunities, including access to campsites, trailheads, dispersed recreation, and the Burnt Log Creek (eligible Wild and Scenic River), off of Burnt Log Road would not be accessible during operations under Alternative 2 (unless Stibnite Road to Thunder Mountain Road is closed). The SDEIS fails to clearly disclose and analyze how this would impact these specific recreational resources. Will the public be able to access Pistol Lake Trailhead, Mud Lake Campground, Burnt Log Campground, or Thunder Mountain/Riordan Trailhead during operations? How will this impact the public's ability to access and enjoy these recreational resources? This lack of detailed analysis and alternative comparison extends to other access-related issues on Johnson Creek Road and Warm Lake Road.</p> <p>Downstream, the South Fork Salmon River feeds into the congressionally designated Wild and Scenic Main Salmon River. Section 7(a) of the Wild and Scenic Rivers Act prohibits the Forest Service from "assist[ing] by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration. Specific to tributaries, Section 7(a) prohibits water resource projects that would "unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of designation of a river as a component of the National Wild and Scenic Rivers System." Section 10(d) of the Wild and Scenic Rivers Act further clarifies agency authority to protect the values of designated and study rivers.</p> <p>The SDEIS largely ignores impacts to downstream reaches, including impacts to the 32 permitted commercial outfitters that operate on the Wild and Scenic Main Salmon River⁴²⁸. Direct, indirect, and cumulative impacts to these river segments are described in the sections to follow.</p>		Road for an extended period of time. These restrictions would not apply to existing segments of the Burnt Log Road or Meadow Creek Lookout Road that are parts of the overall Burntlog Route. However, these existing roads would experience traffic limitations at times during the construction period. The Final EIS includes another mitigation measure describing the process for public notifications regarding traffic limitations and road closures.

Scenic Resources

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Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	37	Please use LED lighting for all mine and facility lighting needs to raise the bar for mining practices and show Idaho that Perpetua is genuinely committed to environmental protection and conservation.	SCE	As described in Tables 2.4-12 and 2.4-13, the Project would implement a variety of regulatory and Forest Plan requirements along with proponent proposed EDFs to minimize impacts from lighting needed for the Project. Forest Service requirements do not extend to specifying types of lighting to be utilized for mining projects. That said, in 2018, Perpetua (then Midas Gold) prepared a report committing to responsible night lighting at the SGP to preclude and/or mitigate light pollution (Dark Skies Report: Looking to the Stars; Banet 2018).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	686	" <i>such as those associated with the Meadow Gold exploration project</i> " Please replace " Meadow Gold " with " Golden Meadow "	SCE	Text revised per the suggested revision.
Alan Haslam (Vice President, Permitting, Perpetua)	19325	500	" <i>The analysis area for scenic resources is not a definitive boundary as it includes all areas where the SGP would potentially be visible to the public.</i> " Please replace " where the SGP " with " where SGP components "	SCE	Text revised per the suggested revision.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	501	"The analysis area generally extends north of and along the East Fork Road segment and the Stibnite Road segment of the McCall-Stibnite Road (CR 50-412), to the east into portions of the FCRNRW, south of and along Warm Lake Road (CR 10-579), and west of Lake Cascade, and represents a 25-mile viewshed analysis area (Figure 3.20-1)." There is not a definitive 25-mile viewshed analysis area on Figure 3.20-1. Please clarify if this is 25 miles from the mine site or 25 miles from any mine feature, or a 25-mile area that encompasses all SGP components.	SCE	The viewshed analysis area represents a clipped area out to 25-miles showing a seen/un-seen analysis for any SGP component.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	502	"Additionally, air quality modeling predicts visual impacts from the potential emissions plume. Actual visibility would depend on meteorological conditions. Visibility and associated impacts would lessen the greater the distance from the Operations Area Boundary and visual contrast would appear strongest during times of low sun angle. Section 4.3 and the SGP Air Quality Specialist Report provide additional information regarding the emissions plume (Forest Service 2022a)." - Suggest clarifying for the reader that potential plume blight due to mine site emissions is described in Section 4.3.4.2 of Section 4.3 and impacts are concisely summarized in Tables 4.3-16 and 4.3-17.	SCE	Text revised per the suggested revision.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	503	"The Hangar Flats pit would be completely backfilled, resulting in a line and form that would blend with the surrounding natural topography." It should be noted here that the pit is below the current valley floor and a high wall on the steep slope to the north cannot be backfilled and would remain exposed. Suggest revising to reflect the current plan.	SCE	Text revised as follows: "The Hangar Flats pit would be fully backfilled to valley grade, resulting in a line and form that would blend with the surrounding natural topography except for an area of its western highwall which would not be covered by backfill."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	504	"Meandering stream channels would be designed across the TSF and TSF Buttress. Reclamation and revegetation of SGP features would contribute collectively to reduce permanent visual contrast to the characteristic landscape." True for the TSF but not true for the TSF Buttress. Please revise to reflect the current plan.	SCE	Text has been revised to remove "and TSF Buttress" from the sentence.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	505	"Visual impacts from construction would alter the experience for individuals at the lookout by transforming it to a more industrial setting." Please define "industrial" or choose another term as construction at the site would likely create an industrial setting, but not construction on the Burntlog Route, for example.	SCE	The word "industrial" has been changed to "developed".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	506	"Nighttime lighting would be perceptible during construction and operation, although implementation of Forest Service mitigation measures specific to lighting would reduce the magnitude of impacts from sky glow. Permanent contrast would be slightly reduced over time because color contrasts of the TSF and the backfilled Hangar Flats pit would gradually diminish through reclamation and revegetation. For areas where revegetation is not possible, in geologic time (i.e., millions of years), weathering would reduce the contrast but, in any human-type context, the change would be permanent because of the coloration and angular nature of the granitic rock against more surficial sedimentary type rocks." The discussion of FS mitigation measures overlooks the design features that Perpetua has also incorporated into the project. This paragraph discusses nighttime impacts and then switches to color and contrast which would not be visible at night. Please separate discussion of elements of visual impacts that are at night vs. day.	SCE	Text has been revised to separate the discussion of visual impacts that would occur between nighttime versus daytime.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	507	"Short-term impacts visible from KOP 4 would be similar to those described above and would be seen from a superior vantage point." Vantage point would be level or inferior from KOP 4. Please revise.	SCE	Text has been revised to delete "and would be seen from a superior vantage point."

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	508	"The emissions plume would be visible from KOP 4. " Presenting as "the emissions plume" suggests to the reader it is a persistent feature, which it is not. Please clarify this statement with additional information from Section 4.3.4.2 and Tables 4.3-16 and 4.3-17.	SCE	Text edited as suggested.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	509	"The limestone crushing plant could be visible from KOP 4 in the middleground once vegetation present in the foreground is cleared. " Please clarify how this assertion is made with an appropriate reference to the Specialist Report. It seems highly unlikely that the LS crushing plant would be visible from KOP 4.	SCE	After further evaluation, it appears very unlikely that the limestone crushing plant would be visible from KOP 4 due to existing topography that would likely block the processing areas which would be almost 2 miles away and existing topography would most likely block, therefore, the impact analysis and text has been revised accordingly.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	510	"The 2021 MMP components described in the list above would result in very similar visual changes to the characteristic landscape as viewed from KOP 4. " Please list the components. It is unlikely that MMP components would be the same at KOP4 as they would for KOPs 1, 2, 9, 10, or 12.	SCE	Deleted text for better clarity. Please note that the seen/unseen analysis is very conservative having used Digital Elevation Models that were only 30 meters in resolution likely resulting in some KOPs showing that components would be visible at various KOPs, but in reality, likely are not.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	511	"Visibility would generally extend up to 2 to 3 miles to the east of the Burntlog Route and less than 1 mile to the west ." Please clarify where this visibility of the BL Route would be from.	SCE	Added text to clarify it would be from "various KOPs".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	512	"The route also could be visible from a ridgeline about 5 to 7 miles west, although due to distance, visual contrast would be weak. " Please clarify where the location is that the route would be visible from.	SCE	A specific location cannot be defined, but the statement is based on the seen/unseen analysis that has been conducted and shows that the route could be visible from higher elevation areas to the west.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	513	"Construction activity on the Riordan Creek segment of the Burntlog Route and the Stibnite Road (CR 50- 412) to Thunder Mountain Road (FR 502375) link would have the same type of impacts to the landscape. " Please state why this is the case only for these segments. This should describe the entire BL Route since the existing segments will be widened too.	SCE	Deleted text for better clarity. Impacts from construction of the Burntlog Route are already included later on in this section.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	514	"During operations , long-term visual effects associated with improvements to Burnt Log Road (FR 447) would occur from Landmark to Trapper Flat, which would require grading and removal of vegetation to accommodate a travel width of 20 feet and total width of up to 26 feet (but less in some locations), including shoulders. " This would be during construction. Please replace " During operations" with " During construction"	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	515	"Similar to the existing portion of Burnt Log Road (FR 447), upgrades required along the portion of Thunder Mountain Road (FR 50375) between the worker housing facility and the mine entrance gate would require upgrades to existing access, including grading, vegetation removal, and upgrade of road structures ." Please add "and road widening" after "road structures" for accuracy.	SCE	Added "(i.e., road widening)" after existing access.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	516	"The Riordan Creek segment of Burntlog Route and the Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link " Please include "the entire segment between the end of Burnt Log Rd and MC LO Rd" and "the segment from MC LO Rd to Thunder Mtn Rd" in this statement for accuracy.	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	517	"A 140-foot-tall road cut near the SGP would introduce a large, smooth light-colored surface above the road that would sharply contrast with the natural, variable lines and forms of the surrounding landscape. " Please state exactly where this is located.	SCE	Reference to the 140-foot tall road cut was removed and text edited.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	518	"From KOP 4, the Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link would travel north through the SGP " Incorrect, please replace "north" with "south" .	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	519	"The impacts visible from KOP 10 would alter the experience of individuals traveling on the forest road by transforming the surrounding setting to a more industrial-like landscape . " Based on the simulation, this is not accurate. Please revise to exclude the "industrial-like landscape"	SCE	Changed to "... a more developed landscape."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	520	"The viewshed analysis (Appendix C of the Scenic Resources Specialist Report [Forest Service 2022n]) indicates that utilities would be visible from 12 KOPs, where detailed analyses were performed: KOP 1, 2, 3, 5, 6, 7, 8, 9, 14, 15, 16, and 17 (Figure 3.20-1). " The transmission would likely not be visible from KOPs 2 and 9, as described in the following sections for each KOP. Please remove KOP 2 and 9 from this list.	SCE	Based upon the seen/unseen analysis, it does show that the transmission line components could potentially be visible from KOPs 2 and 9. However, it is recognized that the seen/unseen analysis is very conservative having used Digital Elevation Models that were only 30 meters in resolution likely resulting in some KOPs showing that components would be visible at various KOPs, but in reality, likely are not. Therefore, no changes have been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	521	"Communications towers are not expected to be visible from the KOPs ." The cell tower would be visible from KOP1. Please revise.	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	522	"Construction-related changes to the landscape would not be visible from the Thunder Mountain Estates subdivision . " Actually, a new segment of the transmission line will be constructed north of Thunder Mtn Estates but the existing line goes right through the subdivision. We intend to remove it once the new segment is constructed. Please revise this sentence to read "Construction-related changes to the landscape that would be visible from the Thunder Mountain Estates subdivision include the removal of the existing transmission line that runs through the subdivision following the construction of the new segment of transmission line. "	SCE	Suggested edit made: "Construction-related changes to the landscape that would be visible from the Thunder Mountain Estates subdivision include the removal of the existing transmission line that runs through the subdivision following the construction of the new segment of transmission line to the north of Thunder Mountain Estates."

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	523	"The level of visual change would be moderate to high where tree clearing would occur in densely wooded areas with steep terrain due to grading or exposing lighter-colored rock. " With only 15 additional feet on either side of the ROW, the level of change would be minor to moderate. Please replace " moderate to high " with " minor to moderate ".	SCE	Edits made. Now reads ... "minor to major, depending on location and existing vegetation that needs to be cleared..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	524	"Access for construction and maintenance of the transmission line would occur in the existing ROW , including conductor-stringing vehicles, construction trucks, and equipment. " This is true in some locations, but many access roads originate from outside the ROW. Please revise.	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	525	"Visual changes associated with widening the ROW would reinforce the existing linear form of the ROW edge, resulting in a bolder, geometric, man-made element in this rugged natural landscape. " This would be 100 ft wide area of new ROW. Please replace " widening of the ROW " with " construction of the 100 ft wide ROW ".	SCE	Added "and clearing" for clarification.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	526	"Long-term visual contrast would result from ROW grading , vegetation removal, and introduction of new transmission line structures. " The ROW wouldn't be graded. Only structure pads and potentially localized access road improvements within the ROW would. Please remove all references to "ROW grading" and replace " ROW grading " with " ROW clearing ".	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	527	"KOP 9: Frank Church-River of No Return Wilderness – Pistol Lake " Please keep the naming of KOPs the same between Chapter 3 and Chapter 4. Replace this heading with " KOP 9: Boundary of the Frank Church-River of No Return Wilderness Near Pistol Lake "	SCE	Suggested edit made for consistency.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	528	"Viewshed modeling indicates that short-term visual contrast from this viewpoint could result from construction activities for the transmission line upgrade. However, due to distance and intervening terrain, visual contrast would be weak to none. Existing vegetation also would limit visibility as long as it is present. " Please add that the transmission line would not be visible from Pistol Lake.	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	529	"The perimeter of the substation would be fenced, and nighttime lighting would be required for maintenance activities, introducing sky glow that would impact the integrity of the night sky . Impacts to night sky would be reduced by implementation of design features such as using minimal lighting, directing lights downward, and shielding lights where appropriate. " No maintenance activities would occur at night. No lights are planned. Please delete.	SCE	Deleted applicable sentences about the substation being lighted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	530	"The SGLF is not within the PNF or BNF, and, therefore, there is no VQO associated with the facility. After reclamation activities have concluded at the SGP, the maintenance facility would be decommissioned and reclaimed to existing conditions. Over time, color contrast would be reduced to a low level of visual contrast once native vegetation becomes established. Permanent visual contrast would be low, and nighttime lighting would return to existing conditions, resulting in negligible permanent visual contrast. " This needs to be a separate paragraph as this is describing a different facility than the first half of the paragraph.	SCE	Paragraph made separate as suggested for clarity.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	531	"The 25-acre site footprint would extend along Warm Lake Road (CR 10-579) in flat to slightly rolling terrain with low-lying vegetation ." The site is dominated by lodgepole pine. Please replace " low-lying vegetation " with " lodgepole pine ".	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	532	"Slight modifications to landform may be evident, and vegetation would be cleared in the majority of the site footprint ." The Conditional Use Permit stipulates a 50-foot setback from the property. That 50-foot setback is dominated by lodgepole pine which acts as a screen. In addition, between the Warm Lake Road borrow ditch and the property line there is an additional 50 feet of lodgepole for a total of 100 feet of lodgepole screen. Please replace " in the majority of the site footprint " with " within the footprint, outside of the 50 ft setback, which provides visual screening. "	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	533	"A 199-foot communications tower would be constructed at or near the facility to provide telephone, internet, and radio communications. " This is a relic of the PRO. It was not carried forward as part of ModPRO2 (2021 MMP). Please delete.	SCE	All text related to the 199-foot tower was deleted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	534	"Additional nighttime lighting would be introduced at this facility, which would contribute to sky glow in an area where existing nighttime lighting is minimal; limited to the few residences in Scott Valley. " Per the CUP, Perpetua will be following Valley Co guidelines for protecting night skies. Specifically, Condition of Approval #5, "All lights shall be fully shielded so that there is not upward or horizontal projection of lights. The lights can only be a maximum of 20' in height and 3000 Kelvin." Please include this information in this paragraph.	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	535	"After closure of the mine, the SGLF would not be reclaimed and it would be made available for other light industrial uses. " This is possible. However, the CUP, Condition of Approval #18, "After reclamation of the mine site and the facility is no longer needed by Midas as a logistics facility, a new conditional use permit will be required prior to use by any other entity. If there is no further use of the site after a two-year time frame, the structures will be removed and the site reclaimed." Please revise to incorporate this information.	SCE	Suggested edit made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	536	"Major road widening and/or straightening of curves, with associated cut and fill, would be required for the Johnson Creek Road (CR 10- 413) portion of the Johnson Creek Route . " Please replace " Johnson Creek Road (CR 10-413) " with " Stibnite Road (CR 50-412) " for accuracy.	SCE	Text edited as suggested.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	537	"Johnson Creek Road (CR 10-413) would be plowed for year-round use under the Johnson Creek Route Alternative, and vegetation clearance along the road would increase in order to accommodate heavy vehicle mine traffic. " Please delete " heavy " as this is not an accurate description of the mine traffic expected in this area.	SCE	Text edited as suggested.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	538	"However, helicopters would be used during construction of communication repeater sites and would periodically enter into view from the majority of the KOPs during construction and maintenance activities. " This paragraph, and section, needs an introduction. Please add " Under the Johnson Creek Route Alternative, the proposed new and upgraded transmission lines would be the same as those described under the 2021 MMP. " to the beginning of this paragraph (from Specialist Report)	SCE	Text added for clarification as suggested.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	539	"4.20.4.2 Action Alternatives " This section describes mine impacts which are not different between alternatives. Please add information about how the 2 action alternatives are different.	SCE	Added text related to the access road aspects of both action alternatives.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	540	"Burntlog Route Geophysical Investigation Field Work (2020-2021)" This field work has not been conducted yet. Please remove dates.	SCE	Text edited as suggested in the Scenic Resources Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	541	"Burntlog Route Geophysical Investigation CE /BNF SOPA- Minerals and geology; The purpose of the investigation is to collect crucial geophysical data along the existing Burnt Log Road and proposed new alignment between Trapper Creek and Stibnite. In Progress: Scoping Start: 02/10/2020 Expected Decision: 03/2022 Expected Implementation: 09/2022 " Please revise schedule. This field work has not been conducted yet.	SCE	Text edited as suggested in the Scenic Resources Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	542	"There would be no new major utility corridors introduced through infrastructure development projects. " Please consider revising to account for the new 8.5 mile section of electric transmission line, unless that is not considered to be applicable for this sentence.	SCE	Text edited as suggested in the Scenic Resources Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	20	<p>Comments are provided in Attachment A for sections 3.20, 4.20 and the Scenic Resources Specialist Report. In addition to those comments, there are several general comments presented here regarding the analysis of effects to Scenic Resources in the SDEIS.</p> <p>The term "industrial setting" is used throughout the scenic resources effects analysis. This term is not defined but is used to describe the future condition for a wide range of SGP features. While this term may be an appropriate descriptor for the active mine site or more particularly the ore processing facility area, its use to describe the (unpaved) Burntlog Route, other improved roads, and the transmission line seems inaccurate and indicates a greater level of change to scenic resources than what would actually occur.</p> <p>On Page 4-572 there is a description of a 140-foot-tall road cut near the SGP. The SGP does not include a 140-foot-tall road cut. Where does the USFS believe this cut to be located?</p> <p>The description of the transmission line through the Thunder Mountain Estates subdivision is inaccurate (Page 4-577). A new segment of transmission line would be constructed north of the Thunder Mountain Estates. Once the new segment is complete, the existing transmission line that passes through the subdivision would be removed.</p> <p>In the scenic resources effects analysis, there are several places where construction of the transmission line describes the "grading" of the right-of-way (ROW). The transmission line, including both expansion of the existing line and construction of the new line, would not include grading of the ROW. Grading would only occur locally at work areas around structure locations and only at structures that are in steep terrain. Stating that the ROW would be graded significantly increases the perception of a greater level of impact to scenic resource than would actually occur.</p> <p>In the analysis of impacts to scenic resources from KOP 16 Stibnite Gold Logistics Facility (Page 585) analysis of nighttime lighting did not appear to take into consideration the guidelines for protecting night skies required of SGP by the Valley County Conditional Use Permit. Specifically, Condition of</p>	SCE	Comments noted and addressed in the specific comments as described above.

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			Approval #5, "All lights shall be fully shielded so that there is not upward or horizontal projection of lights. The lights can only be a maximum of 20' in height and 3000 Kelvin." This requirement of the Valley County Conditional Use Permit should be considered in all future analysis of nighttime lighting effects.		
Jesse Lutz	19386	6	Pollutant emissions in the form of a plume - As stated in DEIS would degrade the air quality by not only increasing harmful particulates into the air but also sacrifice even further the Undeveloped management characteristics the Payette National Forest is tasked to uphold. This plume (along with all vehicular emissions will negatively impact the "Undeveloped" characteristic of Wilderness by showing 'modern human occupation, such as the presence of structures, installations, habitations, or the use of motor vehicles, motorized equipment, or mechanical transport. By having a visual plume seen from how far away (still not clear in the SDEIS?) and at what mixing height before it 'dissipates'(Still not clear in the SDEID?) the visual characteristic of the ridge lines will be hindered for the entire operation of the proposed analysis area.	SCE	As described in Section 4.3.4, a 2020 VISCREEN analysis was conducted, and the results are presented in Tables 4.3-16 and 4.3-17. The analysis predicts that approximately 1 hour of the annual daytime hours (6 a.m. to 6 p.m.) and 107 hours of the annual nighttime hours (6 p.m. to 6 a.m.) may experience a visible plume within a 60 km viewing area. The vast majority of plume visibility would occur when the wind speeds were 2 m/s or less. Regarding mixing height and dissipation of the plume, those types of issues are addressed as part of dispersion modeling and not part of the VISCREEN analysis.
Jesse Lutz	19386	8	Scenic 'values' are equally negatively impacted by the SDEIS proposals - Again, I'd like for the USFS to consider the viewpoint of its public land users. Imagine being on a ridge to the Northeast of the proposed operational area (the Idaho Centennial Trail, Lookout Mountain and Marble Creek areas). Imagine wanting to watch the sunrise or tired at the end of the day trying to enjoy the sunset and twilight sky, then the milky way, only to have that interrupted by constant artificial lighting not only from the area of proposed operations but by vehicle traffic proposed along the Meadow Creek Lookout/Monumental Summit and Proposed Burnt Log road area. There are countless locations to watch the sunrise and sunset within the Wilderness, countless. This to me is an obvious intrusion on all of the characteristics of managed Wilderness; hindering any ability within sight to enjoy and unencumbered sky and natural landscape. Lights emitted from the proposed cell phone tower are not addressed in the SDEIS or are vague and inaccurate. This will also impact Wilderness experiences.	SCE	Section 4.20.2 provides the analysis of scenic resources that would occur from the Project, including where potential components of the Project could be seen from within the wilderness areas. The proposed cell tower would only be approximately 60 feet tall and be located west of the process plant area, over 2 miles away from the wilderness boundary. Although based on Idaho Statutes the cell tower is required to be lighted, in 2018, Perpetua (then Midas Gold) prepared a report committing to responsible night lighting at the Stibnite Gold Project to preclude and/or mitigate light pollution (Dark Skies Report: Looking to the Stars; Banet 2018). Further, as described in Tables 2.4-12 and 2.4-13, the Project will implement a variety of regulatory and Forest Plan requirements along with proponent proposed design features to minimize impacts from lighting needed for the Project.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	234	e. Models used to calculate visual effects need additional refinement and disclosure Visual impacts to the wilderness are not sufficiently addressed in the SDEIS: Burntlog Route cut and fill slopes, repeater site access roads, and mine operation lighting could be visible to wilderness visitors within Big Chief drainage, Summit trail, and at higher elevations within the FCRNRW. No alternative is presented that does not have viewsheds of the mine from within the FCRNRW trailless area. The mine is visible from areas within the Wilderness in all alternatives, but an underground mine would not be. This visual aesthetic is further harmed by the installation of transmission lines and future Burntlog road cuts that are significantly more visible from the interior of the Wilderness. Regarding visual effects, the SDEIS attempts to calculate the visual effect of pollution plumes caused by "a source or combination of sources" (namely dust and emissions from mining activities)on FCRNRW users:	SCE	Section 4.20.2 provides the analysis of scenic resources that would occur from the Project, including where potential components of the Project could be seen from within the wilderness areas. It is recognized that the seen/unseen analysis is very conservative having used Digital Elevation Models that were only 30 meters in resolution, therefore, likely resulting in overstating where SGP components would actually be visible from, especially from within the FCRNRW.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	235	Plume visibility is a transient condition that is caused by a source or combination of sources and is the presence of a plume that is visible to an observer some distance from the source. Assessment of plume visibility is a means to quantify the ability of a viewer to discern a visible plume and is usually evaluated for an observer at the closest point on the boundary of a Class I area of concern. Plume blight occurs when a coherent plume from a source is perceptible against a viewing background (e.g., the sky, or a terrain feature such as a mountain) to a casual observer. The primary parameters of plume blight are the change in visible contrast and color contrast between a plume and background. SDEIS 3-42. The SDEIS provided an estimate of the amount of time a pollution plume would be visible to a viewer: SGP sources may cause visible plumes at the closest Class II wilderness area (FCRNRW) for a small fraction of daylight hours (~0.02 hours). SDEIS 2-137. The SDEIS dismisses the pollution plumes as being visible only for approximately just over one minute per day. It is unclear if this estimate really predicts less than two minutes of visual impacts every day, or if this is an average and most days there won't be any and others when impacts could last hours. Further discussions of the pollution plume in the Specialist Report are particularly unclear and unhelpful: Plumes from emissions sources during mine operation could be visible within the FCRNRW; however, when and where the plume is visible depends on topography, weather conditions, and time of day. The SGP emission sources would be in a valley, and the intervening topography would influence the plume's visibility within the FCRNRW. In the long-term, the natural	SCE	As described in Section 4.3.4, a 2020 VISCREEN analysis was conducted, and the results are presented in Tables 4.3-16 and 4.3-17. The analysis predicts that approximately 1 hour of the annual daytime hours (6 a.m. to 6 p.m.) and 107 hours of the annual nighttime hours (6 p.m. to 6 a.m.) may experience a visible plume within a 60 km viewing area. Previous versions suggested that the vast majority of plume visibility would occur when the wind speeds were 2 m/s or less. The VISCREEN analysis was performed separately for each hour of the 2014 onsite meteorological data with winds that could potentially intersect with the FCRNRW. The VISCREEN results were evaluated on an hourly basis. It further indicates that a plume would not be visible most days, and under certain viewing conditions for which the plume would be seen should only last for approximately one hour. The SGP VISCREEN analysis accounted for the seasonal variation in daytime and nighttime hours; i.e., there is no assumption of 12 hours of daytime and 12 hours of nighttime hours per day. Instead, the daytime or nighttime determination was performed for each hour by comparing to the day-specific sunrise and sunset times. The site-specific sunrise and sunset times were calculated based on the longitude and latitude of the onsite meteorological tower

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			<p>quality of wilderness character within the FCRNRW would be impacted where and when plumes from emissions are visible likely to negligible to minor levels. The calculations used to estimate the 0.02 hours of pollution plume visibility are based on the assumption of 12 hours of daylight and 12 hours of nighttime: Following EPA's VISCREEN guidance, both daytime (6 a.m. to 6 p.m.) and nighttime (6 p.m. to 6 a.m.) are included in this analysis. Therefore, during the summer, the nighttime hours would include some hours when sunlight illuminates any plume and, conversely, during the shorter wintertime daylight hours, some hours analyzed as daytime would occur after the sun has set. SDEIS 4-48. Instead of providing a conservative approach, this modeling used underestimated plume visibility to users. Summer is the most likely time of year when recreationists are going to be in the Middle Fork Salmon River corridor within the FCRNRW. During the summer solstice, there are an additional 3 hours and 35 minutes of daytime compared to the study's calculations. Nautical twilight is the period of time when the sun is 12 degrees or less below the horizon and when the horizon is still visible. During the summer solstice, nautical twilight begins at 4:28 a.m. before sunrise and ends at 10:56 p.m. after sunset. Adding nautical twilight extends the time at which a plume might be visible to 18 hours and 28 minutes. Civil twilight is the period of time when the sun is just 6 degrees below the horizon and no artificial light is needed for visibility. During the summer solstice, civil twilight begins at 5:17 a.m. before the sun rises and ends at 10:07 p.m. after the sun sets. Proper consideration of civil twilight extends the daylight impacts of a plume to 16 hours and 50 minutes of clear visibility. The Forest Service needs to disclose the actual amount of time a plume might be visible to visitors and outfitters. Furthermore, the SDEIS discounts the negative effects of the plume on visitor experiences. Plumes are more likely to be visible when the sun is at a low angle such as 10 degrees rather than overhead. These time periods of sunrises and sunsets are times at which recreationists are most attuned to the sky in appreciation of the wilderness setting and this is also when a plume is most likely to occur and degrade the area's wilderness characteristics. The Forest Service also needs to describe if the time a plume is visible is due to atmospheric conditions beyond the Forest Service's control or if it is related to mining activities at sunrise and sunset. The visual effects of a plume floating above the area of operations and being visible from the FCRNRW or even drifting into the FCRNRW will certainly degrade wilderness character. If the plume is indeed a short term impact lasting only a few minutes at sunrise and sunset, it would appear that the Forest Service could require a mitigating measure during those short time periods to avoid these adverse effects.</p>		<p>using the EPA regulatory methods found in the MPRM meteorological data processing program.</p> <p>The "0.02 hours" cited on SDEIS 2-137 is a typo and has been corrected to "0.02%", as provided in SDEIS Table 4.3-16.</p> <p>Finally, the Middle Fork of the Salmon River is more than 20 miles east of the SGP and is within a canyon. It is unlikely that any light or plume would be visible from the SGP.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	268	The Forest Service should also explore ways to mitigate visual impacts to the Meadow Creek Lookout by requiring communication towers to "blend" into the surrounding environment.	SCE	Comment noted. The Meadow Creek Lookout is analyzed for physical and visual impacts in the Heritage Resources section (Section 4.17) of the SDEIS since it is a historic property and a repeater site is proposed to be co-located there. Mitigation measures for any physical or visual impacts will be directed by the SGP-specific Programmatic Agreement.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	355	<p>V. Noise and light</p> <p>1. Light Pollution</p> <p>Eighty percent of the population of the United States cannot see the Milky Way due to the impact of artificial light. Central Idaho is renowned for its exceptionally dark night skies, and is one of the few large remaining areas in the country that remains relatively unaffected by light pollution. In 2017, the International Dark Sky Association designated the Central Idaho Dark Sky Reserve — the first dark sky reserve in North America and one of only a dozen worldwide. This internationally significant designation is only 45 miles from the Stibnite Gold Project site and is emblematic of the superb dark sky values of Central Idaho. The inappropriate or excessive use of artificial light can have serious consequences for human health, wildlife and our energy grid. For example, artificial light can disturb the sleep patterns and reproductive cycles of a variety of creatures ranging from large mammals to small insects.</p> <p>Existing nighttime lighting in the analysis area is minimal so a large-scale mine development will naturally lead to a significant increase in light pollution unless substantial steps are taken to minimize the amount and type of artificial lighting. The SDEIS states that the SGP would "change the landscape character of the night sky by increasing sky glow or light pollution." (SDEIS, 4-532). Light pollution</p>	SCE	Comment noted. As stated, and described in Section 4.20.2.2, there would be impacts to night sky, but these impacts would be reduced by implementation of design features such as using minimal lighting, directing lights downward, and shielding lights where appropriate. Further, In 2018, Perpetua (then Midas Gold) prepared a report committing to responsible night lighting at the Stibnite Gold Project to preclude and/or mitigate light pollution (Dark Skies Report: Looking to the Stars; Banet 2018).

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			from activities at the SGP would be visible from several recreation areas, roads, and trails, including from portions of the Frank Church-River of No Return Wilderness.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	356	<p>a. Baseline Dark Sky Data</p> <p>For the SDEIS to properly analyze the light pollution impacts of the project alternatives, that light pollution needs to be quantified in some measurable way. However, the SDEIS, like the DEIS before it, does not do so:</p> <p>The extent of change to natural dark skies from lights during mine operation and vehicle headlights on Burntlog Route is unknown. If the extent of change is unknown, then how can the Forest Service properly evaluate the environmental effects of that change? The Forest Service has collected this kind of baseline data for noise pollution (natural decibel levels), but not for the similar phenomenon of light pollution (e.g., measurement of natural darkness).</p> <p>To adequately evaluate the impact of the proposed project alternatives on nighttime lighting, the Forest Service and Perpetua Resources should collect baseline dark sky readings for a well-distributed suite of sites in the analysis area - similar to what was done for baseline ambient sound levels. The International Dark Sky Association has guidelines on how to obtain scientifically rigorous dark sky measurements through use of a Sky Quality Meter. The process of obtaining baseline dark sky measurements is relatively simple, quick, and inexpensive.</p> <p>Once the Forest Service and Perpetua Resources has collected that baseline dark sky data for a range of locations within the analysis area, modeling should be conducted (similar in concept to what is done for air quality) to determine how each of the proposed alternatives would affect the sky darkness in the project area compared to the pre-project dark sky baseline. Specifically quantifying the expected changes is crucial to understanding the resultant environmental effects of the mine construction and operation. This information would then lend itself to the development of more site-specific and nuanced mitigation measures.</p>	SCE	As stated, and described in Section 4.20.2.2, there would be impacts to night sky and a long-term visual contrast would be associated with the expansion of mining activities to full build-out and continued nighttime lighting. However, these impacts would be reduced by implementing lighting design features, including directing lights downward, and shielding where appropriate. Overall, long-term visual contrast introduced to the characteristic landscape would be moderate and localized, primarily due to the expansion of mining activities and introduction of nighttime lighting. In addition, as described in the Transportation Management Plan, travel along the Burntlog Route would typically be scheduled for daylight hours, thus further reducing the impacts to natural dark skies along this route. Further, in 2018, Perpetua (then Midas Gold) prepared a report committing to responsible night lighting at the Stibnite Gold Project to preclude and/or mitigate light pollution (Dark Skies Report: Looking to the Stars; Banet 2018).
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	357	<p>i. How to Create Responsible Night Lighting at the Stibnite Gold Project & Mitigate Light Pollution</p> <p>In 2018 Midas Gold (now Perpetua Resources) sponsored the creation of a unique industry guide to reducing light pollution and gave a presentation on this topic at the Idaho Mining Association conference. See attached report, "How to Create Responsible Night Lighting at the Stibnite Gold Project & Mitigate Light Pollution." We would like to see a description of how the SGP is incorporating these measures from this guide, what are viewed as acceptable levels of light pollution, how the Forest Service will be monitoring light pollution throughout the mine life and how Perpetua will be using adaptive management with pre-set triggers to keep lighting below established amounts.</p>	SCE	<p>As described in Tables 2.4-12 and 2.4-13, the following measures would be used and implemented for the Project to minimize impacts from lighting:</p> <p>To the extent practicable, limit construction activities to the time between dawn and dusk.</p> <p>Utilize, where possible, down shielding or directional lighting such as 'Cobra' style lights rather than an omnidirectional light system.</p> <p>While allowing for public and worker safety, utilize low intensity energy saving lighting (e.g., low pressure sodium lamps).</p> <p>If possible, minimize illumination of lighting on associated construction or operation structures by using motion sensors or heat sensors.</p> <p>If possible, place light shields over outside lights, confining light to the immediate area.</p> <p>Whisper Quiet light plants could be utilized used to mitigate visual impacts from night operations. Lighting would be managed within active mining areas to avoid unintended lighting of natural, wildlife usage areas. External lighting would be kept to the minimum required for safety and security purposes. Lights would be directed down toward the interior of the SGP and shielded, where appropriate. The Forest Service is not planning on monitoring light pollution with the design features and measures already built into the Project to minimize light pollution and impacts to night skies from the Project.</p> <p>At the SGLF, guidelines for protecting night skies are required by the Valley County Conditional Use Permit. Specifically, Condition of Approval #5, "All lights shall be fully shielded so that there is not upward or horizontal projection of lights. The lights can only be a maximum of 20 feet in height and 3000 Kelvin." This is a requirement of the Valley County Conditional Use Permit.</p>

Social and Economic Conditions

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Wade Olsen (OK Gravel Works)	1000	2	Not only have we enjoyed our working partnership with the team at Perpetua Resources but work on the Stibnite Project has helped sustain us as a local business. From this experience, I can say that should the project move forward more local businesses will thrive from the added and diverse economic growth. My family and I live in Cascade, and I trust that Perpetua will continue to value our way of life and our environment while creating hundreds of jobs and supplying our country with much needed resources.	SOC	Comment noted. No response required. The SDEIS describes Project effects on employment, taxes, and other socioeconomic elements in Section 4.21.2.2.
Wade Olsen (OK Gravel Works)	1000	5	Perpetua wants to invest more than \$1 billion in our state, bring many direct and indirect jobs to rural Idaho and still provide access to Idaho's public lands. This is the type of project our state needs.	SOC	Comment noted. No response required.
Clark Kauffman (Representative Legislative District 25, Seat B)	4146	2	As a Vietnam veteran, and a former member of the U.S. Air Force, I understand firsthand the strategic importance of certain minerals to our national defense. We cannot rely on foreign nations, like China, to supply the resources our military needs to defend our way of life. Especially when we have those minerals in our own backyard. Approving the Stibnite Gold Project will help us secure our national defense and we cannot ignore the importance of this project in doing so. Beyond our national defense, this project will positively affect our local communities and be a huge boon for our state's economy.	SOC	Comment noted. No response required.
Clark Kauffman (Representative Legislative District 25, Seat B)	4146	3	I was very impressed with Perpetua Resources' diligence and commitment to working with our communities. Understanding a project of this size will have impacts on a multitude of stakeholders in the area and throughout Idaho. Perpetua has created and executed a plan that gives local communities an equal voice to provide input on and develop accountability mechanisms for the project. They've done this through a Community Agreement with eight local communities in 2018 that lead to the creation of the Stibnite Advisory Council (SAC). The Stibnite Advisory Council was created to be a basis for collaboration with local governments to share information, collect and incorporate feedback, refine details, identify opportunities for partnerships, and enter into formalized agreements and partnerships that address impacts and promote social and economic opportunities. Such commonsense engagement on the part of the investor is cornerstone to sustainable commercial success in Idaho.	SOC	Comment noted. No response required. The SDEIS describes Perpetua's engagement efforts associated with the Project in Section 4.21.2.2.
Clark Kauffman (Representative Legislative District 25, Seat B)	4146	4	I was also encouraged by Perpetua's interest in investing in our slate. According to an independent economic analysis, the Stibnite Gold Project will generate more than \$150 million in state and local tax revenues during its 20-year duration. Meanwhile, local impacts on the economy from direct job creation are estimated at more than \$18 million per year during operations alone. This project is the type of long-term economic and community investment that our state desperately needs.	SOC	Comment noted. No response required.
Greg Chaney (Representative Legislative District 10, Seat B)	4147	2	If permitted the Stibnite Gold Project will be a \$1 billion dollar investment in Idaho, benefitting the entire state. Perpetua is committed to hiring local employees and providing them with valuable training that will strengthen our workforce. Currently, Idaho ranks among the lowest in the country for per capita income and wages, however, these jobs will pay on average much more than many of the predominate jobs in Valley County. Additionally, the communities will see more than \$150 million in local and state tax revenues as a result of the project's completion. These resources will help solidify our schools, bolster local law enforcement, and provide local governments with options to serve the community. But the economic impact of the project is just one reason why the Stibnite Gold Project should be permitted to move forward.	SOC	Comment noted. No response required.
Greg Chaney (Representative Legislative District 32)	4148	1	As Chair of the Idaho House Resources and Conservation Committee, it is important to me that we support sustainable, responsible projects that have a profound economic impact on our communities. An independent study by Highland Economics on the economic impacts of the project found, during construction, the direct impact on the local economy would be \$18.1 million a year in taxes, wages and ancillary benefits. Critical public focused areas, including our schools and law enforcement, would realize more than \$300,000 a year annually from this project. Perpetua is committed to hiring local and	SOC	Comment noted. No response required.

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			supporting training opportunities for Idahoans by working directly with schools, community colleges and the Idaho Department of Labor.		
Greg Chaney (Representative Legislative District 32)	4148	2	Perpetua Resources is about Idaho and the company is committed to investing right here in our great state, in our people and our products. This project is the type of long-term economic investment that our state desperately needs. Not only does it serve as an economic boon to our state, but it also prioritizes and invests in the people of Idaho.	SOC	Comment noted. No response required.
Greg Chaney (Representative Legislative District 32)	4148	3	Perpetua has been a great example of how mining companies can provide benefits to both their communities and their environment. The company has a reputation of being a great community partner and for high quality community engagement. One of the ways they do so is through their Community Partnership Agreement which created the Stibnite Advisory Council. An organization which represents the voices of all 8 of the communities who signed the Community Partnership Agreement. Each community independently selects a resident to represent the community on the Council so that they can bring their questions and concerns directly to Perpetua's management.	SOC	Comment noted. No response required.
Scott Syme (Representative, Commerce & Human Resources Committee - Vice Chair)	4150	2	Allowing Perpetua Resources to move forward with the Stibnite Gold project will mean a \$1 billion investment in Idaho. An independent consulting firm, Highland Economics, conducted an analysis of Stibnite Gold's potential economic impact. They found that the project would, over its lifespan, generate over \$400 million in income tax revenue. Additionally, it would produce \$300,000 annually from property taxes that will go towards local government initiatives including education funding and supporting emergency services.	SOC	Comment noted. No response required.
Scott Syme (Representative, Commerce & Human Resources Committee - Vice Chair)	4150	3	There is a local group asking for another economic study on the SGP to better understand the economic effects of the project on the tourism and recreation industries in the region. But it is clear to me that the economic impacts of the project have been thoroughly reviewed and that another study would not only be a waste of taxpayers' dollars but would also unnecessarily delay the project. Beyond the newly generated tax revenues, this project will bring good paying jobs back to Idaho. Perpetua is committed to hiring from within the state whenever feasible. They plan to employ hundreds of Idahoans during operations; nearly 300 of those new hires would be from the communities surrounding Stibnite. Perpetua has also committed to providing education and job training opportunities to these employees over the course of the project.	SOC	Comment noted. No response required.
Scott Syme (Representative, Commerce & Human Resources Committee - Vice Chair)	4150	4	The economic and local benefits of this project will be a boon for our State. But the antimony resource at Stibnite is just as important. As someone who served 32 years in the U.S Army and the Army Reserve, I know firsthand how critical a domestic supply of antimony is to our national security. Antimony is a crucial component in ammunition and primers and is also used in infrared sensors, camouflage, aircraft, warships, and night vision goggles.	SOC	Comment noted. No response required. The predicted value of the Project's mineral extraction is discussed in SDEIS Section 4.21.2.2.
Terry Gestrin (Representative)	4151	2	The Stibnite Gold Project will be a \$1 billion dollar investment in Idaho and will bring hundreds of well-paying jobs to the state's rural communities. The investment will provide a huge opportunity for many families in my district and across the state. Presently, the job opportunities in Donnelly center on the leisure and hospitality industries. On average, the jobs the Stibnite Gold Project will bring in will be four times the average wages of these leisure and hospitality positions -that's more than \$80,000 per year. The advantage of this project is the employees and incomes it will generate get to stay in Idaho.	SOC	Comment noted. No response required.
Carl Crabtree (Senator, Senate Finance Committee - Vice Chair)	4152	4	As a member of the Joint Finance-Appropriations Committee (JFAC), I am encouraged by projects that, as proposed, will yield significant economic benefits while also demonstrating measurable outcomes. The Stibnite Gold project fits squarely in this category. An independent study on the economic impacts of the project found, during construction, the direct impact on the local economy would be over \$18 million a year in taxes, wages and ancillary benefits. Total local income tax payments over the 20-year	SOC	Comment noted. No response required.

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			project are expected to be more than \$448 million. The economics of this project have been thoroughly studied and it is my opinion that another economic study would be unnecessary.		
Peter Riggs (Senator, Legislative District 3)	4153	2	The project will lead to a one-billion-dollar investment in our great state, with an estimated generation of \$150.9 million in state and local tax revenues. Additionally, the total income tax payments over this period from employees of the project are estimated to reach approximately \$448.2 million. This is a huge boon for our state. On top of the hundreds of jobs the project will generate in rural Idaho.	SOC	Comment noted. No response required.
Peter Riggs (Senator, Legislative District 3)	4153	4	On top of these great economic and environmental benefits, the project will produce 4.8M oz of gold and 148M lbs of antimony. Antimony is a strategic defense mineral an a mineral that may play a huge role in energy transition. Antimony is used for solar panels, wind turbines, semi-conductors and renewable energy batteries. But also in bullets, camouflage, night-vision goggles, aircraft and infrared sensors. The US is now 100% reliant on foreign countries for the antimony we need. It is in our best interest to permit the SGP so that we can secure our antimony supply chain, restore the environment, and provide vast economic benefits to rural Idaho an our state at large.	SOC	Comment noted. No response required.
Fred Martin (Senator, Senate Health & Welfare Chair)	4178	2	Once approved, Perpetua Resources will invest \$1 billion directly into our economy, providing sales to our local businesses and up to 1,000 new jobs for our residents over the 20-year span of the project. The company has committed to hiring, contracting, and purchasing supplies and services locally whenever possible. This will generate more than \$300,000 in yearly property taxes, and almost \$500 million in state and federal income taxes over the duration of the project.	SOC	Comment noted. No response required.
Rick Youngblood (Representative, House Appropriations Committee)	5376	2	As the Co-Chair of the Joint Finance and Appropriations Committee, it is important to point out the economic benefit of this project. The Stibnite project would provide an estimated \$1 billion investment in Idaho. Perpetua's proposed mining project will bring much needed jobs and tax revenues to Idaho. The company has committed to hiring from within Idaho and will work with local businesses whenever possible - providing opportunities to countless businesses outside of the actual mining operations. Their business in Idaho will support Idaho entrepreneurs and families from across the state. The local economic impact from direct job creation is estimated to be more than \$18 million per year during construction, \$18 million per year during operations, and close to \$4 million per year during reclamation. This revenue will support our state's infrastructure projects and support our local schools, helping to create an Idaho capable of taking on a next generation economy and workforce for the future.	SOC	Comment noted. No response required.
Rick Youngblood (Representative, District 4, Seat A)	5747	2	Job creation and economic prosperity are high priorities for Idaho and is why I am proud to support this project. The Stibnite Gold project would add up to 1,000 jobs during the 20-year duration of the project and the company has committed to hiring local, which includes privately funded job training opportunities for Idahoans. In Valley County, a quarter of the employment today is in the leisure and hospitality fields. The positions provided by Perpetua, however, are estimated to pay up to four times the average wages earned in these two industries.	SOC	Comment noted. No response required.
Rick Youngblood (Representative, District 4, Seat A)	5747	3	During the span of the project, it is estimated that Idaho would see more than \$150 million in state and local tax revenues. Perpetua has also committed that the equipment and materials for the project will be purchased locally from Idaho vendors when feasible. Overall, the analysis of the economic impacts of the project by Highland Economics found that total local income tax payments would be nearly \$450 million. Clearly, this is an essential private investment in our community that will help Idaho grow without the use or waste of taxpayer dollars.	SOC	Comment noted. No response required.
Rebecca Lange	6524	2	America needs antimony and gold. We need to strengthen our supply chains and bring mining home.	SOC	Comment noted. No response required.
Clete Edmunson (Superintendent, Council School District)	6527	2	The Stibnite Mining Project is that economic opportunity. The SDEIS indicated that "Both the Valley County and Adams County comprehensive plans reaffirm the importance of natural resources to their communities' economies (Adams County 2006; Valley County 2018a). The Valley County Comprehensive Plan includes goals and objectives pertinent to the SGP to ensure mining remains a viable element in Valley County's economy; to ensure new industrial activities consider long-term impacts and benefits on the local economy and environment; and, to maintain the role of the timber industry, tourism, outdoor recreation, mining, and agriculture in the local economy. Relevant goals under	SOC	Comment noted. No response required. The Adams County and Valley County comprehensive plans are described in SDEIS Section 3.21.3.

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			<p>the Adams County Comprehensive Plan for the SGP include to provide an economically viable environment that builds and maintains a diverse base of business." (3-2)</p> <p>Perpetua Resources hasn't mined one mineral, yet they have already spent more than \$300 million in the state since exploration of the area began in 2009. State and local tax coffers will take in an estimated \$218 million in direct and indirect taxes from the project.</p> <p>These are revenues that we may not otherwise be able to generate that can be directed to state and local projects in need of funding.</p>		
Clete Edmunson (Superintendent, Council School District)	6527	3	The Stibnite Mining Project is the perfect opportunity to add more stable jobs to our economy. It would directly employ 600 to 700 people during construction. Once the mine is operational, Perpetua Resources expects to provide roughly 500 jobs with an average yearly salary of approximately \$80,000. This is in stark contrast to the current \$35,000 in the surrounding area.	SOC	Comment noted. No response required.
Barbara Ehardt (Representative, District 33, Seat A)	7136	2	Perpetua Resources has made a promise to Idaho families, working to bring high-paying jobs back to the region and providing future opportunities for Idaho's youth. In fact, they have programs in place already that specifically focus on educating our children and preparing them for the next generation economy. Working with schools throughout Valley and Adams County, Perpetua has established after-school programs focused on coding and STEM programs. These after-school programs teach students to code and build robots, making learning about the technology of the future fun, while enriching.	SOC	Comment noted. No response required.
Barbara Ehardt (Representative, District 33, Seat A)	7136	3	With my work on the House Education Committee, it is great to see a company support local education. And Perpetua has done just that. Since 2015, the company has supported 39 students with over \$50,000 to help them achieve their higher education goals. And since 2019, they have partnered with local schools to provide over \$115,000 in STEM programming, annual back to school supplies, children's books, and other classroom activities and upgrades.	SOC	Comment noted. No response required.
Barbara Ehardt (Representative, District 33, Seat A)	7136	4	<p>Perpetua Resources is committed to our families, by providing new jobs and bringing increased in state tax revenues to Idaho. If permitted, the Stibnite Gold Project would represent a \$1 billion dollar investment in Idaho.</p> <p>Perpetua plans to hire up to 1,000 employees during operations and will have a yearly payroll of up to \$51 million. This money will spread throughout Idaho communities as it is spent at local stores, restaurants, and on housing. An independent study of the economic impacts found that during the construction phase the direct impact on the economy would amount to \$18 million.</p>	SOC	Comment noted. No response required.
Greg Lanting (Representative)	7147	2	The project will be a huge economic boon to the state of Idaho and specifically Valley County. In fact, Perpetua has already spent nearly \$300 million in total, roughly \$10 million in Idaho alone last year. The project is expected to cost roughly \$1 billion to construct and will be between 500 to 600 Idaho jobs. The company is expecting to have annual expenditures over \$230 million. Perpetua has already proven to be a vital business partner to Idaho and will continue to be that throughout the life of the mine.	SOC	Comment noted. No response required.
James Holtzclaw (Representative, District 20)	7152	2	Perpetua Resources has committed to hiring locally and supporting training opportunities for Idahoans by working directly with local schools and colleges as well as the Idaho Department of Labor. In short, these jobs will be filled by our constituents and directly help the families in Idaho that need it most. In fact, Perpetua's anticipated average salary of \$80,000 is nearly double the current average salary in Valley County. The company anticipates that they will provide over 500 employees, one third of which would come directly from the region.	SOC	Comment noted. No response required.
James Holtzclaw (Representative, District 20)	7152	3	In fact, an independent economics firm estimated that the \$1 billion investment from Perpetua Resources will have significant impacts on the community from job creation alone. They estimate that direct and indirect impacts of the Stibnite Gold Project would generate more than \$29 million in annual local incomes during the years of operations. That same economic analysis also found that our schools, local police and local municipalities could see up to \$300,000 annually from property taxes.	SOC	Comment noted. No response required.

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John Vander Woude (Representative)	7154	3	It's also important to note the costs associated with a cleanup of this size. We cannot - nor should we - count on the taxpayer resources to address these concerns. That is why this influx of private investment is essential, and Perpetua's potential investment of more than \$1 billion to this project is just what is needed.	SOC	Comment noted. No response required.
Judy Boyle (Representative, District 9, Seat B)	7158	2	The Stibnite Gold Project is a \$1 billion investment in the Gem State that will employ hundreds of Idahoans as well as generate significant resources for our economy. With upward of 1,000 new jobs created during construction and Perpetua Resources' commitment to hiring locally for many of those jobs, this is a tremendous opportunity to build a skilled workforce.	SOC	Comment noted. No response required.
Sage Dixon (Representative, District 1, Seat B)	7160	2	By collaborating closely with local schools, community colleges, and the Idaho Department of Labor, Perpetua Resources will support employment and training opportunities for Idahoans throughout the project's lifespan. The business expects to employ up to 600 people and pay \$34 million in wages annually just for construction. With the Stibnite Gold Project, Perpetua Resources intends to make a total investment of more than \$1 billion in Idaho.	SOC	Comment noted. No response required. Employment training is described in SDEIS Section 4.21.2.2.
Tony Wisniewski (Representative, District 5, Seat B)	7163	2	The planned \$1 billion investment and ensuing millions in local and state taxes from Perpetua Resources are the best examples of their dedication to boosting our state's economy. Additionally, during construction and operation, the company will directly employ 500-1,000 people, with a projected annual payroll of over \$34 million. Additionally, Perpetua Resources has pledged to employ locals, which means they will promote training opportunities for Idahoans all throughout the project's lifespan by collaborating with local educational institutions, community colleges, and the Idaho Department of Labor. Not just District 5, but all Idaho communities, require this kind of investment.	SOC	Comment noted. No response required.
Brandon Mitchell (Representative, District 6, Seat B)	7175	2	As a small business owner myself, I commend Perpetua Resources for their commitment to hire locally and use local vendors wherever possible. It is this type of commitment that helps uplift all Idahoans. An independent economic study predicted that the Company will provide 500 direct and 500 indirect jobs, with salaries almost double the average salary in Valley County. Moreover, the project is expected to contribute \$86 million in local and state taxes, \$232 million in annual expenditures, and \$298 million in annual sales transactions in Idaho.	SOC	Comment noted. No response required.
Brent Crane (Representative)	7177	3	Once operational, the Stibnite Gold Project would be the only mined source of antimony in the United States. The US government has declared antimony one of fifty minerals critical to our economy and our national security. Antimony made this list because of its defense, technology and energy applications including ammunition, both lead-acid and renewable energy batteries, semiconductors, and flame retardants. And because over 75% of the global antimony supply is controlled by Russia and China.	SOC	Comment noted. No response required.
Brent Crane (Representative)	7177	4	The Stibnite Gold Project also represents a \$1 billion dollar investment in our state's economy and people. The impacts will reach all Idahoans, increasing employment, and providing an influx of tax revenue. Perpetua is committed to hiring and training Idahoans throughout all stages of the project, generating state and local tax revenues estimated at over \$150 million. As a father of two, I understand our education system needs improvement and can see that this type of investment in Idaho will help contribute to a brighter future for our children. Perpetua has shown their support for local education in a number of ways, including volunteering in classrooms, supporting the Idaho STEM Action Center, providing over \$50,000 in scholarships for local students and by spending over \$115,000 to provide annual back to school supplies, classroom upgrades, and STEM education opportunities.	SOC	Comment noted. No response required.
Britt Raybould (Representative)	7180	4	Furthermore, this project will have a significant impact on our state's overall economy. With USFS approval, Perpetua will invest \$1 billion dollars in Idaho. This boost to the state's economy is crucial to the future development of Idaho and makes clear why it is so important to allow the Stibnite Gold Project to proceed.	SOC	Comment noted. No response required.

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Brooke Green (Representative, District 7)	7185	2	The Stibnite Gold Project is a financial investment to the state of Idaho. When possible, the business has committed to hiring Idaho residents as employees, and it has also promised to prioritize using local vendors. In addition to providing jobs for up to 1,000 local Idahoans, this commitment will boost tax collections throughout the state of Idaho. Property tax revenues from the project would bring in \$300,000 a year for our local governments, schools, and law enforcement. Over the course of the project's lifespan, the local economy is expected to be impacted by over \$18 million during construction, over \$18 million during operations, and \$5 million during the final stages of reclamation.	SOC	Comment noted. No response required.
Jim Guthrie (Senator, District 28)	7190	2	From an economic perspective, this project helps the state create many well-paying jobs. Perpetua Resources plans to hire up to 600 workers with average yearly salaries of \$80,000. The less noticeable but no less lucrative broader economic impact during construction amounted to nearly \$30 million in direct, indirect, and induced effects. Property taxes on the project are anticipated to generate \$300,000 a year for public institutions like universities, police departments, and local governments. Clearly, both private and public entities benefit from the Stibnite Gold Project.	SOC	Comment noted. No response required.
Kevin Cook (Senator, District 30)	7192	2	With USFS approval of the SD EIS for Stibnite Gold, Perpetua would be able to: Build on its nearly \$300 million in local expenditures on the project. Last year alone, Perpetua contributed almost \$10 million. Invest more than \$1 billion into the project Mine the only identified reserve of antimony in the US. This critical mineral, used in ammunition manufacturing, will be essential for our national defense. Establish domestic production of antimony. Currently, 90-percent of antimony is sourced from China, Russia, and Tajikistan. Stibnite Gold would reduce our reliance on imports.	SOC	Comment noted. No response required.
Lori Den Hartog (Senator)	7194	2	Furthermore, the Stibnite Gold Project has plenty of resources for Perpetua to provide a large economic boost not only to Valley County but to the entire Gem State. All while remaining environmentally responsible and contributing to the furtherment of the mining industry as a whole. I am encouraged by Perpetua Resources' extensive community engagement and looking to Idahoans, first, for employees and materials necessary on the SGP. This project is a beneficial opportunity for the Gem State, which is why I urge you to commit sufficient resources for the USFS review of the project.	SOC	Comment noted. No response required.
Tammy Nichols (Senator, District 10)	7195	2	They've already committed and spent more than \$300 million dollars in our communities, with millions more on the way. It is estimated that the company will spend roughly \$1 billion to construct the mine. Private investment and environmental reclamation will do significant things for us all.	SOC	Comment noted. No response required.
Todd Lakey (Senator)	7196	2	Numerous local economies in Idaho will experience significant growth thanks to the Stibnite Gold Project. Between 500 and 600 people will be employed by Perpetua Resources during the project's construction phase, providing high-skilled and lucrative job opportunities for Idahoans from all over the state. Increased activity and employment at this company will also result in higher tax receipts that will go straight to these communities. In fact, Highland Economics, an independent economic consulting firm that studied the project, predicts that over its 20-year lifespan, income tax revenues will total close to \$450 million. The Stibnite Gold Project needs to be approved and moved forward due to these significant economic effects and the advantages of the proposed reclamation.	SOC	Comment noted. No response required.
Matt Bundy (Representative)	7197	2	Perpetua Resources is dedicated to bringing much-needed capital into the economies of our state as well as high-paying jobs. The business has committed to using local suppliers for goods and services whenever possible and will look to hire Idahoans. Perpetua estimates that they will hire up to 1,000 workers during construction, bringing high-paying jobs back to Idaho, and their project would be a \$1 billion investment in our economy. As an educator, I am ecstatic to see that Perpetua Resources is interested in developing the workforce of the future as well as Idahoans. Perpetua Resources will collaborate with schools in Valley and Adams County to set up after-school coding programs in order to develop the future STEM workforce. Through these initiatives, they are enhancing the educational value of youth in Idaho and preparing our young people for the high-tech jobs of the future.	SOC	Comment noted. No response required.

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Megan Blanksma (Representative, District 8, Seat B)	7198	2	<p>Having studied economics, I can recognize the significant impact this project will have on not just the communities near Stibnite, but the entire statewide economy. Perpetua Resources is committed to hiring upward of 1,000 people during construction and another 200 or so during shut down and reclamation. Even better is that Perpetua is committed to looking at Idahoans first to fill these jobs which will pay in the neighborhood of \$80,000 a year – a stark contrast to what many of the service and tourism positions in Valley County currently pay.</p> <p>It was great to see the supplemental call out that the employment and income opportunities from the project would mainly support Idahoans. The report says "Construction and operation of the SGP would provide jobs and income for both individuals directly employed for the SGP, as well as for other individuals whose employment and incomes would be indirectly or induced by SGP's activities. Most of these employment and income impacts would support Idaho residents, of which a portion would be Valley and Adams counties residents. Given the local area's population and current low unemployment conditions, the SGP would result in an in-migration of up to 200 individuals and another 230 dependents for SGP-related employment opportunities. Project-related employment opportunities would have the potential to affect the labor supply for other local employers needing to backfill open positions." Executive Summary, page 29</p> <p>Additionally, the tax revenues from this project will also reach every Idahoan. This project will generate more than \$150 million in state and local taxes and \$300,000 annually from property taxes alone would go toward critical public works endeavors, like our schools, first responders, and local governments.</p>	SOC	Comment noted. No response required.
Megan Blanksma (Representative, District 8, Seat B)	7198	3	Finally, a stronger economy with investments and activity like the Stibnite Gold Project will attract more new businesses and enable continued growth throughout the state. This is an opportunity Idaho and specifically my legislative district cannot ignore.	SOC	Comment noted. No response required.
Melissa Durrant (Representative, District 23, Seat A)	7199	2	Perpetua is planning a \$1 billion investment in Idaho. They intend to employ roughly 500-600 people with a yearly payroll of approximately \$34 million. This money will provide our communities and families with much needed economic opportunities. An independent study of the economic impacts from this project found that during the construction phase the direct impact on the economy would amount to \$18 million a year.	SOC	Comment noted. No response required.
Rod Furniss (Representative, District 31, Seat B)	7201	3	The Stibnite Gold Project will have a significant economic impact on Idaho. Perpetua has pledged to hire locally and buy locally whenever possible. Perpetua estimates that over the course of the project's anticipated 20-year lifespan, the Stibnite Gold Project will contribute \$1 billion to the state's economy and incur average costs of \$232 million. Perpetua intends to employ more than 500 people in the state for the project's operations phase, many of whom will be from Valley and Adams Counties.	SOC	Comment noted. No response required.
Ron Mendive (Representative)	7202	3	In terms of per capita income and wages, Idaho consistently ranks among the lowest states in the nation. Many employees search for jobs outside of the state because Valley County unemployment is so high. Throughout the course of the project, Perpetua has made it clear that they are committed to using local vendors whenever possible and hiring employees directly from Idaho.	SOC	Comment noted. No response required.
Steve Miller (Representative, District 24)	7203	2	My roots run deep in Idaho, with my family living in our great state since the 1880s. I run a family business, operating a ranch in the Magic Valley. Simply put, natural resources are the backbone of this state's economy. Farming, ranching, logging and mining have been extremely important and right now more than ever we need companies like Perpetua who has antimony, a critical mineral. Antimony is used in the primers of all military munitions and this project would be the United States only domestic source. With the world the way it is right now, we need to rely on our resources and not the resources in China and Russia, who along with Tajikistan control roughly 90% of the global supply of antimony.	SOC	Comment noted. No response required.
Ted Hill (Representative, District 14, Seat A)	7204	3	The economic boon to Valley County will be immense, the jobs created for Idaho families impactful and not to mention the environmental cleanup work the company has already begun working on.	SOC	Comment noted. No response required. Economic effects of the Project are described in SDEIS Section 4.21.2.2.

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Wendy Horman (Representative, District 32, Seat B)	7205	2	<p>As a representative of our wonderful state, it is my mission to capitalize on Idaho's inherent advantages. People are one of our greatest assets. The willingness of Perpetua Resources to grant neighborhood communities a well-earned seat at the project development table inspires me. Perpetua Resources has created a Community Agreement program to give locals an equal say in its design because it recognizes that a project of this scale will have a significant impact on our state.</p> <p>However, Idahoans must persist in identifying additional chances that let our kids and teens capitalize on their own assets. For me, the most effective way to achieve this is through economic and educational engagement, which is absolutely necessary to raise the next generation of Idahoans. Perpetua Resources has made a commitment to employing locals and assisting Idahoans with training opportunities by collaborating directly with neighborhood schools and colleges. Furthermore, a Highland Economics independent economic study revealed that the property taxes generated by this project alone could bring in up to \$300,000 for the local communities.</p>	SOC	Comment noted. No response required.
Wendy Horman (Representative, District 32, Seat B)	7205	3	<p>Moreover, Perpetua Resources will support employment and training opportunities for Idahoans throughout the project's lifespan by collaborating closely with local schools, community colleges, and the Idaho Department of Labor. The company expects to hire up to 600 people and pay \$34 million in wages per year just for construction. Perpetua Resources intends to invest more than \$1 billion in Idaho with the Stibnite Gold Project.</p>	SOC	Comment noted. No response required.
James Petzke (Representative, District 21)	7206	2	<p>Perpetua's operations in Valley County will employ roughly 500-600 jobs. Most of those miners, operators and support teams will be comprised of local Idahoans. The company has already spent nearly \$300 million in total working on permitting the project. Last year alone almost \$10 million was spent in Idaho. Once permitted, it is estimated that construction of the site will be roughly \$1 billion. The economic impact of the project is tremendous.</p>	SOC	Comment noted. No response required.
Jeron Crane (Representative, District 12, Seat B)	7207	2	<p>Allowing Perpetua to mine gold and antimony, a critical resource, would result in: A \$1 billion investment in the state of Idaho, along with 500-600 jobs in the Valley County area. This financial investment shows Perpetua's commitment to community, which is coupled with its numerous efforts to revitalize an area left in poor condition by previous operators.</p> <p>Reduced reliance on the import of antimony, which is used to manufacture US military ammunition. As an Idaho National Guardsman, this is imperative, as Russia, China, and Tajikistan currently control 90% of the global antimony supply.</p>	SOC	Comment noted. No response required.
Jason Monks (Representative)	7208	2	<p>Seeing this project move forward would result in an economic windfall for Idaho. Perpetua not only plans to hire upward of 1,000 workers, but the company has committed to look at the workforce here in Idaho to fill those jobs first. This would bring mining jobs back to Idaho and put unemployed people to work. Furthermore, this project is expected to result in a nearly \$1 billion investment. According to an independent analysis done by Highland Economics, the project would generate nearly \$151 million in tax revenue for the state. That money would go towards our schools, local governments, and even law enforcement.</p>	SOC	Comment noted. No response required.
Jeff Ehlers (Representative, District 21)	7209	2	<p>One of the first jobs I held in my youth was at my neighbor's potato farm. It was there I learned the value of small businesses in our community. This is a very large project but will be an economic boon for other area businesses both large and small. Further the company will be employing roughly 500-600 people directly. This along with using local Idaho businesses is huge for our state.</p>	SOC	Comment noted. No response required.
Jerald Raymond (Representative, District 31, Seat A)	7210	2	<p>As a father of six, grandfather of 24, I know how important it is for Idaho kids to get a fulfilling education and, ultimately, an Idaho job. Taxes generated by work on Stibnite Gold will fund local infrastructure, such as schools, that will provide our children with the necessary tools to succeed. Additionally, the project will provide roughly 500-600 jobs and infuse approximately \$232 million in annual expenditures.</p>	SOC	Comment noted. No response required.
Joe Palmer (Representative)	7211	2	<p>Idaho was settled upon vast untapped reserves of minerals and metals. Perpetua Resources is offering Idaho the opportunity to utilize and profit from these resources rather than squander them. Harvesting the gold and antimony deposits in Stibnite will generate significant revenue for the state and the nation's</p>	SOC	Comment noted. No response required.

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			economy. If this projected is granted approval, it would be a \$1 billion dollar investment in the state that will provide hundreds of jobs to rural communities.		
Joe Palmer (Representative)	7211	3	I find it prudent to discuss the importance of the antimony resource at Stibnite. Every bullet fired by our armed services contains antimony. The Department of Defense has been unable to get military grade antimony from China for the last two years. And one day soon our antimony stockpile will run out. Perpetua's recent grants from the Department to study whether or not their antimony can meet military specifications signals how critical their antimony resource is to our national defense. We cannot continue to leave our nation vulnerable by relying on Russia and China for our antimony when we have a significant resource right here in Idaho.	SOC	Comment noted. No response required.
Jon O. Weber (Representative, District 34)	7212	2	With my time as a member of the House Committee on Revenue & Taxation, Perpetua's plan for a \$1 billion investment on this project is something we must not ignore. That massive commitment to the community of Valley County would result in a sizeable tax contribution to fund local infrastructure projects. More importantly, Perpetua's commitment to hiring local workers/contractors would put people on the job.	SOC	Comment noted. No response required.
Julie Yamamoto (Representative, District 11, Seat A)	7213	2	As a Representative for District 11 and an educator, it has been encouraging to see Perpetua's investment in their local communities and school systems. To date, the company has spent over \$115,000 supporting school programs and opportunities such as back to school supplies and STEM education opportunities. And they have also donated over \$50,000 in scholarships to local students to advance their higher education. The Stibnite Gold Project (SGP) is anticipated to bring almost a thousand jobs to rural central Idaho, with an average salary nearly double that of the county average. The SGP will provide the opportunity for current and future generations of Valley County residents to find well-paying jobs upon graduation in their community; reducing the need for them to move elsewhere in order to provide for their families.	SOC	Comment noted. No response required.
Kenny Wroten (Representative, District 13, Seat B)	7214	2	This project will provide a \$1 billion private investment in our state that will benefit our economy, boost domestic production of a critical resource, and end with an extensive reclamation process. Perpetua has shown that it is committed to hiring locally and purchasing supplies from local vendors. Additionally, the positions needed for this project are high paying positions, with employees receiving quality training.	SOC	Comment noted. No response required.
Lance Clow (Representative, District 25)	7216	2	The Stibnite Gold Project will be a \$1 billion investment in Idaho, bringing in tax revenues, jobs, and environmental restoration Idaho needs. Perpetua is committed to not only hiring directly from local communities but is anticipating paying their employees nearly double the average salary in industries common in Valley County. Considering Idaho ranks among the lowest in the county for per capita income and wages, this project will offer an opportunity for Idahoans to prosper from our natural resources, while also repairing the environment.	SOC	Comment noted. No response required.
Lance Clow (Representative, District 25)	7216	3	Over the duration of the Stibnite Gold Project, an independent economic analysis estimates that the project would generate over \$150 million in state and local tax revenues. Local communities' schools and emergency services would see \$300K annually from property taxes alone. Means to support our schools will provide our children with a better education helping to stabilize the future of Idaho. And Perpetua has already shown their commitment to support local students and to help provide additional education opportunities. The company has provided numerous STEM education opportunities, provided annual donations to after school programs, donates back to school supplies on an annual basis, has helped fund classroom updates, and has also awarded over \$50,000 in scholarships to local graduating seniors looking to further their education - whether that be at a traditional university or college, a trade school or an apprenticeship.	SOC	Comment noted. No response required.
Chris Allgood (Representative)	7257	2	The Gem State is one of the most abundantly rich states in natural mineral resources in the United States. The Stibnite Gold Project has a very solid gold resource and just as important, 148-million-pounds of antimony, a critical mineral. Once approved and after a billion-dollar investment to construct the mine, Perpetua Resources will be able to provide between 500-600 new quality jobs to Idahoans, thereby assisting in the retention of a skilled workforce that is aptly compensated. Furthermore, Perpetua is a part	SOC	Comment noted. No response required.

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			of the community because they hire locally and support Idaho businesses by sourcing contractors, materials, services, and supplies from local providers.		
Stephanie Jo Mickelsen (Representative, District 32, Seat A)	7258	3	Furthermore, I admire Perpetua's commitment to the Valley County community. By repurposing, restoring and, ultimately, reclaiming an abandoned mine site, Perpetua will provide an economic boost to the area and serve as a beacon for responsible mining. The company has signaled a \$1 billion dollar investment in the community, which is accompanied by a highly robust plan for repairs to the site and surrounding habitat.	SOC	Comment noted. No response required.
Doug Ricks (Senator, District 34)	7259	2	As a small business owner, I admire Perpetua's commitment to the community. The company has spent nearly \$300 million total, with nearly \$10 million spent in Idaho over the past year. With approval, Perpetua is planning on an investment of \$1 billion for the Stibnite Gold Project. That would include an average of \$232 million and 500-600 direct jobs.	SOC	Comment noted. No response required.
Faye Thompson	7262	3	I am impressed by the improvements the company made to its plan based on public feedback. In fact, your statement "The potential for other adverse impacts to the local area's economy would be relatively limited. This is due to both the limited extent and remote location of SGP's expected resource impacts. In addition, recreational opportunities would be available elsewhere in the analysis area for recreationists displaced by SGP's activities. As a result, these other SGP-related impacts generally would not result in future visitation changes or other impacts to the local area's overall economy but could affect specific outfitters' access to the SGP area." (ES-29), is appreciated. Some locals make it seem the world is going to end.	SOC	Comment noted. No response required.
Susan Dorris (Mayor, Donnelly)	8432	2	We are a small community that is proud to host Perpetua Resources. We believe Perpetua's approach to the Stibnite Gold Project is a standard for other large businesses to use as they communicate with their community. Of special note, we find the Stibnite Advisory Council (SAC) a resource that suits our needs. Over the last couple of years, SAC wanted to provide a third party's perspective of the water conditions at Stibnite and they partnered with the University of Idaho's IWRRRI to validate what Perpetua was sharing about water conditions on site and Perpetua paid for those samplings. In addition, the environmental working group asked for a third party review of the TSF and again Perpetua agreed. This year SAC also spoke with leadership in communities to prioritize some areas of concern in order to address those concerns over the coming year. Simply stated, Perpetua Resources has been a valued partner and we look forward to a long and prosperous relationship.	SOC	Comment noted. No response required.
Susan Dorris (Mayor, Donnelly)	8432	6	Beyond the conservational enhancement, the economic improvements that Perpetua Resources will make available will be significantly important to Valley County. It is projected that Perpetua Resources will bring over 1,000 jobs throughout the life of the project. The trickle-down effect may include another 1,000 jobs. The importance of Perpetua's 1,000 jobs is huge. These will be well paying jobs providing salaries and benefits that will exceed \$80,000 per year. Perpetua is committing to conduct training that will help ensure the jobs will be available to local residents. Additionally, the impact to our tax base will further help our communities.	SOC	Comment noted. No response required.
Joe Iveson, Mike Paradis, Viki Purdy (Commissioners, Adams County)	8680	1	Thank you for this opportunity to provide our input on the Supplemental Draft Environmental Impact Statement (SDEIS) for the Stibnite Gold Project. We believe this major project will provide substantial benefits to the citizens of Adams County and other communities like ours in the surrounding region. We have observed with interest the progression of the Stibnite Gold Project since Perpetua first began communicating plans for redeveloping the Stibnite site more than a decade ago. Since that time, we have appreciated the unique approach taken by Perpetua to truly involve the surrounding communities in their planning and placed environmental restoration at the center of their proposed project. Perpetua Resources has been very transparent with their plans and have obviously taken the time to listen to the public with the modifications they have made to the plan.	SOC	Comment noted. No response required.
Joe Iveson, Mike Paradis, Viki Purdy	8680	3	Adams County is looking forward to the economic benefits this project will provide for our region. From the \$1.1 billion in private investment, the Stibnite Gold Project is expected to create roughly 600-700 direct jobs during the construction phase, with annual payroll ranging from \$42 to \$49 million. During operations, the company expects to provide Idahoans with another 500-600 direct jobs, with payroll	SOC	Comment noted. No response required.

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(Commissioners, Adams County)			ranging from \$48 million to \$51 million. Another 950-1,400 indirect jobs would be created during both phases.		
Joe Iveson, Mike Paradis, Viki Purdy (Commissioners, Adams County)	8680	4	<p>Several citizens from the City of Council within Adams County have been employed by Perpetua Resources and can attest to the company's values and ongoing commitment to the region. We look forward to furthering employment opportunities throughout the life of the project.</p> <p>With our long history of resource development, particularly mining and forestry, in our region, we are familiar with both the challenges and benefits of major projects in these industries. With the Stibnite Gold Project, one major positive aspect for our county is that there will be opportunities for the younger generation to have well-paid jobs with good benefits near to their hometown, near family, and not be reliant on only part-time tourism or government jobs. This project represents some encouraging news about the potential for economic growth and revitalization within Adams County.</p> <p>Additionally, the project is expected to inject hundreds of millions of dollars into our state's economy and provide significant local and state tax revenue. For a region like ours, these benefits will have a substantial positive impact on the local economy.</p> <p>Finally, and as we are sure many Idahoans would agree, in addition to the economic benefits that will result from this project, Adams County approves of the extra measures proposed by Perpetua Resources to protect the environment and help restore habitats for local wildlife and fish populations.</p>	SOC	Comment noted. No response required.
Steve Hull (Fire Chief, Cascade Rural Fire Protection District)	10178	4	The remote nature where the Stibnite Gold Project is located along with weather and mountain road factors will require careful and thoughtful consideration in selecting the option that best meets all of our needs. There is no way CRFPD could provide the service level required for this project without mitigation funding.	SOC	<p>Funding agreements between CRFPD and the SGP are outside the purview of the Forest Service.</p> <p>The Project effects on public services are described in SDEIS Section 4.21.2.2.</p>
Lori McCann (Representative, District 6, Seat A)	10234	3	The commitment of Perpetua Resources to the growth of our state economy is best demonstrated by their planned \$1 billion investment and subsequent contributions of millions in state and local taxes. Furthermore, the company will directly employ 500-1,000 people during construction and operations, with an expected annual payroll of more than \$34 million. These figures do not begin to capture the project's indirect economic impacts. Property taxes alone will generate an estimated \$300,000 in annual revenue for schools, state law enforcement, and local governments. We cannot afford to miss out on this chance to grow and strengthen our communities.	SOC	Comment noted. No response required.
Treg Bernt (Senator, District 21)	10237	3	In addition to the environmental impacts, Perpetua will have an immense impact in both Valley County and our state economy. As a small business owner, I stand by businesses that provide opportunity and actively support the community. If the SGP is allowed to move forward, Idaho can expect a continuation of over \$1 billion in construction and annual expenditures of over \$230 million.	SOC	Comment noted. No response required.
Jeff Cornilles (Representative, District 12, Seat A)	10759	3	Additionally, the Stibnite Project will be a boon to the state and regional economy. By projecting a \$1 billion investment for the project, as well as the commitment to hiring local workers, this will allow may Idahoans the chance to earn a good living while mining the critical resource of antimony. Today, Stibnite is the only identified antimony reserve in the US. Given the uses of antimony (US military ammunition, semiconductors, long duration batteries), we need to allow Idaho workers to meet the growing need of a domestic supply of antimony.	SOC	Comment noted. No response required.
Conway Ivey (Executive Chairman, Ivy Minerals, Inc.)	13274	3	Implementing the MMP will unarguably provide tremendous economic benefits to Idaho, and in particular the local communities in Valley County that will provide many of the employees, services, and supplies for the project. The SDEIS projects 200 new residents for SGP-related employment, and \$61.7 million dollars a year in total government tax revenues of which \$10.1 million will go to state and local government entities. This is a very significant economic boost to the local area, with creation of living wage jobs and increased government revenues that can fund services and facilities depended upon by the public. Importantly, it will also provide economic diversification by providing employment and funding supporting county services which are currently dependent on recreation and retirement living.	SOC	Comment noted. No response required.

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Kevin Vivian (President, Agri-Service)	14669	4	Moreover, the project will be vital in creating local jobs and spurring economic activity in the rural Idaho communities that need it most. Perpetua has committed to working with local vendors and suppliers whenever possible and they have already spent nearly \$88 million in Idaho to bring this project to life. During the construction phase, the company expects to employ 600-700 people directly and support another 500-800 jobs indirectly. Once operations begin, the company anticipates they will employ another 500-600 people directly and support an additional 450-600 jobs through the downstream economic impact the project will have on local communities.	SOC	Comment noted. No response required.
Kealey, Tom (Director, Idaho Department of Commerce)	16536	1	Fostering economic opportunities for Idaho workers, businesses, and industries is one of the primary concerns of the Idaho Department of Commerce. To that end, we are supportive of business willing to make a private investment in developing our state's workforce and infrastructure and contribute to the continued economic success of our communities – especially in rural areas where such opportunities are often few and far between. It is also true that business growth can be accomplished in such a manner that promotes the responsible use of our natural resources and protects Idaho's natural places. From cobalt to antimony, Idaho has the opportunity to responsibly source some of our country's most needed critical minerals while bringing jobs, workforce training, upgraded infrastructure and many secondary benefits to Idahoans. Representing a \$1.1 billion private investment, the Stibnite Gold Project will create roughly 500 direct jobs during operations in rural Idaho, with an average annual salary of \$91,000, as noted in Section 4.21 of the SDEIS. Indirectly, the project would be responsible for supporting hundreds of more jobs across a wide spectrum of industries, in the transportation sector, the supply chain for goods and services, and in the jobs created to fill the increased needs of local communities, including teachers, hospitality workers, and more. All of that is only accounting for the ongoing operations once construction is complete. During the construction phase, the project could support up to another 600 direct jobs for local workers, contractors, and others involved in the construction industry as well as 800 indirect jobs.	SOC	Comment noted. No response required.
Kealey, Tom (Director, Idaho Department of Commerce)	16536	2	Moreover, local communities and our entire state will benefit from the significant new revenues that will be injected into our economy. We find the Supplemental DEIS analysis accurate in accounting for roughly \$300,000 in annual County property taxes, \$100 million in state corporate income taxes and mine license taxes, \$150 million in sales transactions for the regional economy, and \$200 million in direct, indirect, and induced state taxes.	SOC	Comment noted. No response required.
Kealey, Tom (Director, Idaho Department of Commerce)	16536	3	Perpetua has been in the region for 12 years now, spending nearly \$88 million in Idaho through a commitment to prioritize local hiring and spending. The company has also done excellent work incorporating feedback from local businesses and communities to ensure their plan appropriately addresses the needs of local residents and business. Perpetua has proven itself a responsible corporate citizen, not only transparently providing information to local communities, but also investing in community giving, charitable work, and educational outreach.	SOC	Comment noted. No response required.
Kealey, Tom (Director, Idaho Department of Commerce)	16536	4	Perpetua has also indicated that it intends to invest in workforce training for communities, collaborating with local schools, community colleges, and Idaho's Department of Labor to help connect Idahoans with the new opportunities. At a time when many Idahoans are struggling from housing affordability and inflation pressures, creating these kinds of employment opportunities is more important than ever.	SOC	Comment noted. No response required.
Kealey, Tom (Director, Idaho Department of Commerce)	16536	5	One of the largest challenges to business growth in rural Idaho is access to infrastructure. Many of our rural communities struggle to attract new businesses because of outdated or underperforming infrastructure like access to power and fiber networks. The plan to upgrade 73 miles of transmission line to a higher voltage and add distribution capacity to Valley County will, in our experience, help attract new business and help existing businesses grow.	SOC	Comment noted. No response required.
Kealey, Tom (Director, Idaho Department of Commerce)	16536	6	In our experience, we have found that local businesses benefit from the diversification of the local economy. An increase in high-paying natural resource and construction jobs for a community heavily reliant on accommodation, food service, and real estate sectors can help to promote economic resilience. Increasing the purchasing power of local residents has significant trickle-down effects which spur local business. Providing competitive benefit packages increase health and well-being of workers and their	SOC	Comment noted. No response required.

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			families. In addition to the direct benefits, the mine would support local business offering construction, excavation, maintenance, repair, transportation, retail, and a suite of other services. Demand for		
Kealey, Tom (Director, Idaho Department of Commerce	16536	8	For the above reasons, the Stibnite Gold Project presents a valuable opportunity for economic growth, community development, and environmental restoration. We ask that you support the permitting process and in a timely manner so that these opportunities may be realized.	SOC	Comment noted. No response required.
Lehrer, Laura	16878	1	1.The EIS and SEIS fail to describe the actual negative impacts to the economy of Valley County. It seems that they are biased toward the mining company and do not portray a true picture of what will happen to this area. The projected net income compared to the actual estimated costs to the community appear to show the local economy having to spend more money that they might receive.	SOC	Negative and positive socioeconomic impacts of the Project are described in the SDEIS Section 4.21.2.2. The section presents forecasted Project expenditures and tax revenues within the community.
Lehrer, Laura	16878	2	2.The negative social impact a transient, highly-paid workforce might bring to the rural communities of Valley County would detract from the factors that contribute to an unusually high standard of living and degrade from the social factors which come with a long-established group of citizens who know each other well, and who have their neighbor's interests at the heart of their activities.	SOC	In-migration of residents associated with the Project in addition to the current non-Project in-migration, along with social impacts of in-migration (e.g., demand for housing and schools) are discussed in the SDEIS Section 4.21.2.2. The comment does not provide sufficient detail to identify other social factors or community interest for analysis.
Lehrer, Laura	16878	8	The applicant, Perpetua, paints a rosy picture of potential benefits which are more than outweighed by the facts laid out in the independent report submitted by IHESG. When the benefits (extracting of metals useful in battery production and in the defense industry) are considered against the potential of permanent destruction to the natural environment in and around the mine site, it becomes clear to me that much stricter standards of production, waste management and monitoring are necessarily required before any serious consideration of approving such a project should move ahead. Please bring these concerns back to the applicant and require that they satisfy the real economic, social and environmental issues that this project will create. We only get one shot at this. No amount of reassurance will help clean up toxic waste once it's unleashed from a failed tailings dam. We need hard facts backed up by real accountability that is built into the process.	SOC	Effects of the Project on the natural environment are described in Chapter 4 of the SDEIS with tailings dam stability described in Section 4.2.2.2, waste management described in Section 4.7.2.2, and environmental monitoring of water resources described in Section 4.9.2.2. The SDEIS also discusses Project socioeconomic effects (Section 4.21.2.2), health and safety effects (Section 4.18.2.2) and recreational effects (Section 4.19.2.2). Project design features and mitigation measures have been proposed to minimize risks and potential effects to the environment. These design features and measures would be incorporated into any Forest Service decision on the Project as mandatory. Further, financial surety for completion of Project reclamation and closure would be required.
Nissula, Judith (Mayor of Cascade)	16924	1	With a population of roughly 1,000 people, our city is familiar with the benefits and challenges of natural resource work, especially as it is related to timber and mining. For generations, Cascade was built on and sustained by these industries. We have both prospered from the highs and felt the devastating impacts of the disappearance of industry jobs in our region. We have not had either industry for almost two decades; businesses are left to the cyclical nature of a tourism-based economy as our families struggle to keep the next generation anchored to Cascade.	SOC	Comment noted. No response required. The SDEIS recognizes potential boom and bust effects in Section 4.21.2.2.
Nissula, Judith (Mayor of Cascade)	16924	2	Experience reminds us that it is important to have a voice in the process. Perpetua Resources has reached out and involved local communities like Cascade in their planning. With the creation of the Stibnite Advisory Council (SAC) Perpetua wants to hear about concerns or impacts that will affect our region. In fact, after reading most of the letters after the DEIS in 2020, SAC approached Perpetua about funding a 3rd party Independent Water Monitoring program and when asked, Perpetua agreed to fund this study and it shows that surface and ground water at Stibnite are in fact contaminated and Perpetua's water quality reporting is accurate. In addition, SAC asked for 3rd party Tailings Storage Facility review and although we have yet to see the results, the study was completed, and SAC is to receive a presentation in December. This kind of partnership from our community businesses is what we want to see.	SOC	Comment noted. No response required.
Nissula, Judith (Mayor of Cascade)	16924	3	Cascade is the closest city to the Perpetua Resources; a project that will have a direct impact on our residents that will be both positive and negative. This project has an opportunity to provide some much-needed economic stimulus during these uncertain times. Infrastructure of all types, including, but not limited to housing that is affordable, water, sewer, and roads within the city will require a commitment to meet the increased demands resulting from this project. The city will look to Perpetua to help meet needs that our current tax base is unable to meet. In addition, growth impacts the school, hospital and law enforcement will also need to be considered now and in the future.	SOC	Comment noted. No response required. The SDEIS describes Project effects on employment, taxes, and other socioeconomic elements in Section 4.21.2.2.

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			Perpetua has reached out recently to start the discussion about a sustainable development fund to address the potential of impacts once the project is in construction and operations. This will allow our communities the flexibility of addressing issues as they arise if they arise.		
Nissula, Judith (Mayor of Cascade)	16924	4	<p>It has been over 20 years since a since a major employer was in or close to Cascade. The City has struggled to attract another entity that would be able to provide a living wage for families that reside in our city and the surrounding area. With Perpetua coming to the region, our hope is that our economy will start to diversify as businesses move to the region to support the mine. In, Perpetua, we will have electricians, plumbers, and other trade workers that will be able to provide those services throughout our region when the Stibnite Gold Project is completed or if employees decide to pick up a part time position on their days off.</p> <p>According to the estimates from Perpetua Resources and data reflected in the Payette Forest Supplemental Draft study, this project has the potential to create as many as 600 jobs during the construction phase and more than 500 local jobs through operations. Acknowledging that a third of those local jobs would benefit existing residents with another third potentially moving into the area with their families. With the increase in short term rentals properties, the City of Cascade has and will continue to experience a series long term housing shortage that already negatively impacted existing residents. An increase in population without a plan for more housing is a serious concern for our city. However, it is uncertain if those workers will live in the city other than Cascade.</p> <p>WE are told that during operations, these jobs would include management and administration as well as mechanics and engineers, surveyors, geologists, environmental specialists, and many others. Additionally, there would be hundreds of jobs indirectly supported by the project including those to fill the new demand in transportation, the supply chain, as well as local community services like teachers, retail, and hospitality. We look to Perpetua to step up and help us meet the challenges known and those challenges yet to be discovered. In addition, we look for help with solutions to mitigate the burden to local businesses affected by the loss of employees who become employed by Perpetua because of high wages.</p> <p>With the lifespan of the project being 12-15 years, we feel there should be a plan in place that assuages the effects of transitioning the local economy back to one of the self-sustenance when the project has reached its lifespan.</p>	SOC	The effects of Project closure on the local economy are discussed in Section 4.21.2.2 of the SDEIS. The SDEIS notes the benefits of economic development planning, job-retraining, and other mechanisms to facilitate the transition from Project operation to closure.
Nissula, Judith (Mayor of Cascade)	16924	5	A major employer can bring a sense of community ownership. We counted on the support of Boise Cascade's upper management as well as the local managers and employees. There was a sense of family whereby everyone was supportive of school, chamber, and city activities. The logistic facility being located closed to Cascade could result in providing the regular Monday to Friday work week and help build a sense of community and family that has weakened over the years. Given the current proposed location, company transportation coming out of the Treasurer Valley could help reduce vehicle trips on Highway 55.	SOC	Comment noted. No response required.
Fereday, Rick	17193	1	<p>I responded to the original DEIS for the proposed Stibnite Mine project, and I attach a copy of that response here. This letter contains my additional comments addressing the Modified Mine Proposal submitted by Perpetua Resources for the Stibnite Gold Proposal. Please include both in the record of this matter.</p> <p>As a fifty year business owner in McCall my input will mostly deal with what I know best - the economic state of McCall, Donnelly, Cascade, and the Valley County region. In considering the Stibnite Mine proposal, I have been focused on understanding how the project would affect our economy, including the many businesses here dependent on tourism and recreation. This is why my company has joined with some fifty other area businesses to commission an independent, third-party analysis of this subject by Power Consulting of Missoula, Montana. Power Consulting's principals have, for over 45 years, provided expert analyses of natural resource development and its associated economic effects in many parts of the West. I recall their work in 1976, presented to the Idaho Public Utilities Commission, that demonstrated the economic effects, both on the public, on Idaho's economy, and even on the project</p>	SOC	Comment noted. No response required.

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			proponent, of a proposal to build a large coal-fired electrical plant near Boise. Their work helped lead the PUC to turn down that proposal, which in hindsight was a fortunate decision not only for Idaho, but for the power company itself.		
Fereday, Rick	17193	2	In the case of the Stibnite proposal, Power Consulting has produced a study, An Evaluation of the Potential Socio-Economic Impacts of The Proposed Stibnite Mine on Valley County, Idaho (DEC 2022) (“Economic Impacts Study”), that carefully evaluates the proposed project. I am enclosing a copy of the Economic Impacts Study with this letter for the public record.	SOC	Comment noted. No response required.
Fereday, Rick	17193	3	1. (SDEIS 4.21.2.2) In reading the SDEIS I was surprised to see that virtually all of the economic analysis figures used in the original 2018 DEIS were simply re-used in the SDEIS document (OCT2023). Using nearly five year old numbers is, if not outright fraudulent, misleading and disingenuous at best.	SOC	The forecasted labor force, expenditures, and tax revenues for the project that form the basis for the impact analysis are comparable to the 2020 Draft EIS analysis and were therefore, retained. While the results of the 2018 IMPLAN modeling on the regional economy were considered, they were primarily used for forecasting indirect and induced employment for the assessment of population growth and its effects on housing and public services.
Fereday, Rick	17193	4	2. Section I of the Power Economic Impact Study goes into extensive detail to document the current drivers of the Valley County economy, something the SDEIS essentially ignores. The take-away from the Economic Impact Study is that Valley County is doing extremely well economically because of its “Recreation” based economy and the “non-labor” income that flows into the area from second home owners, retirees and people who can work from anywhere. As a McCall business person who has experienced and participated in this economy since the early 1970s, I can attest to the accuracy of this conclusion. It is truer today than ever. Any project that could substantially degrade the land and water resources upon which this economy is built should be viewed with skepticism. Likewise any project that could cause additional stresses on our local services, including housing, education, law enforcement, sanitation, and health care.	SOC	SDEIS Section 3.21.4.3 describes the existing Valley County labor and income conditions. The roles of tourism as a primary economic driver is acknowledged.
Fereday, Rick	17193	5	3. Section 2 of the Economic Impact Study points out that it is, “troubling that issues of HWY 55 transportation, spill risk, local wage scale problems, housing availability/affordability, and general infrastructure concerns were not adequately examined in either the DEIS or the SDEIS. Public officials, elected leaders, and concerned citizens should not be making decisions about the future of their communities without a full comprehensive impact analysis having been carried out to inform their decisions. Specifically, we find that the DEIS and the SDEIS socioeconomic sections presented a ‘benefits only’ analysis.” This comment refers to (SDEIS 4.21.2.2)	SOC	SDEIS Section 4.21.2.2 describes Project impacts on wages, housing, and infrastructure. Section 4.16.2.2 describes impacts associated with transportation and Section 4.7.2.2 describes spill risks. These descriptions included negative and positive effects associated with the Project.
Fereday, Rick	17193	6	As an operating business today in McCall, we face extreme competition for workers because the current housing situation in McCall is horrible. Obviously, Perpetua has no hand in the existing situation, but to turn their backs on what their operation will probably do to inflate the local housing problem is brutally unfair. The SDEIS is deficient in failing to take a hard look at the actual, predictable impacts the project would have on the housing situation in Valley County.	SOC	The effects of the Project on housing availability and affordability are described in Section 4.21.2.2.
Fereday, Rick	17193	7	4. Section 4.21.2.2 of the DEIS describes the very large multipliers to the mine’s spending that will be created during the construction period, but it also shows that most of these multiplier impacts will accrue outside of Valley County. The SDEIS uses the IMPLAN economic impact model to estimate these numbers, which is questionable. As pointed out in the Economic Impact Study, (2.1), “When IMPLAN is used to model a local area, if there is a connection in the area, then IMPLAN will allow that connection to be made. If, for example, there is a gas station in Valley County that sells diesel fuel, then IMPLAN will assume that the mine can and will procure its diesel from that local supplier. The problem with this assumption is that the local supplier is likely incapable of supplying the volume of diesel that the mine will need, and the mine is unlikely to purchase it at a much higher price from the local supplier. The mine will instead attempt to minimize their costs and have the diesel fuel brought in from a regional or national supplier that can give them a much better price and more secure supply. If one is not very careful with the results of IMPLAN, specifically in a small, isolated economy, one can, mistakenly, allow connections that do not have an economic logic to them. We strongly believe that this is the case with the modeling done for the proposed mine.” “Given the large volumes of supplies and the time to	SOC	IMPLAN was used to estimate regional or local economic impacts and the data used are compliant with the Data Quality Act (Section 515 of Public Law 106-554). IMPLAN is based on well-established input-output modeling methods that had been developed for and have been used to successfully describe economic contributions and impacts, over more than two decades, for hundreds of projects and management plans on National Forest System lands most of which are located in rural areas. IMPLAN has gone from a system employed by a few Federal agencies to one that is embraced by economists throughout the U.S., including 250 academic institutions, as well as over 200 Federal, state, and local government agencies. IMPLAN data is well-suited for rural areas given the use of proprietary methods to estimate trade flows and industry characteristics that are not available from public sources (proprietary techniques are used to estimate data that cannot be disclosed because of Federal confidentiality requirements). These methods allow for estimates of trade flows for 440 commodities between all U.S. counties that are key to the creation of credible, local models.

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			<p>plan, the mine will choose to import supplies from the greater Boise metro area, or the U.S., or even the world. Remember that we are discussing the purchase of more than \$260 million in materials, equipment, and services for the construction of the mine.” Section 4.21 of the SDEIS, by glossing over this problem, and then purporting to rely on IMPLAN, fails again to engage in the rigorous analysis of economic impacts required by the National Environmental Policy Act.</p> <p>Similar inconsistencies and weaknesses appear all through the Highlands [spell out full name] study on which the Forest Service appears to rely in the SDEIS.</p>		
Fereday, Rick	17193	8	<p>5. Still referring to SDEIS section 4.21.2.2, the Economic Impact Study (section 2.3, Fiscal Revenues), points out that rural counties may not see a significant inflow in taxes from mining operations, in contrast with Highlands’s contention. But the Economic Impact Study’s evidence is far more persuasive. “With respect to the \$300,000 in property tax that is paid annually by the proposed mine during the operations phase, we must remember that there is a cost that the mine is imposing on the local area. There is likely to be an increase in use of Emergency Medical Services (EMS), roads, schools, etc. The important question is then if the property taxes that are paid by the mine will offset the costs that the mine imposes on the local area. This point is made in the DEIS, but not explored.”</p> <p>Again, the SDEIS settles for a once-over-lightly analysis, when a much deeper and more meaningful review should be done for a project that would use National Forest System Lands, and public resources and infrastructure, while having potentially far-reaching environmental and socio-economic impacts. These impacts must be fairly and thoroughly displayed to the public and to local decision-makers, and the SDEIS falls short in this obligation.</p> <p>The Economic Impact Study contains substantial detail—again, in stark contrast to the Highland effort on which the Forest Service evidently relies—about the likely costs to schools that would arise due to the project, concluding that, “If we believe that 80 students is the right number [i.e., the number Highland used], then this will cost Valley County more than \$670,000, which is significantly more than the increase in property taxes that the proposed mine will pay.⁴⁰ Put another way, those 80 students would take up all the property tax money that is gained due to the presence of the mine in Valley County, and then some, and leave none for the other services which will have added costs because of the population increase.”</p>	SOC	The distribution of taxes between State and local governments is outside the purview of the Forest Service.
Fereday, Rick	17193	10	<p>The Economic Impact Study is quite extensive and has much more to say about the inadequacies of the DEIS and the SDEIS. I ask that you and your team read the complete study. (Attached)</p> <p>The conclusions that the Economic Impact Study offers do not surprise me. Frankly, I did not have a good feel for what they (Power) would come up with so felt somewhat vindicated when I read the Economic Impact Study. After reading and digesting the Economic Impact Study I am convinced that this mine is too dangerous for Valley County. Any jobs and associated benefits are far outweighed by the possible costs to our County and City Governments, our local businesses and the working people of Valley County.</p>	SOC	Comment noted.
Fereday, Rick	17193	11	<p>The direct costs that our economy could suffer, the potential for hazardous spills, leaks and TSF failures at the project site and all along the various supply routes are all unacceptable risks for the residents of Valley County. I am fearful for the future of the entire South Fork Salmon drainage as well as the North Fork of the Payette, the Little Salmon and the Main Salmon.</p> <p>Therefore, I recommend that you choose the “No Action Alternative” for this proposal.</p>	SOC	Comment noted. No response required.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	6	<p>Another shortcoming of the Executive Summary is that it omits an overview of the substantial socioeconomic benefits from the SGP despite the fact that Section 4.21 of the SDEIS discusses these benefits in detail. Page ES-29 mentions increased tax revenue benefits, but the following page suggests there might not be net tax revenue benefits. Section 4.21 of the SDEIS presents quantitative information about the numerous socioeconomic benefits that should be summarized in the Executive Summary to provide a complete synopsis of the socioeconomic benefits including but not limited to:</p>	SOC	The SDEIS Executive Summary lists the effects of the Project on jobs, population, and economic activity. Detailed quantitative information is described in Section 4.21.2.2.

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			<ul style="list-style-type: none"> • \$29.3 million in local income; • \$71.6 million in statewide income; • \$133 million in annual expenditures for goods and services in Idaho; • 1,820 direct and indirect jobs during construction; • 1,150 direct and indirect jobs during the 15-year operating period; and • 190 jobs during closure and reclamation. 		
Hendrickson, Emily (President, Women's Mining Coalition)	17429	7	<p>The Executive Summary's discussion of the potential for "boom and bust" impacts following mine closure completely ignores the opportunities the local communities will have to diversify their economies while the mine is operating. Invoking a "boom and bust" scenario based on the history of old mining camps is looking in the rearview mirror at an outdated concept that is not relevant to modern U.S. mining projects where mine operators work closely with community stakeholders and local governments to develop programs that will maximize a mine's long-term benefits to communities.</p> <p>To significantly eliminate the potential for an economic downturn after the mine is closed, Perpetua established the Stibnite Foundation⁷ with eight local communities. This foundation is a visionary profit-sharing contractual agreement that provides the participating communities with annual payments of a minimum of \$500,000 or one percent of the mining operation's total comprehensive income less debt repayments. When reclamation starts, Perpetua will make a final contribution of \$1 million to the Foundation. Prior to production, during the permitting and mine construction phases, Perpetua is making incremental donations and has already contributed \$300,000 and given 150,000 shares of the Company's stock to the Foundation.</p> <p>Neither the Executive Summary nor Section 4.21 of the SDEIS discuss the Stibnite Foundation and the community benefits that will be derived from this foundation. Because the Foundation is an important component of the socioeconomic benefits from the SGP, the Final EIS and Executive Summary should discuss the Stibnite Foundation so the communities in Valley and Adams Counties and other Idahoans can thoroughly understand the socioeconomic impacts and benefits that would result from the SGP. Similarly, both the Executive Summary and Section 4.21 of the Both the tax revenues from the SGP and contributions from the Stibnite Foundation will minimize the potential for boom and bust impacts. Therefore, the Final EIS should describe how local communities could use tax revenues and Perpetua's contributions to the Stibnite Foundation to make long-term investments to provide sustainable benefits long after mining is completed.</p>	SOC	A description of the Stibnite Foundation was added to Section 4.21.2.2.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	20	<p>Many WMC members have first-hand experience with the types of socioeconomic impacts and benefits associated with a multi-year, large mining project like the SGP. Based on our review of Section 4.21 on Social and Economic Conditions in the SDEIS, it is clear that the SGP will create high-paying jobs and generate local and state tax revenues that will benefit Valley and Adams Counties and the State of Idaho for at least 20 years.</p>	SOC	Comment noted. No response required.
Hendrickson, Emily (President, Women's Mining Coalition)	17429	21	<p>Section 4.21 presents the results from the IMPLAN economic modeling software, which is a well known socioeconomic impact assessment methodology that is widely used to evaluate how proposed projects will affect nearby communities. For example, EIS documents prepared by the U.S. Bureau of Land Management (BLM) have used IMPLAN for the socioeconomic analyses for several Nevada gold mines⁸. Based on the widespread use of IMPLAN to evaluate the socioeconomic impacts of gold mines on rural communities in Nevada and the presentation of the IMPLAN modeling results in EIS documents for these other proposed mining projects, WMC has confidence that the results of the IMPLAN modeling effort for the SGP are a data-driven reasonable prediction of the likely socioeconomic impacts and benefits associated with the SGP.</p> <p>As explained in Section 4.21.2.2 of the SDEIS, "IMPLAN was used to estimate regional or local economic impacts and the data used are compliant with the Data Quality Act (Section 515 of Public Law 106-554)." Given that the data used in Section 4.21 and the use of that data in the IMPLAN analysis comply with the Data Quality Act, the socioeconomic impact analysis presented in Section 4.21 of the SDEIS clearly complies with the NEPA requirement to take a hard look at socioeconomic impacts.</p>	SOC	Comment noted. No response required.

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Hendrickson, Emily (President, Women's Mining Coalition)	17429	22	<p>‘WMC is aware that a third-party report prepared by the Idaho Headwaters Economic Study Group (Headwaters) entitled “An Evaluation of the Potential Socio-Economic Impacts of the Proposed Stibnite Mine on Valley County, Idaho” speculates that Perpetua will not obtain goods and services locally and consequently questions the IMPLAN modeling results for the SGP. This speculation is nothing more than an unfounded prediction designed to foment local concerns about and opposition to the SGP. This conjectural forecast completely ignores Perpetua’s track record of constructively working with local communities to ensure they will benefit from the SGP.</p> <p>Headwaters’ skepticism inappropriately fails to consider Perpetua’s corporate values, the Company’s approach to responsible mineral production, its sustainability goals⁹, and its actions to implement these goals by creating the Stibnite Foundation¹⁰. The Foundation is emblematic of SGP’s commitment to benefit area communities. As discussed in Section III of these comments, this foundation is a far-sighted, generous, and voluntary agreement that guarantees the communities will benefit from the SGP. The Forest Service and the public should disregard the Headwaters report because it conjures up a hypothetical scenario that is incongruent with Perpetua’s actions and the Company’s commitments to the communities.</p>	SOC	Comment noted. No response required.
Ronn Julian	17666	5	<p>3. The old nemesis of effects on the social and economic environment has a place in this analysis. It very well may be that it is much more important given the scope and influence this project will have on the local area. The need to have a strong analysis is great. While hard to quantify the effects, there has to be a strong effort to do so. Aside from the effect this project will bring to the business climate in the adjacent area, the effect it will have on local taxing districts must be identified. I do not see a strong analysis on either sector. I am not aware of a high level of coordination and projections of effects between the Company and the various taxing districts. Again, eye-candy stuff. I am certain you will be visiting this portion of the analysis prior to the FEIS and am hopeful you will be successful at bringing it up to defensible status. I might hasten to add that you may be able to do nothing more than identify and disclose the effects simply because you alone cannot mitigate undesirable effects in those sectors.</p> <p>Ms. Jackson: I don’t bring these points forward to embarrass or put anyone in a difficult position. I certainly do not want to cause you more work. But I think it is imperative that you must improve on the analysis presented. You inherited many of the problems and really cannot fix the history. What matters is having the difficult task of analyzing this project be supported by what the law and planning regulations mandate be done. Thank you and good luck.</p>	SOC	SDEIS Section 4.21.2.2 describes the expected effects of the Project on taxation, local Project expenditures, and local employment and income.
Idaho Headwaters Economic Study Group Steering Committee (Debbie Fereday, Rick Fereday, Samuel Stoddard, Joey Pietri, Meghan Minshall)	17737	1	The SDEIS should have taken a hard look at the potential socio-economic impacts from the proposed SGP. Based on the results of the Power Study that hard look did not occur in the SDEIS. In fact, the Power study states, “Specifically, we find that the DEIS and the SDEIS socioeconomic sections presented a ‘benefits only’ analysis”. (Section II, page 1 of the Power Study Executive Summary).	SOC	Negative and positive socioeconomic impacts of the Project are described in the SDEIS Section 4.21.2.2. The characterization of the analysis as a "benefits only analysis" is incorrect.
Idaho Headwaters Economic Study Group Steering Committee (Debbie Fereday, Rick Fereday, Samuel Stoddard, Joey Pietri, Meghan Minshall)	17737	2	The SDEIS states in Section 4.21.1, page 4-593 that “Social and economic conditions were analyzed using the Economic Impact Analysis of the SGP (Highland Economics 2018). It is important to note that this study was conducted for Perpetua Resources by the consulting firm Highland Economics. In the Executive Summary of that study, it clearly states “we did not evaluate potential economic impacts due to possible effects of the SGP on other economic activities, such as the recreation or tourism industry”. This obviously reinforces the Power Study observation that the SDEIS presented a “benefits only analysis “. Furthermore, the analysis in Section I. of the Power Study provides data and details for how “Valley County’s productive economy is built around visitors and the recreation experiences they seek”. The Power Study goes on to demonstrate how the proposed SGP will put this robust economy at risk and how the SDEIS does not take a hard look at these risks.	SOC	The SDEIS examines the effects of the Project on recreation in Sections 4.19.2.2 and 4.21.2.2. The SDEIS analysis concluded that there would be minor to moderate effects on recreation resources with the exception of Over-Snow Vehicle trails where temporary trail closures and relocations would constitute a major effect. Minor to moderate effect determinations were based in part on the Project's existing condition as an unreclaimed historical mine site, where current recreational use of the site is limited and there are alternative locations within the area for recreational use.

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Idaho Headwaters Economic Study Group Steering Committee (Debbie Fereday, Rick Fereday, Samuel Stoddard, Joey Pietri, Meghan Minshall)	17737	3	An important topic that is relevant to the SDEIS which is covered by the Power Study in detail is the mining and processing of antimony as part of the proposed SGP. Perpetua Resources is currently making a strong public relations campaign based on the presence of antimony at the Stibnite mine. The campaign highlights the use of antimony for national defense and green energy technology. Helping to fuel this campaign are recent actions taken by the Federal Government including recent Executive Orders issued by the Biden Administration as well as the DOD award of almost \$25 million to Perpetua Resources to assist in the mining of antimony. The Power Study outlines in detail the reality of what will actually happen with the mining and downstream processing of the antimony. Because of the obvious influence of the Federal Government in this aspect of the proposed SGP the Forest Service should pay special attention to Section 4.2 of the Power Study.	SOC	Comment noted. No response required.
Idaho Headwaters Economic Study Group Steering Committee (Debbie Fereday, Rick Fereday, Samuel Stoddard, Joey Pietri, Meghan Minshall)	17737	4	<p>IHESG believes that the Power Study is particularly relevant to the following sections of the SDEIS. However, there are also overarching issues in the Power Study such as transportation and potential spills that may be relevant to other sections of the SDEIS.</p> <p>Sections ES-21, ES-26, ES-27, ES-28 & ES-29 of the EXECUTIVE SUMMARY</p> <p>Subsections 3.16, 3.18, 3.19, 3.20 & 3.21 of Section 3.0 AFFECTED ENVIRONMENT</p> <p>Subsections 4.16, 4.18, 4.19, 4.20 & 4.21 of Section 4.0 ENVIRONMENTAL CONSEQUENCES</p> <p>Subsections 5.16, 5.18, 5.19, 5.20 & 5.21 of Section 5.0 CUMULATIVE EFFECTS</p> <p>The IHESG has found that the Power Study provides a great amount of detailed information regarding socio-economic impacts of the proposed SGP which is either missing or inadequate in the SDEIS. Therefore, we are submitting the complete Power Study to the Forest Service as an inclusive set of comments to the SDEIS. We feel it is imperative that the Forest Service review the Power Study and takes it into strong consideration for any decisions it makes regarding the proposed Stibnite Gold Project.</p>	SOC	The Power Study was reviewed as part of the review and response to public comments on the SDEIS.
Giles, Robertt (Mayor McCall, ID)	17834	15	According to an economic study of tourism impacts on Idaho published by Visit Idaho (Dean Runyan Associates, Economic Impact of Travel in Idaho, Slide 111 - Valley County Tourism Economic Impact, (2020)), Valley County generated \$138 Million of annual spending from tourist visits which is the 8th highest of all counties in the state. Based on the Resource Specialist statements above, the City is highly concerned about the negative economic impact the mine project will have on tourism visits to our county and the corresponding impact to available jobs and earnings for our citizens. Given the traffic congestion on Hwy 55 and on Warm Lake Road that will be created by mine traffic and the close off of traditional recreation areas plus the increased noise, reduced air quality, and impacted aesthetic and visual resources from the operation, it is likely that we will see a decline in tourists visiting our area for backcountry recreation opportunities and that over time our area will develop a reputation of being difficult to access and the areas available for access are more limited and less desirable. The City of McCall relies on local option taxes (lodging taxes) generated from tourism visits to pay for road maintenance and community programs. The City is greatly concerned there will be a negative impact to this revenue stream while at the same time there will be an increased need to use these funds to mitigate mining traffic impacts to our roadways which subsequently further erodes our ability to provide government services to maintain infrastructure and other public amenities. This could have a cascading impact on McCall's recreation based economy.	SOC	Increased road usage associated with the Project is described in Section 4.16.2.2 with Project effects on recreational usage described in Section 4.19.2.2. The SDEIS notes the potential for reduced recreational access along routes utilized by the Project, but notes that there are alternative recreational locations to the affected routes.
Giles, Robertt (Mayor McCall, ID)	17834	16	Other than the concerning statements from the Specialist Report discussed above, the SDEIS fails to provide any analysis of how changes in recreational access will impact the economy of McCall. These impacts must be identified and disclosed in a second supplemental DEIS and made available for review and comment. Without this analysis it is impossible to understand how these impacts might be mitigated.	SOC	Section 4.21.2.2 describes effects of the Project on Tourism and recreational access. The analysis concludes that these would be negligible to moderate, long-term, and localized depending on the timing and duration of the access changes and interruptions. McCall is included within the boundaries of the area of analysis for recreation and tourism impacts. Specific businesses (e.g., outfitters with permits for the Project area) would be potentially more affected by the Project than McCall as a whole.

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Giles, Robertt (Mayor McCall, ID)	17834	17	<p>McCall like every jurisdiction in Valley County, has a comprehensive plan, passed by its community, that guides what ordinances the jurisdiction passes, what policies it implements, and how it spends its money. Disclosure of impacts the mine will have on our community is paramount to our city leaders making informed decisions on how to mitigate impacts and how the city can use legal and budgetary tools to protect our infrastructure, public services, economy, and community. The socioeconomic impact analysis in the SDEIS is based on the same Highlands Economic Report (20118) from the October 2020 DEIS that states it is a "benefits only" analysis, and statedly did not analyze the cost to the community's recreation-based economy, increased pressure on infrastructure and public services, and potentially significant changes to the social fabric of our community.</p> <p>These are all factors that need to be analyzed and disclosed to the local communities and the public.</p>	SOC	Section 4.21.2.2 of the SDEIS describes Project effects to tourism, recreation economy, infrastructure, and public services. The existing social conditions within Valley County are described in Section 3.21.4.4. Because negative and positive effects of the Project are identified, the analysis is not a "benefits only analysis".
Giles, Robertt (Mayor McCall, ID)	17834	18	<p>The Social and Economic Resource Specialist report summarizes the impact on housing availability, a major concern in our area and top priority for our City Council, as:</p> <ul style="list-style-type: none"> • "Housing impacts may be adverse from the overall local area perspective, and concentrated new immigrant population increases could result in greater impacts within specific communities - especially if those communities are not well equipped to absorb the new residents. For example, while McCall has 4,259 housing units, only 1,440 are occupied year-round by residents (Census 2018). If half of the projected new in-migrant workers selected McCall for their place of residence, that would represent an approximate 3 percent increase in the community's population (3,226 people), which would likely represent and could be perceived by current residents as a noticeable and possibly adverse population effect. As discussed under the Housing Availability and Affordability Section below, the potential for affordable housing impacts would depend on the number of lower-paid, in-migrants relocating to the specific community. As a result, if there is an insufficient existing inventory of suitable housing within the affected communities, adverse affordable housing availability impacts could result during construction activities." • "... the 198 workers projected to relocate to the local analysis area during the construction phase would be expected to result in a total population increase of up to 438 new residents, which would consist of 240 dependents (113 spouses and 127 children)... in-migration worker population could increase new local housing demand by up to approximately 200 dwellings." • "... the percentage of Valley County households paying more than 30 percent of their household income on rent grew from 33.5 percent to 59.1 percent between 2010 and 2018 (Census 2010, 2018). This increase indicates that the local housing market is becoming less affordable and that local demand for affordable housing already currently exceeds the available supply in Valley County." • "An influx of new SGP employees and contractors into the local communities would increase local housing demand. If this in-migration trend continues post-pandemic, there would be a general lack of housing that would be further affected by the housing needs of SGP construction workers. As a result, potential adverse housing availability impacts would likely predominantly result from the approximately 103 workers that may migrate into the local area for the indirect and induced jobs supported by SGP's construction activities. Given the lower typical salaries for the indirect and induced jobs supported by construction activities, the workers in-migrating to the local area for these jobs could increase competition for lower-priced housing, which could in turn contribute to greater scarcity of affordable housing." • "Adverse affordable housing availability impacts could result from construction and operating activities if there is an insufficient existing inventory of suitable housing within the affected communities. In which case, SGP construction activities could result in adverse impacts to housing availability and affordability within the local area. In addition, this impact would be expected to occur primarily during the start of construction and/or operations phases and then subsequently stabilize in the absence of any further increase in local employment." <p>The City is extremely concerned by the statements in this Specialist Report that the project will impact housing affordability and availability and concerned that the Forest Service has provided no</p>	SOC	While Project impacts on housing are analyzed, they are described as residual impacts of the Project because they are without mitigation measures enforceable by the Forest Service.

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			recommended mitigation for this impact. The City requests that the Forest Service include mitigation requirements for the Social and Economic impacts to our communities, especially as it relates to housing, in a second supplemental DEIS for public review and comment.		
Giles, Robertt (Mayor McCall, ID)	17834	19	<p>Failure to discuss how increased, higher-paying employment opportunities from the proposed mine could potentially shift or impact availability of the population to fill jobs within the local community, including essential government services. The SGP Socioeconomic Report discussed the contributions to the local economy and the direct economic benefits of higher paying jobs from the proposed project. See Report at 32. It concludes that "[e]mployment impacts from the SGP would be beneficial, local and regional, moderate to major, and long term." Report at 36.</p> <p>The Report, however, ignores any potential negative impacts that the presence of higher paying jobs may have from a shift in the workforce from current employment opportunities to mine-related jobs. Valley County has a relatively low unemployment rate, as the Report indicates. See Report at 19 (2019 unemployment rate of 4.2 percent). Adding an additional estimated 200+ jobs that local residents will take could drive unemployment rates even lower.</p> <p>There are negative benefits of a too low of an unemployment rate that the SGP Socioeconomic Report failed to consider. Extremely low unemployment rates make it more difficult to recruit suitable staff. A smaller applicant pool may mean that local businesses and local governments are unable to find suitable candidates leading to inability of businesses to realize economic gains, constraining local business growth, and leading to inefficiencies in local governments and constraints on the ability to provide essential government services.</p> <p>For example, the SGP Socioeconomic Report states that "[i]t is expected that most of the local construction workers would be adequately qualified and/or trainable for mine operations work and that many construction workers living locally or elsewhere within Idaho would likely accept mine operations jobs." Report at 33. But there is no discussion about how that shift from local construction workers will impact the County or McCall's ability to hire people within the local community with an already low unemployment rate. McCall is already experiencing worker shortages across all sectors of the economy. Businesses are already short staffed and often have to reduce business hours or reduce the number of customers they can accommodate, thereby not realizing their full potential economic gain. The proposed project will significantly exacerbate worker shortages, resulting in business income and business-to-business transactions, unemployment, loss of residents' income, and loss in local taxes as the mine's impacts with suppress or reverse growth in the region's amenity-based economy, which is currently a vital cornerstone of success in our community, and should not be ignored.</p> <p>Moreover, government services may be significantly reduced as city and county employees may shift to higher paying administrative and construction jobs related to the mine at salaries that our local governments can't compete with, thus decreasing the ability of local governments to provide crucial government services-e.g., emergency services and operations and maintenance of roads and recreation centers-and create economic security.</p> <p>These potential negative impacts were completely ignored and should be evaluated in a second supplemental DEIS.</p>	SOC	SDEIS Section 4.21.2.2 describes the effects of Project hiring on the ability to fill other job openings in the local communities. In particular the SDEIS notes that "Valley County's public agencies and service sectors also would have greater potential of possible adverse impacts from wage-inflation and/or understaffing."
Giles, Robertt (Mayor McCall, ID)	17834	20	<p>Impacts to income were not adequately addressed</p> <p>The SGP Socioeconomic Report's analysis of the impacts to income suffer from the same flaws as that employment analysis. It does not take into account the reduced ability of Valley County communities to retain or recruit workers in a market that will have even lower unemployment rates. For example, the Report states that the "contribution of relatively well-paying local area employment and labor income from the SGP would result in increased spending and increased economic activity within the local economy.... " Report at 37. However, as discussed above, it is likely that local businesses will be incapable of realizing these potential economic gains because of worker shortages. This is already the</p>	SOC	<p>SDEIS Section 4.21.2.2 describes the effects of Project hiring on the ability to fill other job openings in the local communities. The text has been revised to read "Most of these jobs would occur within the local economy for those businesses capable of handling increased production or service provisioning. "</p> <p>The effect of Project-related employment on wage inflation and worker shortages is included in the SDEIS analysis.</p>

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			case in McCall, and the situation will only be exacerbated by current workers shifting to higher paying mine-related employment.		
Giles, Robertt (Mayor McCall, ID)	17834	21	Additionally, the SGP Socioeconomic Report also does not consider lost income due to potential decrease in our recreation-based economy. Potential economic effects the SGP Socioeconomic Report should have considered, but did not, include a decline in spending as potential visitors choose alternative destinations with high quality scenic and recreational amenities undiminished by nearby mining activity and lost jobs and lost annual income in the rest of the economy if the gold mine suppresses or reverses growth in the recreation-based economy that has been the backbone of the region's economic success since the early 1980s.	SOC	Section 4.21.2.2 describes effects of the Project on tourism and recreational access. The analysis concludes that these would be negligible to moderate, long-term, and localized depending on the timing and duration of the recreational access changes and interruptions. The potential to effect specific businesses that operate in the Project vicinity is greater than the potential to affect the overall community economy because there are alternative recreational locations away from the Project area, thereby potentially diverting customers from specific businesses operating in the vicinity of the Project area.
Giles, Robertt (Mayor McCall, ID)	17834	22	Analysis of impacts to government revenue fail to consider potential loss of revenue from local option taxes The SGP Socioeconomic Report concludes that during the construction, operations, and post-closure phases of the proposed mine, there would be negligible tax revenue benefits for the local area's economy. Report at 48, 49, 50. The Report, however, fails to recognize potential impacts of decreased local option tax revenue ("tourism tax") for incorporated cities in Valley County as tourism decreases. McCall, Cascade and Donnelly all have local option taxes that will be impacted, and that impact needs to be addressed in a second supplemental DEIS.	SOC	More detail on the effects of mining projects on travel accommodations are included in the Final EIS. Studies of mining projects have noted strong growth in hotel revenues (Tourism Research Australia 2013).
Giles, Robertt (Mayor McCall, ID)	17834	23	Lack of analysis of social impact to Valley County communities As discussed above, the SGP Socioeconomic Report only focused on economic benefits from the proposed mine and failed to consider potential negative impacts to these factors. As a result, there is a complete lack of analysis of the social impacts to Valley County communities as a result of potential changes in the economic base of the region, shifts in employment, loss of income, changes in population demographics, and negative impacts on housing, potentially creating significant economic instability and resulting effects on the health and wellbeing of local communities. It is documented that economic instability is a social determinant of health and wellbeing of local communities. Many mining developments cause indirect economic impacts on nearby communities leading to poor health and wellbeing of local residents: Studies show that mining developments typically cause an influx in population due to out-of-region mining employees moving closer to work. This leads to an increase in demand for housing and rental properties in communities with insufficient housing supply and inadequate property development, causing an increase in housing proxies. Population influx concurrently leads to an increased in cost of living (defined as inflation at the local level) due to mining workers on higher salaries contributing to the local economy, and also small businesses struggling to retain employees as they migrate to high-paid mining jobs. Consequently, local residents face financial and social pressures, and poorer mental health, where the most vulnerable groups in society succumb to displacement from their local town. Further, mining developments exacerbate pre-existing socioeconomic disparities and income inequalities through the creation of dualization in local communities. This refers to the large divide between those on high salaries working for mining companies and residents who do not work for mining companies on low uninflated wages. A recent study found mental health deterioration was associated with poor housing affordability, particularly among individuals living in low-income households. Hresc, J., Riley, E., Harris, P., Mining Project's Economic Impact on Local Communities, as a Social Determinant of Health: A Documentary Analysis of Environmental Impact Statements, Environmental Impact Assessment Review, Vol. 72, pp. 64-70 (Sept. 2018). The proposed mine has significant potential to negatively impact economic factors, as discussed above, that are associated with a community's wellbeing. This proposed mine is no exception. But the SGP Socioeconomic Report completely failed to consider potential negative economic impacts, and thus impacts on community health.	SOC	The effects of the Project on housing availability and affordability are described in Section 4.21.2.2. The section also describes in-migration of the mine workforce and effects on public services and wage inflation. Section 4.18.2.2 describes the effects of the Project on public health including mental health effects of Project construction and operating activity.

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Giles, Robertt (Mayor McCall, ID)	17834	24	<p>Inadequate analysis for reasonably foreseeable future actions</p> <p>The SGP Socioeconomic Report states that the proposed project, "in addition to the reasonably foreseeable Stallion Gold Horse Heaven mining project, would provide the economic benefits associated with mine operations." Report at 65. There is no discussion, however, of the potential and compounded negative impacts to housing, infrastructure, transportation, social well-being, among others, if another large-scale gold mine comes into the region. The complete failure to discuss the negative impacts of the SGP as well as the negative cumulative impact of another foreseeable large-scale mine in this region requires additional analysis and disclosure in a supplemental DEIS.</p>	SOC	SDEIS Section 5.21.2 describes the potential compound negative effects of reasonably foreseeable future actions to in-migration, housing availability, housing affordability, community services, and infrastructure.
Giles, Robertt (Mayor McCall, ID)	17834	25	<p>Population and Housing</p> <p>The analysis of the impacts to housing availability and affordability in Valley County and its incorporated communities is confusing, uses unsupported assumptions to minimize the disclosed impacts, fails to consider available local information in the analysis, and is, overall, inadequate. First, the SGP Socioeconomic Report states that at the start of construction, there is a "predicted in-migration of approximately 450 workers [that] would need housing." Report at 41. And although the Report anticipates that there will be less need for housing once "on-site worker housing" is completed, it provides absolutely no analysis of the impacts of this sudden and drastic influx of people on Valley County's housing market. Given the Report's finding that 450 workers will suddenly need to secure housing in Valley County and the "number of currently available homes for sale or rent [in Valley County] is limited" to 321 homes, Report at 45, how can the Report conclude that "[h]ousing impacts would be beneficial, local and regional, minor to moderate, and long term"? Report at 42.</p> <p>Moreover, the Report assumes-without any basis-that the peak effect of 450 new workers needing housing will "diminish following completion of the on-site worker housing." Report at 41. This statement presumes that most of these 450 workers-which is anticipated they will stay on working for the mine during operations-will live full-time at the mine site once on-site worker housing is completed and no longer need the homes they've secured in Valley County. However, the supplemental DEIS states that workers will work only two-week shifts, returning to their homes in between. What is the basis for concluding that these workers, who initially secured housing prior to the construction of on-site worker housing, will not keep their housing once operations start, and therefore decrease the pressure on the housing market?</p> <p>Other baseless assumptions that the Report makes in an attempt to explain away potential significant and adverse impacts on the area's housing availability are:</p> <ul style="list-style-type: none"> • Assumption that the "increased prevalence of multi-generational households" may result in a "sizable number of the in-migrating population [] tak[ing] up residence with friends or relatives that are existing residents." While the Highlands Economic Report (2018), pg. 7, provides figures for national growth in multi-generational households, there is no indication that is the trend in Valley County. For example, the increase nationally may be attributable to the increase in non-Caucasian populations who traditionally live in multi-generational households. It could also be a function of the significant increases in home prices and the general lack of availability-and not by choice-which can have significant social impacts on families and communities. See Pew Research Center, Financial Issues Top List of Reasons U.S. Adults Live in Multi-generational Homes (Mar. 24, 2002) • Assumption that in-migrating SGP employees, because of the two-week shift work, would have "more housing opportunities" by potentially renting or purchasing "occasional use" second homes using "temporary housing in motels or trailer parks." Reliance on these assumptions to justify a finding that there will be little to no adverse impacts to housing availability fails to take into account the fact that these in-migrating employees may come with families that would need stable housing in the community; that second home owners probably will not be willing to rent out their homes to these workers since they haven't been willing to rent them out as vacation rentals or for needed rental housing for current local employees and post-COVID with more teleworking options, those second homes may not be available 	SOC	The conclusion regarding potential benefits to housing pertains to out-migration following the end of the Project. The SDEIS also states that effects could become adverse if future housing demand and supply conditions change if vacated properties remain unoccupied for an extended period of time. Assumptions around construction period workforce are presented in Table 4.21-5 of the SDEIS. For the construction period, in-migrating labor is expected to result in 198 workers that require housing as described in Section 4.21.2.2. The balance of labor is expected to be drawn from the local communities. The SDEIS mentions that multi-generational households and use of temporary housing could reduce the demand of housing but does not conclude that there would not be adverse housing effects on this basis.

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			anymore as a rental or for sale; that there is already a lack of availability of trailer park options because many residents live full-time and long-term in local trailer parks due of the lack of affordable housing.		
Giles, Robertt (Mayor McCall, ID)	17834	26	Finally, the Report does an extremely simplistic and inadequate analysis of how the anticipated in-migrant workers will impact the current availability and affordability of the local housing market. The SGP Socioeconomic Report does a simple comparison to the number in-migrant workers against what it considers "available" housing units, concluding that the impact to housing will be minimal because there are more "available" homes (321 units) than anticipated in-migrant workers (198 workers). Report at 45. However, the analysis fails to consider data from the communities themselves on actual housing needs. For example, the McCall Housing Strategy (2018) identified that 730 local housing units were needed to address housing shortages for local residents and employees in McCall alone. Those in-migrants in particular that will be working at lower wage jobs will further exacerbate and compound an already significant housing shortage in our community. The SGP Socioeconomic Report fails to disclose the true impacts to this community with its simplistic comparison of anticipated in-migrant workers with irrelevant numbers of what it considers to be "available" housing. Disclosure in the SDEIS of how the proposed mine may exacerbate the lack of availability of affordable housing for those low-income earners who are vital to the economic and social fabric of our community is necessary to understand so that the City can direct its legal, political, and budgetary power in a direction that will have the most effectiveness. It is also necessary information to have and understand so that mitigation measures can be implemented in the final EIS and Record of Decision.	SOC	Discussion of the McCall Housing Strategy has been added to the EIS.
Giles, Robertt (Mayor McCall, ID)	17834	27	After careful consideration of the SDEIS and the related documents attached herein, along with public comment submitted to the City Council regarding the DEIS and SDEIS attached herein, the City of McCall recommends the Forest Service: a. prepare additional Supplemental Analyses that address the real and specific concerns of our community as identified above prior to issuing a final EIS and draft Record of Decision, and b. propose specific mitigations to the real and specific concerns of our community as identified above and allow for comment on those mitigations prior to issuance of a Final EIS and draft Record of Decision, or c. if Supplemental Analyses will not be prepared, then we recommend the No Action Alternative be selected.	SOC	Modifications to the EIS have been made to reflect information provided in comment letters. While Project impacts on many socioeconomic aspects are analyzed, they are described as residual impacts of the Project because they are without mitigation measures enforceable by the Forest Service.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	18649	6	But every day the Project is delayed is one more day that an Idaho miner (and family) will be deferred from the economic promise of employment at Stibnite.	SOC	Comment noted. No response required.
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	5	<p>IV. The SGP Will Become an Economic Engine for Central Idaho</p> <p>A. The Final EIS Should Include a Clearer Discussion of the Economic Benefits from the SGP</p> <p>The SGP will create many high-paying jobs, pay substantial local and state taxes, and stimulate economic diversification in the region. However, the SDEIS is not written in a way that makes it easy to understand these socioeconomic benefits. Although Section 4.21 of the SDEIS documents the numerous socioeconomic benefits that would result from the SGP, it lacks a useful overall synthesis of the beneficial socioeconomic impacts to facilitate the public's understanding of how the project will benefit the State of Idaho, Valley County, and surrounding areas. Section 4.21 in the Final EIS would be enhanced by including a table that summarizes the socioeconomic benefits that are discussed in Section 4.21 of the SDEIS.</p> <p>IMA is disappointed that the Executive Summary in the SDEIS does not accurately describe the socioeconomic benefits that are discussed in Section 4.21 of the SDEIS. In fact, we are concerned that the Executive Summary paints the wrong picture because it omits a thorough overview of the economic benefits. Instead, it sends mixed signals about the project's socioeconomic impacts. For example, it mentions increased tax revenue benefits on Page ES-29, but then, on the following page, it questions whether there would be a net socioeconomic tax revenue benefit.</p>	SOC	<p>The Project effects on income, expenditures, and employment are detailed in SDEIS Section 4.21 and the summary of Project effects in Table 2.8-1. The Executive Summary summarizes these effects qualitatively with the quantitative details explained in the SDEIS chapters and their supporting references.</p> <p>The SDEIS estimates the economic benefits of the Project and does conclude there would be net economic benefit. The SDEIS acknowledges the uncertainties regarding application of this economic benefit to the funding public services also affected by the Project.</p>

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			<p>At a minimum, the Executive Summary in the Final EIS should list the following beneficial socioeconomic impacts that would result from the SGP:</p> <ul style="list-style-type: none"> • \$29.3 million in income to local residents; • \$71.6 million in income statewide; • \$133 million in annual expenditures of for goods and services in Idaho; • 1,820 direct, indirect, and induced jobs during construction; • 1,150 direct, indirect, and jobs during the 15-year operating period; and 190 jobs during closure and reclamation. 		
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	6	<p>Another shortcoming of the Executive Summary is its inaccurate discussion of the potential for “boom and bust” impacts following mine closure, which fails to mention the Stibnite Foundation⁸. Both the Executive Summary and Section 4.21 in the Final EIS need to acknowledge that this Foundation will mitigate the potential for a bust once the SGP is closed. The Final EIS should explain that this agreement between Perpetua and eight local communities will provide these governments with resources that can help them maximize the mine’s long-term benefits and ensure that economic benefits from the mine are realized for generations after mining operations cease.</p>	SOC	A description of the Stibnite Foundation has been included in the Final EIS.
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	7	<p>B. The Headwaters Criticism of the Socioeconomic Analysis is Conjectural Fear Mongering</p> <p>The Forest Service should ignore the recently released Idaho Headwaters Economic Study Group (Headwaters) report entitled “An Evaluation of the Potential Socio-Economic Impacts of the Proposed Stibnite Mine on Valley County, Idaho” that criticizes the IMPLAN⁹ modeling results in Section 4.21 of the SDEIS. The Headwaters report inappropriately presupposes that Perpetua will not obtain goods and services locally for the SGP. This speculation is nothing more than an unfounded prediction designed to distract the Forest Service and create doubts about the SGP’s socioeconomic benefits. Moreover, it ignores the explanation in Section 4.21.2.2 of the SDEIS that IMPLAN and the data used to estimate regional or local economic impacts comply with the Data Quality Act¹⁰. Because the data and the use of that data in the IMPLAN analysis in Section 4.21 comply with the Data Quality Act, the socioeconomic impact analysis presented in Section 4.21 of the SDEIS clearly takes a hard look at socioeconomic impacts as required by NEPA.</p> <p>The Headwaters’ crystal ball is quite murky when it comes to Perpetua because it fails to acknowledge (or purposefully disregards) Perpetua’s track record of working constructively with local communities to ensure they will benefit from the SGP. Headwaters’ skepticism completely dismisses Perpetua’s corporate values, the Company’s approach to responsible mineral production, its sustainability goals¹¹, and its actions to implement these goals by creating the far-sighted, generous, and voluntary Stibnite Foundation discussed above. The Forest Service and the public should disregard the Headwaters report because it is utterly conjectural, dreaming up a theoretical scenario that does not match Perpetua’s actions or the Company’s commitments to the communities.</p>	SOC	Per comments received on the SDEIS, the Forest Service considered the Idaho Headwaters Economic Study Group’s criticism of the socioeconomic analysis. Responses to those comments are included in this response to comments and incorporated into the Final EIS where appropriate.
Shawn Phillips	18836	2	<p>The Nez Perce will be blocked from traditional and treaty-guaranteed land, upon which they depend for sustenance and access to ceremonial ground. And yet, the Nez Perce have no recourse to protect their land in the face of the needs of the larger nation, no say in what occurs or does not occur there.</p> <p>The land they would be left with after the mining project has run its course will be degraded. This impact will be felt beyond the tribe, to include recreationalists, anglers and hunters, and whitewater kayakers who are drawn to a uniquely wild landscape and river system. While not as important as sustenance for a people, future recreational income for Idaho and its people far outweigh the real, local economic benefits from a single mining operation.</p>	SOC	<p>Impacts to tribal resources are based on impacts to the resources themselves and impacts of concern as expressed by the Tribes in government-to-government consultation. As noted in Section 6.2.3 of the SDEIS, government-to-government consultation serves as the primary means for federal agencies to carry out their trust obligations.</p> <p>SDEIS Sections 4.15.2 (land use), 4.18.2 (recreation), and 4.21.2 (socioeconomic values) describe Project effects associated with its exclusion from public use and the economic effects of the Project related to employment, income, taxation, and the loss of recreational use.</p>
Michael Gibson (Trout Unlimited), Aaron Lieberman	18871	17	<p>Hunting and fishing is a significant economic driver in Idaho. In 2011, 534,000 resident and non-resident hunters and anglers recreated over 9.7 million days in the field, spending \$1.02 billion. Abundant hunting and fishing opportunities also generate 15,261 jobs in the state. Breaking this down further,</p>	SOC	Economic effects to recreation (including hunting and fishing) are described in SDEIS Section 4.21.2.2 with a description of those activities in Section 4.19.2.2. Further, effects on

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(Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)			Idaho Sportsmen and women support \$2.8 million in spending per day, \$442 million in salaries and wages, \$105 million in federal taxes, and \$97 million in state and local taxes ¹⁰ . More specifically, visitors to the South Fork Salmon River and the Wild and Scenic Salmon River spend \$13.5 million annually in the region. These impressive statistics are a result of high-quality, in-tact public lands administered by the Forest Service and other federal agencies. Hunters and fishermen spend their time and money in rural Idaho, where many of these communities have embraced and become reliant on this financial source year after year.		fish and aquatic resources are described in Section 4.12.2.2 and effects on water quality are described in Section 4.9.2.2. The current state of the Stibnite area as an unreclaimed historical mining operation where hunting and fishing are not currently pursued reduces the nature and extent of Project effects on these activities.
Joseph Pietri	19062	17	Perpetua's Highland report is outdated and the Power Consulting Economic Study gives a more recent view of the current Economic Climate. In reading the IHESG the independent economic study points out the SGP will be of much less value than the Highland Study indicates in its Benefits Only Study, for the citizens of Valley County save for maybe a few businesses.	SOC	Comment noted. No response required.
Paula Schappachet	19138	5	• Noise and Nuisance - If the influx of 750-1000 workers to the area requires additional accommodations for seasonal and residing families, Midas Gold should develop campgrounds or other facilities on private property near the mining operations.	SOC	Development of a worker housing located near the mine is a component of the Project.
Paula Schappachet	19138	6	All efforts should be made to protect the existing residences and atmosphere which have existed for close to a century. Valley County should provide deputies on a daily basis instead of a few hours per week as is the current case.	SOC	Assignments for Valley County deputies is outside the scope of the EIS.
Tanya Nelson (Vice President Human Resources, Perpetua Resources)	19202	2	As an HR professional in our community, I enthusiastically welcome the positive job impacts and economic opportunity that the Stibnite Gold Project will bring to all employers in our area and Idaho. Perpetua Resources wants to invest \$1 billion in our state and bring more than 1,000 jobs to rural Idaho. This will bring well-paying jobs to the area. These jobs will not only include competitive compensation but also offer attractive employee benefit packages including health, dental and vision insurance; paid vacation and sick time; paid holidays and 401k retirement accounts. Job growth is challenging and there will be opportunities for training, career development and tuition assistance. This is exciting to me! I see the excitement in our community as well, they are ready!	SOC	Comment noted. No response required.
Pam Wissenbach	19213	4	Why is Perpetua not going to bear the cost for the energy it will consume at the mine? It should not be the burden on existing Idaho Power costumers to bear the energy costs needed for the mine.	SOC	Perpetua would be an Idaho Power Company customer with payment obligations for power delivered and used by the Project.
Pam Wissenbach	19213	6	What do the people of Valley County gain from having this mine? The employment economic benefit would be lost with just a 2% decline in tourism that would occur due to loss of natural amenities. The estimated property taxes that Valley County would collect is about \$300,000, not even 2% of the county's annual budget. Public services such as roads, medical care and schools will be burdened by the influx of mine workers. These additional costs will not be paid for by Perpetua's taxes. Hence, once again the funding would be on the citizens of Valley County. The Stibnite Mine would have a boom and then bust effect on Valley County. We have seen first-hand the boom and bust cycles in small communities caused by mining, it is a real concern. It is the people that live here that will be left with recreating the economy after the boom. In short, residents in Valley County have nothing to gain from this project and so much to lose if it is approved.	SOC	SDEIS Section 4.21.2.2 describes the effects of the Project on employment, income, taxes, housing, and other socioeconomic factors, including the potential for boom and bust effects. The distribution of tax revenues is outside the scope of the EIS. Historically, mine operations and the current designation of the existing site as a CERCLA site have not impeded the historical growth of the Valley County tourist industry.
Kira Tenney	19247	10	Sources are out of date (many are 2003 and 2010) in the context of Idaho experiencing a population boom, and its residents holding high value in recreation opportunities. Idaho's Recreation and tourism generates \$7.8 billion in consumer spending and support 78,000 jobs; 79% of Idaho's residents participate in outdoor recreation; and recreation opportunities is a recruitment tool for businesses used to attract and retain workers (Source: Bureau of Economic Analysis, 2018; Idaho Business for the Outdoors, 2020). Recreation and tourism are a big deal locally, state-wide, and nationally and thus, please provide the missing information on impacts to recreation and recreation and tourism economies as related to the Stibnite Alternatives and a management plan and contingencies for the recreation in the area per each alternative.	SOC	The SDEIS describes Project effects on recreation and tourism in Section 4.19.2.2 and the economic implications of those effects in Section 4.21.2.2. The analysis recognizes the recent growth in Idaho population, particularly with regard to potential effects on housing.

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Kira Tenney	19247	11	<p>Specifics from the DEIS that were not addressed in the SDEIS</p> <p>1. In Section 3.4.3.3.17 SOCIAL AND ECONOMIC CONDITIONS, the DEIS notes that “Communities near the analysis area are rural and rely heavily on tourism and the trade industry to support their economies” and yet the Recreation section of the DEIS (3.19 beginning on page 603) does not include any information on the impact the project will have on local recreation.</p> <p>- Please provide an economic analysis of the local tourism economy and the Stibnite impacts including methods, sources, and data relevant to the most recent 2-3 years.</p>	SOC	<p>The description of the Valley County tourism economy in SDEIS Section 3.21.4.7 has been modified per comments received.</p> <p>The 2003 and 2010 Forest Service citations still reflect the general residential locations for Project area recreational users.</p> <p>Project effect on the tourism economy are described in SDEIS Section 4.21.2.2.</p>
Kira Tenney	19247	12	<p>2. The cited recreation use on pg. 603 “The analysis area is a popular area for a variety of recreation activities on both private and public lands.” A summary statement of the importance and abundance of recreation in the analysis area is provided; however, the entirety of the recreation section does not mention or address how recreation will be impacted by the Stibnite project, nor does it provide recent sources in its descriptions of uses (sources are out of dates, esp. In the context of Idaho’s booming population, noting its value of recreation (census.gov, 2020; Foy, 2020; Raphelson, 2017; Men’s Journal, 2019). Please provide information on impacts to economic and social cultural benefits of recreation to local communities and state, national, and international visitors in a supplemental DEIS that can be reviewed.</p>	SOC	<p>SDEIS Section 4.19.2.2 describes the effect of the Project on recreational use.</p> <p>SDEIS Section 4.21.2.2 describes the economic implications for Project effects on tourism while Section 4.18.2.2 describes the health effects of Project activities on local recreational use.</p> <p>The current condition of the site as an unreclaimed historic mining area somewhat reduce the Project's effects on recreation and tourism.</p>
Kira Tenney	19247	14	<p>a. FURTHER related to more recent data being taken into account is this:</p> <ul style="list-style-type: none"> - Recreation is Idaho's outdoor recreation economy generates \$7.8 billion in consumer spending and support 78,000 jobs - 79% of Idaho’s residents participate in outdoor recreation - Our outdoors are a recruitment tool for businesses used to attract and retain workers - Areas in the West with protected wilderness, national parks and recreational assets have higher growth rate and higher per-capita income - Medical savings and improved physical and mental health are associated with outdoor lifestyles <p>(Source: Bureau of Economic Analysis, 2018; Idaho Business for the Outdoors, 2020)</p>	SOC	<p>The description of the Valley County tourism economy in SDEIS Section 3.21.4.7 has been modified per comments received.</p>
Kira Tenney	19247	15	<p>4. Similarly to the above, cited on page 615 uses sources cited from 2003-2010, which are inadequate and out of date, especially in the context of Idaho’s growing population, recreation interests, and general economic benefits to local Idaho citizens (census.gov, 2020; Foy, 2020; Raphelson, 2017; Men’s Journal, 2019). Please provide more up to date information and analysis. “Recreation users in the analysis area are mostly locals, originating from areas in the analysis area such as Yellow Pine, Warm Lake, Big Creek/Edwardsburg, and areas just west of the analysis area including Cascade and Long Valley (Forest Service 2010).</p> <p>Users particularly in the western portion of the analysis area also are from populated areas further south including Treasure Valley and Boise (Forest Service 2010). As noted in the Payette Forest Plan for PNF MA 13, though most use is local, “users come through the area from all over the country to use the adjacent Wilderness [FCRNRW], especially during big-game hunting seasons” (Forest Service 2003a).” This section further presents information that needs clarification. Cited local areas such as recreationists being mostly local, but also from the Treasure Valley, Boise, and from all over the country, what effect will the Stibnite project have on these local, Treasure Valley/ Boise/ other Idaho, national and even international visitor’s uses? There is no information on impact to visitors or the local tourism economies that depend upon Them.</p>	SOC	<p>The 2003 and 2010 Forest Service citations still reflect the general residential locations for Project area recreational users. More recent publications do not provide evidence of additional source locations for local recreational users or types of activities (Raphelson 2017, Foy 2020).</p> <p>Effects on recreational use are described in SDEIS Section 4.19.2.2 and the economic effects on tourism are described in Section 4.21.2.2.</p>
Kira Tenney	19247	16	<p>5. The purpose of the Valley County Comprehensive Plan is to promote the health, safety, and general welfare of the people of the state of Idaho, and in part, to ensure the protection of “fish, wildlife, and recreation resources” (Valley County 2018). The Valley County Comprehensive Plan also includes a Recreation and Open Space goal “To promote and support a viable recreation and tourism program...” (Valley County 2018). Objectives include creating improvements for more varied recreation</p>	SOC	<p>The description of the Valley County tourism economy in SDEIS Section 3.21.4.7 has been modified per comments received.</p> <p>The 2003 and 2010 Forest Service citations still reflect the general residential locations for Project area recreational users.</p>

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			<p>opportunities, promoting development of new recreation facilities when compatible with land use goals, and protecting access to public lands (Valley County 2018).</p> <p>a. Note of this law denotes local work and law to protect recreation resources in Valley County. Again, the current DEIS does not provide information on how recreation in the area will be impacted and provides out of date sources on current use.</p> <p>b. Please provide information on impact including economic impacts to these local economies that rely on tourists, per EIS requirements.</p> <p>c. Please provide an economic analysis of the local tourism economy and the Stibnite impacts including methods, sources, and data relevant to the most recent 2-3 years.</p>		Project effects on the tourism economy are described in SDEIS Section 4.21.2.2. Payette National Forest and Boise National Forest visitor information is described in SDEIS Section 4.19.2.2 from their recent Annual Visitation Use Estimates by Type (Forest Service 2020f and 2021a).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	606	"...particularly the residents of the village of Yellow Pine, the nearest residential community to the mine site area, as well as recreational visitors who frequent the area " Please delete as this table is only stating area analyzed. Also, these areas are not discussed in the cumulative section 5.18	SOC	Revision accepted. Comment addressed in the Public Health and Safety responses.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	607	" Valley and Adams Counties. " According to the technical report, the analysis area is the "statewide perspective" including the Indian reservations and some of the transportation corridors that extend beyond the county boundaries. Please change to " statewide ".	SOC	While the analysis is statewide, the location for most of the effects is Valley and Adams Counties. The text has been modified to read "These effects occur statewide, but primarily in Valley and Adams Counties, in terms of tax revenues ..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	687	" <i>Further, there would be a related level of adverse cumulative effects to housing availability, housing affordability, community services, and infrastructure</i> " Please consider foreseeable infrastructure improvements and services funded or provided by the mine or revenues generated from it.	SOC	Reasonably foreseeable infrastructure improvements and services funded by the Project have been considered in the EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	543	" <i>The direct and indirect effects analysis area for social and economic conditions consists of Valley County and Adams County (and associated communities)</i> " Please include a statement that there are no reservations located directly within the analysis area.	SOC	Figure 3.21-1 illustrates that the reservations are outside the analysis area and the EIS notes that there are no reservations within the socioeconomic analysis area.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	544	" <i>Census data on housing prices in Valley and Adams counties do not show an increase in sale price resulting from a relatively low availability of housing, as median owner-occupied housing prices for both counties have fluctuated but generally not risen since 2010 (Census 2010, 2018; Highland Economics 2018)</i> " Please add information regarding more recent home values. Suggested verbiage might include, "Real estate data for Valley County and (2020 to 2021) indicate that home prices have continued to climb. The median home price over 12 months for 2020 was \$480,000. In 2021, it jumped to \$675,000, a 41% increase." (https://boisedev.com/news/2022/01/31/valley-co-mls/) This trend of increasing prices in rural areas is important context for the reader, particularly with respect to the undefined and unsubstantiated "boom/bust" cycle that is mentioned several times in this document.	SOC	Revision accepted. The more recent housing price information was added to Section 3.21.4.2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	545	" <i>No employment growth from other new major mine operations in the region's mining and manufacturing sector over the 10-year period was forecasted (Idaho Department of Labor 2019).</i> " Please replace " growth " with " impacts "	SOC	Revision accepted. The revised text reads "No employment impacts from other major mine operations ..."

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	546	"Utilities and communications are readily available to Valley and Adams counties residents. Idaho Power Company provides electric service to the region. Natural gas is not available in the area; therefore, homes are heated with electricity, propane, fuel oil, wood, and/or pellets. " Please add how internet is provided to these areas.	SOC	Private internet service providing businesses offer Cable, DSL, Fiber, and Satellite internet connections within Valley and Adams Counties. No text added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	547	Please reconcile topics mentioned here with those introduced in Table 1.10-1 and included in Chapter 3. Also, if items here are not mentioned in Table 1.10-1 or Chapter 3, they should not be included here.	SOC	Items in the narrative are intended as examples of direct and indirect effects and are associated with the topics listed in Table 1.10-1 and Chapter 3. No changes made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	548	" Any impacts on recreation, infrastructure development, revenues, population, housing, and transportation impacts would be temporary and short term and no long-term changes to socioeconomic resources would occur (Forest Service 2015c). " Please clarify the impacts referenced here.	SOC	Text revised to read "Impacts as described in the Golden Meadows Exploration Project Environmental Assessment to recreation, infrastructure ..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	549	" This local area employment increase would be expected to last for the duration of the mine operations phase; however, the post-closure decrease in employment and other related economic activity could result in adverse economic impacts on the local area's economy from the "bust" following the prior "boom" from the SGP's construction and operations employment and spending. " Please define this terminology and the expectation of this effect based on similar conditions in other mining operations/towns. Also, it is recommended that additional information be provided regarding more recent home values. Please note that "Real estate data for Valley County and (2020 to 2021) indicate that home prices have continued to climb. The median home price over 12 months for 2020 was \$480,000. In 2021, it jumped to \$675,000, a 41% increase." (https://boisedev.com/news/2022/01/31/valley-co-mls/) This trend of increasing prices in rural areas is important context for the reader, particularly with respect to the undefined and unsubstantiated "boom/bust" cycle that is mentioned several times in this document.	SOC	Text revised to include "The term boom refers to a period when there are a large number of new jobs added to a local economy and a significant increase in local expenditure compared to pre-existing conditions. Conversely, the term bust refers to a period when there are large reductions in the number of jobs for the local economy and a significant decrease in local expenditure compared to conditions while a project is operating." Text also revised to note that housing prices have increased per national trends in recent years.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	550	" When mine operations cease, local communities and economies may experience a contraction in demand for private and public goods and services and a corresponding reduction in demand for labor. " The effect on the demand is 1.6%. This will not create a large impact. Please include the 1.6% number as this gives context to this statement.	SOC	The SDEIS and supporting Highland Economics report do not include a quantitative estimate for the reduction in labor demand. The 1.6% reduction mentioned in the comment cannot be associated with a SDEIS reference. No change made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	551	" Indirect and Induced Employment: Increased sales for local suppliers providing construction materials and equipment represent an indirect effect of SGP activity and spending. Induced effects represent increased economic activity from household spending of labor income by both the SGP and supporting businesses' workers. " We suggest that this section should address the indirect impact ON employment, instead of just impacts from employment. Please revise.	SOC	The SDEIS section provides estimates for the number of indirect and induced jobs resulting from the Project. These estimates constituent the indirect impacts on employment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	552	" It is important to note that these are jobs and income supported by the SGP, but at the national level, these are not necessarily additional jobs and income in the U.S. " This statement is outside the analysis area and irrelevant. Please delete.	SOC	Effects of the Project on employment at the national level are described quantitatively. This statement is retained to provide context for that the quantification of jobs supported by the Project.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	553	"If the capital and labor resources used for SGP's development were instead invested in mining or other economic activities elsewhere within the U.S., there would be employment and income benefits generated from these alternative activities (Highland Economics 2018). " This is an irrelevant statement. Please delete.	SOC	Effects of the Project on employment at the national level are described quantitatively. This statement is retained to provide context for that the quantification of jobs supported by the Project.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	554	"The indirect and induced job projections are based on national data on the relationship between employment and output for each affected economic sector. Depending on the specific state and local economic conditions, businesses operating at under capacity or facing limited increased demand may increase their utilization of their existing employees rather than hire new workers. " Redundant of second paragraph on this page. Please delete.	SOC	Revision accepted. Repeated sentences deleted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	555	"The total local, state, and national indirect and induced full and part- time jobs supported by the SGP would be approximately 170 (Highland Economics 2018). " Please indicate in this statement that the 170 direct and induce jobs applies to closure and reclamation. Please add a table that summarizes the indirect and induced jobs per phase.	SOC	Revision accepted. Text revised to indicated that the jobs estimate relates to the closure and reclamation period.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	556	Please add a graph that illustrates the mine phases and employment numbers, including baseline (2019 employment).	SOC	Project employment estimates are provided in table form in Table 4.21-1.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	557	"Therefore, the SGP could provide jobs to unemployed or under- employed residents in the labor force in those counties. " Please revise to read "Therefore, if skills align , the SGP could provide jobs to unemployed or under-employed residents in the labor force in those counties."	SOC	The statement indicates that employment could occur but does not provide any quantification for the number of unemployed or under-employed hires. The reasons for hiring or not hiring unemployed or under-employed persons are not limited exclusively to job skills.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	558	"Such potential "boom and bust" effects from a mine's closure are commonly recognized as potential source of adverse socioeconomic impacts on the local area economy. " As noted previously, please provide a relevant example reference/citation for this statement. Also, Valley County could reasonably be described as undergoing a current "boom", with home prices rising dramatically in just the last 2 years. Please provide additional justification for the use of this term.	SOC	Text revised to include "The term boom refers to a period when there are a large number of new jobs added to a local economy and a significant increase in local expenditure compared to pre-existing conditions. Conversely, the term bust refers to a period when there are large reductions in the number of jobs for the local economy and a significant decrease in local expenditure compared to conditions while a project is operating." Text also revised to note that housing prices have increased per national trends in recent years that are part of the existing condition. The reference for mining boom-bust cycles has been added to the section.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	559	"SGP employees and contractors would be expected to spend almost all their earnings in their community of residence , given their bi- weekly shift schedules and employee housing at the Operations Area Boundary's remote location. " It is erroneous to suggest that up to 100% of their earnings will be spent. Please replace " spend almost all their earnings " with " spend a proportion of their earnings "	SOC	The spending assumptions reflect the representation of employee spend locations in the Highland Economics 2018 report. Text revised to "Earnings spent by SGP employees and contractors would be expected to occur primarily in their communities of residence."
Alan Haslam (Vice President, Permitting, Perpetua	19325	561	"Direct 90/20 Indirect and Induced 40/10 Total – Reclamation/Closure IZ130/30 " Please add a footnote indicating what these numbers represent in this table	SOC	A footnote has been added to indicated that the larger number is the employment estimate at the start of the closure process, while the smaller number is the employment toward the end of the closure process.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	562	"An influx of new SGP employees and contractors into the local communities would increase local housing demand." Section 4.21.2.8 says that in-migration could be limited, which contrasts with this statement about an influx of employees and contractors. Please revise either or both sections to be consistent.	SOC	The text has been revised to read "New SGP employees and contractors in-migrating into local communities ..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	563	"The Nez Perce Tribe's Department of Fisheries Resources Management (DRFM) operates Fisheries Restoration Programs in the vicinity of the proposed Operations Area Boundary such as the Johnson Creek Artificial Propagation Enhancement Project and its associated research program. Annual funding for the project and research is approximately \$1.5 million from a total annual operating budget of \$22 million and utilizes DRFM's staff labor from the total group of 200 employees (Nez Perce Tribe 2019). The project produces up to 110,000 Chinook salmon smolts annually for direct release into Johnson Creek while the research program examines smolt-to-adult return rates and the utilization of hatchery rearing of wild fish to supplement fish populations." This information could be moved to Section 3.21 as it is affected environment information.	SOC	The descriptive text is retained in Section 4.21.2.2 because it provides context for Project effects on this specific program which does not fall into a general category (e.g., tourism).
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	564	"Project impacts regarding water quality and the transport of hazardous materials have the potential to affect the restoration efforts " Please specify what the actual effect on the restoration efforts would be.	SOC	Water quality (Section 4.9.2.2) and hazardous materials (Section 4.7.2.2) effects have the potential to reduce the viability of Chinook salmon released into Johnson Creek for supplementing fish populations. No text added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	565	"However, the socioeconomic components for the restoration program (e.g., road access, employment) would observe negligible and short-term effects from the increased use of an existing roadway." Please specify what the effects would be.	SOC	The socioeconomic effects would involve more activity in the area due to increased road usage (Section 4.16.2.2). No text added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	566	" Impacts to housing demand and affordability in Valley and Adams counties. " All of the other items on this list are described using neutral terms. Please replace " Impacts to " with " Changes in "	SOC	Revision accepted. The text has been revised to read "Changes to housing demand and affordability in Valley and Adams counties."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	567	"Utilities and communications are readily available to Valley and Adams counties residents. Idaho Power Company provides electric service to the region. Natural gas is not available in the area; therefore, homes are heated with electricity, propane, fuel oil, wood, and/or pellets." Please add how residents access the internet.	SOC	Private internet service providing businesses offer Cable, DSL, Fiber, and Satellite internet connections within Valley and Adams counties. No text added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	560	These numbers do not include taxes. Please state this.	SOC	A footnote has been added to Table 4.21-3 to indicate that the operational spending estimates do not include taxes.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	21	Comments including technical clarifications and requested wording modifications are provided for SDEIS Sections 3.21, 4.21 and the Social and Economic Conditions Specialists Report.	SOC	Comment noted. No response required.
Power Consulting Incorporated		1	<p>In the last half century Valley County has tripled in population while jobs have nearly quadrupled. The Valley County economy outperformed the national economy across a broad range of indicators of local economic vitality: population, employment, and real personal income. In the last ten years or so, the combination of natural growth and net in-migration added about 2,500 new residents in Valley County, but 87 percent of that growth was due to net in-migration, i.e., people “voting with their feet”. Many of the people that moved into Valley County, brought with them a significant amount of “non-labor” income. In 2020 the non-labor sources of personal income in Valley County totaled \$355 million. In comparison, the labor Earnings came to \$261 million. That is, the non-labor personal income was 36 percent larger than the total labor earnings.</p> <p>The historically important goods production in Valley County, timber and mining, have declined in the last several decades as a source of jobs. That is not a unique trend found only in Valley County. Rather, it is a state and national economic change. Jobs in goods production (Non-Services-Related), a category that includes timber and mining, were largely stagnant over the thirty-year period 1970 to 2000 relative to the growth in jobs in services sectors. During that 30-year period, jobs in Services Related industries rose steadily, almost quadrupling (3.9-fold) over that 30-year period.</p>	SOC	Comment noted. No response required.
Power Consulting Incorporated		2	In this section we discuss the projected economic impacts associated with the Stibnite Gold Project (SGP). While Power Consulting was able to assess a variety of the local socio-economic impacts of SGP on Valley County, as presented in this study, we find it troubling that issues of HWY 55 transportation, spill risk, local wage scale problems, housing availability/affordability, and general infrastructure concerns were not adequately examined in either the Draft Environmental Impact Statement (DEIS) or the Supplemental DEIS (SDEIS). Public officials, elected leaders, and concerned citizens should not be making decisions about the future of their communities without a full comprehensive impact analysis having been carried out to inform their decisions. Specifically, we find that the DEIS and the SDEIS socioeconomic sections presented a ‘benefits only’ analysis. We will spend much of this section and parts of the following sections describing and quantifying that shortcoming.	SOC	The SDEIS describes effects of the Project on the use of Highway 55 in Section 4.16.2.2, on spill risk in Section 4.7.2.2, and on wages, housing, and infrastructure in Section 4.21.2.2.
Power Consulting Incorporated		3	Knowing where a proposed mine will get its operating supplies and its workers will help to determine what the economic impacts of the mine will be on the local area. If the mine is in a relatively remote setting, as is the case with the proposed Stibnite mine, then it is quite likely that the positive local economic impacts of the mine will be muted on the local area. The reason for this is that there are fewer economic links between the mine and the local towns that might otherwise supply the mine with the things that it needs to operate. Valley County may be the source of a lot of wealth being created, and the physical location of the mine, but it will not retain much of the wealth that is created. If we look at the Construction phase of the proposed mine, for example, more than 91 percent of the spending will occur outside of the local area. If we look a little deeper, into the total spending that the local area is modeled to receive, we see that only 8 percent of it will be in the local area. Of that 8 percent, 64 percent of that spending will be on direct wages for the people that are modeled to live in the local area. Furthermore, we suspect most of the workers will not live in the local area, therefore, this relatively small percentage will shrink to a few percent since those “local” workers will no longer live in the local area and will no longer spend their direct wages in the local area.	SOC	<p>Assumptions around the extent of local hiring and local expenditures are described in Highland Economics 2018 along with sensitivity analyses around these assumptions.</p> <p>In practice, precise percentages of local hiring and local procurement are difficult to ascertain a priori. Therefore, the assumptions and sensitivity analyses were employed to address this uncertainty.</p> <p>As indicated in SDEIS Table 4.21-2, the mid-range local spending estimated would 18% for the construction period with 28% of that local spend on salaries and wages. The majority of the local spend would be on-site vendors and materials, equipment, and services from local businesses.</p>
Power Consulting Incorporated		4	A complicating factor in all of this is that even if the local area was able to provide the workers for the mine, the 100 in-migrants that are projected to work at the mine will have a hard time finding housing. That is because Valley County does not have a lot of idle houses that are available to rent and or purchase. The Stibnite Supplemental DEIS specifically notes that the local rental market is becoming less affordable and the data that we have collected from the American Community Survey indicates that	SOC	<p>The SDEIS describes Project effects on housing availability and affordability in Section 4.21.2.2.</p> <p>As noted in the SDEIS, predicted in-migration would represent an approximately three percent increase in community populations with a related effect on housing demand.</p>

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			there are not enough vacant houses for sale for all the “local miners” to purchase one. What this adds up to is a housing market that is more expensive than the national average, more expensive than nearby Boise, and a market that will become increasingly less affordable for the locals if the mine is built and operates.		
Power Consulting Incorporated		5	When we look at the potential fiscal impacts of the proposed mine on the local area, much of the same pattern holds. For the operations phase of the proposed mine, there will be \$300,000 annually paid in property taxes ¹ which will go to Valley County during the Operations phase, but all the other taxes are paid to state and federal governments. The \$300,000 must then cover the cost increases that the mine puts on Valley County which include schools, roads, infrastructure, and emergency medical services. If we use the DEIS’s methodology, then this increase in property taxes will not even cover the full costs of the miner’s children attending school, while leaving no tax revenues for the other increases in demand for public services that the miners may put on Valley County.	SOC	SDEIS Section 4.21.2.2 describes the distribution of tax revenues between local and state government. In addition to the property taxes paid directly to local counties, the Idaho tax commission returns portions of the sales tax and other taxes to counties and cities plus other funding allocated for county and city road departments. The percentage of sales tax revenues shared utilize a population-based calculation. The Idaho tax commission provides details on tax revenue sharing with counties and cities quarterly via its website (tax.idaho.gov). Because of the sales tax sharing and transportation funding, the annual property taxes paid to the county are just one component of funding available to address effects on roads, infrastructure, and public services.
Power Consulting Incorporated		6	With a well-paid, predominantly young, male workforce, with weeks at a time off, there are some social problems that can accompany this type of mining. Places like the Bakken in North Dakota and Montana and remote mining locations in Canada and Australia have been a natural research area to study the impact of this type of transient workforce. Since the miners will live at the mine site for two weeks while they work and then have two weeks off at a time, a separate culture will be created by the mine. Because of its structure, its pay, and the diverse cultures of its workforce, that separate mining culture may not fit well with the existing residents of the towns and cities that are closest to that mine.	SOC	The Forest Service analysis does not engage in speculation around people that seek employment in the mining industry nor attempts to disparage them based on their choice of employment. The SDEIS discusses potential changes in demand on public services and housing associated with the potential in-migrant or transient workforces (Section 4.21.2.2). The SDEIS does not attempt to evaluate the desirability or compatibility of cultural values and social aspects of an in-migrating workforce in comparison to the cultural and social aspects of existing resident populations.
Power Consulting Incorporated		7	People have chosen to move to Valley County because of its natural beauty and the outdoor recreational opportunities that surround them. Additionally, people have been moving in at rates higher than the national, state, or rural county average, and they have brought “non-labor” income with them. In the economic literature these attractive local characteristics are called “amenities” and treated as economic values that improve the well-being of residents -just as the purchase of a home in an attractive neighborhood would. Recognition of the existence of these environmental values at certain locations also warns us that if we are not careful about how we manage special attractive natural landscapes, we may degrade significant existing amenities of considerable value, potentially creating a “dis-amenity” that leaves many people worse off. In one important sense, the proposed Stibnite Gold Project represents a gamble that puts at risk a known and existing outdoor economy that is supporting economic vitality in Valley County. What is being offered in its stead is a speculative but threatening multiple open pit mining venture that, if it is commercially successful, will bring only a relatively small and short run “bump” in additional economic activity in Valley County. When a mine or other types of industrial facilities are proposed near where people live, the people that live in the area, as well as the people that know about the new facility and the area, may change the way that they think about that area. That is, a “stigma”, or negative perception, about an area caused by the negative characteristics associated with the industrial facility such as degraded air and water quality, noise, congestion, general run-down characteristics of the neighborhoods, falling property values, etc.	SOC	The SDEIS describes social conditions of Valley County residents in Section 3.21.4.4. Project effects on local characteristics are influenced by the fact that the current condition of the site is an unreclaimed historical mining operation. Resumption of operations would result in a continuation of mining activity rather than initiation of a new operation. The SDEIS describes Project effects on air quality (Section 4.3.2.2), water quality (Section 4.9.2.2), noise (Section 4.6.2.2), and traffic (Section 4.16.2.2). The air quality, water quality, and noise effects are more than 10 miles from residential areas. SDEIS Section 4.21.2.2 describes the employment and income effects of the Project which are expected to be moderate to major for the area. Because the Project is located away from residential areas in an existing mining district, it is not expected to directly affect the characteristics of neighborhoods. The presence of resumed mine operation has the potential to affect sense of place; however, the SDEIS does not attempt to analyze the impacts of individuals simply knowing about resumed operations.
Power Consulting Incorporated		8	The stigma can be the result of many different local industrial degradations, but for the purpose of this report, we will consider spills from truck traffic delivering supplies to the mine and spills from Tailings Storage Facilities (TSF). There will be a dramatic increase in truck traffic as thousands of loads of materials are hauled from around the U.S. to the proposed mine site which will dramatically alter traffic patterns in the local area and all but assure that there will be spills. TSF are the permanent storage features at a mine that will hold back the toxic sediments that are left over from processing the ore to obtain the minerals. In the modern age of mining, and especially when dealing with open pit mines, there is an incredible volume of rock that is moved to recover a very small percentage of the mass moved as metal (in this case gold, antimony, and silver). The amount that is recovered, measured in grams per ton of rock moved, is between 1 and 2 in this case. ² TSF design, in recent years, has not kept up with	SOC	The SDEIS describes Project effects associated with tailings management in Section 4.2.2.2, spills in Section 4.7.2.2, and truck traffic in Section 4.16.2.2. As described in Sections 4.2.2.2 and 4.9.2.2, the TSF design complies with current regulatory requirements and would have reduced environmental effects compared to the historical TSF facilities on the site that would be relocated as part of the Project. The TSF design exceeds the Factors of Safety accepted for managing risk associated with dam failure with design Factors of Safety presented in Table 4.2-1 (greater than 4 compared to 1.5 requirements for static conditions and greater than 1.8 compared to 1.0 requirements for pseudo-static conditions). The combination of the proposed monitoring, planning, and control practices for transport and handling of fuels and hazardous materials and committed design measures would minimize

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			advances in mining technology and the statistics on failure show that the newer TSF are failing at a higher rate than the older ones.		the risk of accidental releases during the transportation, storage, management, and use of hazardous materials. Nevertheless, the proximity of the access roads to surface water resources increases the potential for a release to enter water which could result in major consequences. The overall environmental impacts from potential releases of hazardous materials under the 2021 MMP would be localized, temporary, and minor to major depending on the type of material released and the location of the spill.
Power Consulting Incorporated		9	The problem with having the proposed mine in Valley County is that so much of Valley County's economy is based on the high-quality natural landscapes that are in it and all around it. When we compare Valley County's economic vitality to that of the other Idaho non-metropolitan counties, we see that Valley County has significantly outperformed them. That is, people in Valley County received more income than their Idaho peers in other non-metropolitan counties. The average "bonus" to Valley County residents compared to the group of non-metropolitan counties was \$7,400 a year per person in 2020 dollars. However, a Stibnite mine-related spill that casts a shadow of stigma over Valley County, could easily erase all potential benefits that the proposed mine could bring to Valley County during the mine operation phase. For example, a spill that caused a 2 percent decline in the Visitor-Recreation and Non-Labor Income in Valley County, could erase nearly all of the benefits of having 200 highly paid miners living in Valley County.	SOC	SDEIS Chapter 2 describes the design features and emergency response activities proposed to reduce the frequency and consequences of spills. Section 4.7.2.2 describes the types and consequences of spills anticipated. The greatest frequency of spills is expected to occur on the mine site where they can be effectively remediated. Off-site spills on access roads pose the most probable release to the environment but are the focus of transportation management plans and emergency response plans. The SDEIS does not attempt to describe the incremental wealth of Valley County residents attributable to natural amenities above average non-metro residents in Idaho. Most spills would be expected to occur on the mine site which is removed from residential areas. Because of the proposed monitoring, planning, and control practices for handling of materials, spill effects on scenic resources, water quality, air quality, noise, and traffic are expected to be localized and temporary.
Power Consulting Incorporated		10	Metal mining is notoriously volatile, and gold is a charter member of the club of volatility. In fact, the price of gold has fluctuated by almost a factor of 10 in the last 50 plus years. However, regardless of gold price fluctuations, Valley County and the City of McCall will still have to make decisions about infrastructure. Things like schools, sewers, hospitals, roads, the size of the police and fire departments etc., will still require additional investments, because of the increased use by the miners.	SOC	The SDEIS describes Project effects on schools, police protection, fire protection, telecommunications, transportation and infrastructure in Section 4.21.2.2. Annual property taxes, sales tax sharing and transportation funding are components of funding available to address effects on roads, infrastructure, and public services.
Power Consulting Incorporated		11	We agree that the jobs that the miners will get will pay them well above average wages, but there will also be costs associated with having a mine in Valley County, and those costs have not been explored. Mines are generally located near small towns in rural portions of the U.S. that will have a harder time dealing with some of the negative impacts that come with the mine. As Perpetua has correctly shown, people who reside in Valley County and have mining jobs will have significantly higher than average pay when compared to other Valley County residents. That is known. What is unknown is what some of the costs associated with having the Stibnite mine in Valley County will be. The economic and social science literature tells us that there will be costs in the form of retarded economic growth, increased pressure on public services that Valley County provides, reduced educational attainment, and increased negative social interactions as a transient workforce tries to integrate into the local community. What this report also will show is that Valley County's economy is currently thriving and the reason that the economy is so robust, in large part, is because of the natural amenities that Valley County has. The possibility of short-term gain associated with the proposed mine should be carefully weighed against the potential for long term harm to an otherwise thriving economy	SOC	Comment noted. No response required. SDEIS Section 4.21.2.2 describes the expected in-migration of 190 workers with an equivalent number expected to commute from other areas.
Power Consulting Incorporated		12	In this section we discuss the projected economic impacts associated with the Stibnite Gold Project (SGP). While Power Consulting was able to assess a variety of the local socio-economic impacts of SGP on Valley County, as presented in this study, we find it troubling that issues of HWY 55 transportation, spill risk, local wage scale problems, housing availability/affordability, and general infrastructure concerns were not adequately examined in either the Draft Environmental Impact Statement (DEIS) or the Supplemental DEIS (SDEIS). Public officials, elected leaders, and concerned citizens should not be making decisions about the future of their communities without a full comprehensive impact analysis having been carried out to inform their decisions. Specifically, the analysis that was done in the DEIS and SDEIS socioeconomic sections was largely a 'benefits only' analysis. In this section we will spend some time pointing out many of the different costs that were not quantified and showing why that is important.	SOC	SDEIS Section 4.21.2.2 describes Project impacts on wages, housing, and infrastructure. Section 4.16.2.2 describes impacts associated with transportation and Section 4.7.2.2 describes spill risks. These descriptions included negative and positive effects associated with the Project.

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Power Consulting Incorporated		13	Knowing where a proposed mine will get its operating supplies and its workers will help to determine what the economic impacts of the mine will be on the local area. If the mine is in a relatively remote setting, as is the case with the proposed Stibnite mine, then it is quite likely that the positive local economic impacts of the mine will be muted on the local area, which in this case is Valley County. The reason for this is that there are fewer economic links between the mine and the local towns that might otherwise supply the mine with the things that it needs to operate. The miners will work two-weeks-on and then two-weeks-off shifts and will live on site, at the mine during their “on” shifts. The mine will procure its supplies for itself and the miners ahead of time and will seek to lower their costs as much as they can. While there are small towns that are slightly closer to the proposed mine, larger cities like Boise are negligibly farther away, and will likely be the source of much of the mine’s operating supplies that are purchased. This should not come as a shock to those that live in Valley County, since many of the residents of Valley County use Boise in precisely this same manner. Valley County is not a hub of industrial mining supply and has not been dependent on mining activity for some time. In fact, as we showed in the previous section, mining is not what drives the Valley County economy, and it is not what is driving the growth in Valley County. Valley County had a population of 11,085 in 2020 and 9,846 in 2010. This 12.6 percent increase, representing 1,239 people, is more than 10 times as many people as are projected to move to the local area by the DEIS for the operating phase of the proposed mine. ¹⁴ What we want to point out here is that many people are choosing to move to Valley County, and it is because of the current economy, the growth in the Valley County economy, and the natural bounty of the landscape, that they have decided to make that move.	SOC	Assumptions around the extent of local hiring and local expenditures are described in Highland Economics 2018 along with sensitivity analyses around these assumptions to address uncertainty. Population trends, housing trends, and the number of second homes in Valley County are described in SDEIS Section 4.21.2.2. The SDEIS does not attempt to describe the incremental wealth of Valley County residents attributable to natural amenities above average non-metro residents in Idaho. Most spills would be expected to occur on the mine site which is removed from residential areas. Because of the proposed monitoring, planning, and control practices for handling of materials, spill effects on scenic resources, water quality, air quality, noise, and traffic are expected to be localized and temporary.
Power Consulting Incorporated		14	As the previous section of this report documented, according to several economic metrics, Valley County has been doing well for itself in the recent past, and so it should look carefully at a proposed gold mine to make sure that the mine will be compatible with the sources of economic wellbeing that Valley County currently enjoys. In this section we will look at where the impacts of the proposed mine are likely to occur, where the miners and secondary workers for the mine are likely to come from and where they are likely to live, what the impact of the fiscal revenues generated by the mine are likely to be for the local area, and what the impact of having miners living in Valley County, but working such non-traditional shifts, will be.	SOC	Comment noted. No response required.
Power Consulting Incorporated		15	In the parlance of economics, ‘multipliers’ are often offered as an explanation of how any given project may benefit a community from a socioeconomic point of view. Multipliers, as the name suggests, describe the way that money created by a project circulates, or multiplies, in the local or regional economy. The more connected and complete the local economy, the more the local economy can capture and circulate the money created by a project. In this case, the project is the proposed Stibnite mine and the multipliers that have been discussed are associated with the mine workers spending their pay, or not, in the local area (Valley County) and the mine procuring the operating supplies that it needs, or not, from the local area. The higher the multipliers, the more the local area can support the mine by supplying the workers with the things that they need to live as they spend their pay, and the more the mine can procure its supplies from the local economy. The problem with this metric is that there are often very large multipliers for mines when the geography analyzed is very large, i.e. at a state or national level. But when we study impacts on smaller local areas, those multipliers may in fact be quite small. The reason that this is the case is that mines are often located in remote areas that are far from the supplies that a mine and or its miners need. When economic impact modeling is done, as it was in this case, with a model named IMPLAN, the results are often quite surprising for people. When IMPLAN is used to model a local area, if there is a connection in the area, then IMPLAN will allow that connection to be made. If, for example, there is a gas station in Valley County that sells diesel fuel, then IMPLAN will assume that the mine can and will procure its diesel from that local supplier. The problem with this assumption is that the local supplier is likely incapable of supplying the volume of diesel that the mine will need, and the mine is unlikely to purchase it at a much higher price from the local supplier. The mine will instead attempt to minimize their costs and have the diesel fuel brought in from a regional or national supplier that can give them a much better price and more secure supply. If one is not very careful with the results of IMPLAN,	SOC	IMPLAN was used to estimate regional or local economic impacts and the data used are compliant with the Data Quality Act (Section 515 of Public Law 106-554). IMPLAN is based on well-established input-output modeling methods that had been developed for and have been used to successfully describe economic contributions and impacts, over more than two decades, for hundreds of projects and management plans on National Forest System lands most of which are located in rural areas. IMPLAN has gone from a system employed by a few Federal agencies to one that is embraced by economists throughout the U.S, including 250 academic institutions, as well as over 200 Federal, state, and local government agencies. IMPLAN data is well-suited for rural areas given the use of proprietary methods to estimate trade flows and industry characteristics that are not available from public sources (proprietary techniques are used to estimate data that cannot be disclosed because of Federal confidentiality requirements). These methods allow for estimates of trade flows for 440 commodities between all U.S. counties that are key to the creation of credible, local models. SDEIS Tables 4.21-2 and 4.23-3 describe the predicted local spend on vendors, materials, equipment, and services. Local spend forecasts of approximately \$60 million annually. Purchase of bulk items such as diesel fuel are expected to be sourced from outside the Valley County and Adams County area. The expenditures areas expected to make the most use of local procurement include the provisioning for the worker camp, travel accommodations, phone communications, electrical power, labor services, and road maintenance.

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			<p>specifically in a small, isolated economy, one can, mistakenly, allow connections that do not have an economic logic to them.</p> <p>We strongly believe that this is the case with the modeling done for the proposed mine. We will not turn this report into a referendum on the application and use of IMPLAN, but we do find it highly suspect that the mine will even procure a modest number of supplies from the very small towns found in the local area.</p>		
Power Consulting Incorporated		16	<p>Valley County may be the site where a lot of wealth will be created, and the physical location of the mine, but it will not retain much of the wealth that is created. Section 4.21 of the DEIS describes the very large multipliers that will be created during the construction period, but it also shows that most of the positive impacts will occur outside of Valley County. For example, if we look at the total spending on the Construction Phase of the project, as shown in Table 2 below, we can see that the local area will be the source of a little less than 9 percent of the spending. The state of Idaho, which includes the local area, will be the source of 34 percent of the spending, and 66 percent of the spending will be from outside of Idaho. Put slightly differently, more than 91 percent of the spending on the Construction Phase will occur outside of the local area. The spending from the mine, on local supplies, is called “indirect” spending, and the combination of indirect and “induced” spending, where miners spend their direct pay, together represent the multiplier, or secondary impacts, that circulates money in the local area:</p> <p>“Construction activities are projected to support a total of \$7.4 million indirect and \$3.3 million per year (in 2017 dollars) in induced income within Valley and Adams counties’ economies during the 3-year construction period.”</p> <p>Based on the quote above, the \$17.4 million in direct wages, created \$10.7 million in indirect and induced income. This would then represent a multiplier of 0.6. In other words, for every dollar spent on direct wages, for the construction of the mine, 61.5 cents of “other” dollars are created. While the multiplier for the U.S. may be very high, perhaps as much as an order of magnitude higher or more, the fact is that the local area will receive only a very small fraction of the total spending during the Construction Phase. If we take this one step further and look at the assumed value of all of the minerals that are going to be recovered, which totals into the billions, and all of the local spending (direct, indirect, and induced) on the three phases of the mine, then the local area stands to receive about 8 percent of the value of the minerals that are extracted from the mine. Recall from Table 2 above, that this is quite close to the local spending percentages that are assumed in the DEIS. Put slightly differently, about 92 percent of the wealth that is created at the proposed mine will leave the local area.</p>	SOC	<p>Assumptions around the extent of local hiring and local expenditures are described in Highland Economics 2018 along with sensitivity analyses around these assumptions to address uncertainty.</p> <p>Population trends, housing trends, and the number of second homes in Valley County are described in SDEIS Section 4.21.2.2.</p> <p>The SDEIS does not attempt to describe the incremental wealth of Valley County residents attributable to natural amenities above average non-metro residents in Idaho. Most spills would be expected to occur on the mine site which is removed from residential areas. Because of the proposed monitoring, planning, and control practices for handling of materials, spill effects on scenic resources, water quality, air quality, noise, and traffic are expected to be localized and temporary.</p>
Power Consulting Incorporated		17	<p>In fact, 64 percent of the reported spending in the local area will be based on the direct pay of the miners who are purported to live in the local area. In other words, the vast majority of the spending in the local area will be on the direct pay of the workers at the mine who are modeled to live in the local area. If, as we suspect, most of those workers will not live in the local area, then most of the local area’s direct benefits will also leave. Since a large percentage of the multipliers for the local area are associated with the local workers spending their pay from the mine in the local area, this would then take a large percentage of the “secondary” pay out of the local area. The result is that we believe that assuming 8 percent of the value of the mine’s production being spent in the local area is a very generous view of things. In our estimation, this value is likely to be only a couple of percent of the total value of the mine, at best.</p>	SOC	<p>Assumptions around the extent of local hiring and local expenditures are described in Highland Economics 2018 along with sensitivity analyses around these assumptions.</p> <p>In practice, precise percentages of local hiring and local procurement are difficult to ascertain a priori. Therefore, the assumptions and sensitivity analyses were employed to address this uncertainty.</p> <p>SDEIS Tables 4.21-2 and 4.23-3 describe the predicted local spend on vendors, materials, equipment, and services. Local spend forecasts of approximately \$60 million annually. Purchase of bulk items such as diesel fuel are expected to be sourced from outside the Valley County and Adams County area. The expenditures areas expected to make the most use of local procurement include the provisioning for the worker camp, travel accommodations, phone communications, electrical power, labor services, and road maintenance.</p>
Power Consulting Incorporated		18	<p>While we believe that the local spending that is reported in the DEIS is likely too high, the exercise of calculating it is valuable to show that the local area will receive only a fraction of the wealth that is created. There will undoubtedly be many within Valley County who would be happy to have any amount of local employment and total spending. However, we feel that it is unlikely that Valley County will even see the meager impacts that are projected in the DEIS. The reason that we think this is that the</p>	SOC	<p>Comment noted. No response required.</p> <p>SDEIS Table 4.23-3 describes the predicted local spend on vendors, materials, equipment, and services. Local spend forecasts of approximately \$60 million annually (approximately 25% of total expenditures). Purchase of bulk items such as diesel fuel are expected to be sourced from outside the Valley County and Adams County area. The expenditures areas</p>

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			<p>locals themselves often shop in the greater Boise area. As the McCall 2018 Comprehensive Plan points out:</p> <p>“McCall gradually lost the traditional economic base (logging, milling, and crop-based agriculture) that drove local wealth in the 20th century. The region now imports most of its goods and services from the Boise metro area. It is paying for these imports with money brought in primarily by visitors, retirees, and the Forest Service.”</p> <p>This makes economic sense. There is a large metro area (Boise) that is a little more than two hours away from McCall. While the residents of McCall likely do some of their shopping locally, for example when someone runs out of cream for their coffee, or eggs for breakfast, then the local store is the obvious choice. But given time to plan, many local people will plan to shop in Boise which has a more varied selection and cheaper prices. The same is true of the mine and the operating supplies that it will procure from the local area. It is certainly possible that the proposed mine may purchase some of its supplies in Valley County when they are in a bind, but generally they will plan to purchase them from a vendor that has cheaper supplies and a more varied selection. The other side of this basic argument is that Valley County does not have the ability to supply the proposed mine with many of its needs. Valley County, for example, does not produce mining equipment; nor is it a retail supplier of such equipment. Similarly, Valley County is not likely to be a competitive wholesale diesel supplier at the volumes that the mine will be purchasing. Remember that the ability to circulate money in the local economy is directly related to the local economy’s ability to provide for the needs of the mine and/or mine workers. When those mine needs are very specialized, for example, mining supplies in rather large volumes such as explosives, various chemicals, mining, and chemical engineers, etc., it is easy to see why the multiplier impacts will be low.</p>		<p>expected to make the most use of local procurement include the provisioning for the worker camp, travel accommodations, phone communications, electrical power, labor services, and road maintenance.</p>
Power Consulting Incorporated		19	<p>This is the problem with relying on a model, like IMPLAN, which was used to model the impacts of the mine for the DEIS. The model assumes that because something can be purchased in the local area, that it will be. In practice, we find that it is unlikely that many of the supplies that are assumed to be purchased from the local area, namely Valley County, in the IMPLAN modeling, will be purchased there. Given the large volumes of supplies and the time to plan, the mine will choose to import supplies from the greater Boise metro area, or the U.S., or even the world.</p> <p>Remember that we are discussing the purchase of more than \$260 million in materials, equipment, and services for the construction of the mine.</p>	SOC	<p>SDEIS Table 4.21-2 describes the predicted construction spend on local spend on vendors, materials, equipment, and services. Local spend forecasts of approximately \$62 million annually (approximately 18% of total expenditures). Purchase of bulk items such as diesel fuel are expected to be sourced from outside the Valley County and Adams County area. The expenditures areas expected to make the most use of local procurement include the provisioning for the worker camp, travel accommodations, phone communications, electrical power, labor services, and road maintenance.</p> <p>Of the expected \$260 million expenditure on materials, equipment, and services for Project construction, approximately \$27 million is expected to be spent locally, with the larger share of local expenditure associated with salaries, wages, and vendors.</p>
Power Consulting Incorporated		20	<p>To a large degree, the same can be said about the potential for locals to work at the proposed mine. While some of the mine construction and operation jobs can be filled by locals that have some construction experience, for example, Valley County is unlikely to have many unemployed mining engineers and hard rock geologists sitting around unemployed, waiting to find employment locally. For a host of reasons, including the very low unemployment rate in Valley County, the cost and availability of housing, the work schedule of the proposed mine, and the availability of workers in a County with relatively few residents, it is unlikely that many locals will be hired and unlikely that many of the proposed mine workers will relocate their residence to Valley County. Next, we will discuss why we believe that to be the case.</p>	SOC	<p>Assumptions around the extent of local hiring and local expenditures are described in Highland Economics 2018 along with sensitivity analyses around these assumptions.</p> <p>In practice, precise percentages of local hiring and local procurement are difficult to ascertain a priori. Therefore, the assumptions and sensitivity analyses were employed to address this uncertainty.</p> <p>SDEIS Section 4.21.2.2 compares the number of local hires to local unemployment to assess the local labor pools capacity to fill mine worker demand and the expected in-migration of workers.</p>
Power Consulting Incorporated		21	<p>The boundaries of the physical area that is the economic impact study area is extremely important in determining the results of the study. The DEIS and the subsequent studies that it was based on are no different. If, for example Boise had been included in the “local” area for the DEIS, it would have dramatically skewed the results. The reason for this, as was discussed earlier, is that Boise can capture and circulate far more mine and worker spending than a small rural town in Valley County can. For this study, we have designated Valley County as the “local area”. For the DEIS, it was Valley and Adams Counties²⁰ which is an acceptable alternative.</p>	SOC	<p>Comment noted. No response required.</p>

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			<p>Either of these might be appropriate, although we choose to focus on a narrower geographic area, and the county that would be the site of the mine. What is important is that the socioeconomics are described in a way that the people who will see the impact of the proposed mine, the locals, get a clear view of what may be in store for them. As we have already pointed out, the state of Idaho or the U.S. might well enjoy the benefits of the proposed mine, but they will not have to deal with the potential costs of the mine. Here we choose Valley County because it is where many of the projected impacts will take place. For example, it is the source of most of the DEIS's 100 local people projected to be hired for the mine work and the site of 100 others moving into the local area to work at the proposed mine.</p> <p>"Under the mid-value scenario, SGP [Stibnite Gold Project] operations would provide employment for 470 Idaho residents, of which 200 would live in Valley County or Adams County. As shown in the DEIS Table 4.21-3, it is expected that about 100 of these jobs could be filled by workers relocating to such a local two-county area."</p>		
Power Consulting Incorporated		22	<p>In this scenario there will be 100 local people working at the proposed mine and there will be 100 other mine workers that relocate to the local area. While this is possible, there are some compelling reasons to believe that neither of these scenarios will come to pass. First, when discussing the 100 locals that will work at the mine, which is slightly more plausible than some of the other reasons we will examine next, the unemployment rate is quite low in Valley County. The DEIS they assume that:</p> <p>"It is expected that most of the local construction workers would be adequately qualified and/or trainable for mine operations work and that many construction workers living locally or elsewhere within Idaho would likely accept mine operations jobs."22 While this is a fine idea, the reality is that there are not enough "construction workers" in the local area to accomplish this. Looking at the 5-year American Community Survey (ACS) data from the Census for Valley County, there are 523 construction workers. It is possible that 100 of them will either quit and work at the mine or are already unemployed. However, that will only put upward pressure on the need for construction workers, and it is unlikely given the unemployment rate in Valley County. According to the St. Louis FED, the unemployment rate for Valley County was 3.1 percent in August of 2022.23 Looking at the ACS data for Valley County there were 4,940 workers that worked between 1 and 52 weeks.24 Combining the St. Louis FED and ACS data yields 153 available workers that are unemployed for the whole of Valley County. It is unlikely that all the unemployed people in Valley County are construction workers and is instead much more likely that somewhere around 16 of those 523 construction workers are unemployed, given the 3.1 percent unemployment rate. It seems unlikely to us that two-thirds of the unemployed people in Valley County will be qualified to work in the proposed mine. There is, of course, the possibility that the construction workers in Valley County will go to work for the mine in place of the jobs that they already have. If this happens then there will be a ripple effect through the construction industry as it will be harder to get people to do the construction jobs that they previously had been doing. All of us are now familiar with the different shortages of workers and supplies that is a result of the global Covid pandemic. This would only add to the current construction delays that are plaguing the U.S. and Valley County.</p>	SOC	<p>SDEIS Section 4.21.2.2 describes the Project effects on worker availability and the effects on hiring replacement workers.</p> <p>The assumptions regarding local hiring incorporate local employment and unemployment rates including the information that approximately 400 workers who reside in Valley and Adams counties commute outside the area for their employment.</p>
Power Consulting Incorporated		23	<p>What is far more likely, is that the mine workers will simply come from outside of Valley County. The reason that we believe this, aside from the lack of available workers that we already discussed, is the work schedule of the mine. The mine will house people on site and will have them working two weeks on and then two weeks off. The mine will also be providing a shuttle service that runs from the Boise area which is a little more than a two-hour drive from McCall:</p> <p>"...non-local communities closer to Boise would offer greater housing options, amenities, and public services options within a relatively close travel distance (i.e., less than 2 hours) from the proposed employee bus/van pool pick-up locations in Cascade, McCall, and Donnelly (Highland Economics 2018)."</p> <p>Given that the mine workers will be commuting back from the mine every two weeks already, an extra two hours, or so, past the small-town pick-up locations does not seem like a terrible burden. It is, in fact,</p>	SOC	<p>SDEIS Section 4.21.2.2 describes the Project effects on housing and identified potentially adverse effects on housing availability and affordability.</p> <p>The analysis in the SDEIS no longer includes the potential for former Valley County residents to relocate back to Valley County that was described in the DEIS. Other factors that could reduce demand for housing a mentioned, but the housing demand estimates are based on an estimate of in-migration associated with mine employment.</p> <p>The analysis does include reported housing occupancy rates and the number of unoccupied second homes in the area. Wages for mine workers would enable those employees to compete for rental housing.</p>

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			<p>very likely that many of the mine workers will travel back to an airport like Boise and fly home to their residence somewhere other than Boise.</p> <p>A complicating factor in all of this is that even if the local area was able to provide the workers for the mine, the 100 in-migrants that are projected to work at the mine will have a hard time finding housing. That is because Valley County does not have a lot of idle houses that are available to rent and or purchase. At first glance it may seem that this is not the case since the ACS data indicates that there are far more vacant houses than occupied houses in Valley County. In fact, that data says that there are 8,621 vacant houses and only 3,920 occupied houses indicating that about 69 percent of all the housing in Valley County are vacant. However, if one travels to Valley County, you will notice that those vacant houses are second homes or vacation homes to which people from the surrounding area are very attached. That same ACS data shows that there were 91 houses for rent and 68 houses that were for sale. Again, it is possible that the 100 proposed in-migrants will purchase all 68 houses available and then rent 35 percent of the available houses, but this seems unlikely. Given that the median home value in Valley County in 2020, expressed in 2021 dollars, according to the ACS was more than \$321,000,27 which is about 34 percent more than the U.S. as a whole and about 14 percent more than Boise, it seems like a pricey option for potential miners to choose Valley County over Boise or the U.S. as a whole. In the DEIS, a rather fun idea is presented to get around the lack of available housing in Valley County. The idea is that it may be possible that the new in-migrant mine workers will be former residents of Valley County and that they will simply go back to living where they did in Valley County before! However, we find this suggestion speculative and unconvincing.</p> <p>“Some in-migrants may be former local residents who may reside with current residents when they return.”</p> <p>And... “Coupled with an increased prevalence of multi-generational households, a sizeable number of the in-migrating population may take up residence with friends or relatives that are existing residents and thereby have a lesser impact on local housing demand (Highland Economics 2018).”</p> <p>What we find convincing is that the people that work at the proposed mine will choose to live outside of Valley County. If they do choose to live in Valley County, then the residents of Valley County will see the available houses for sale go to near zero and the price of housing and rent increase. That has the potential to make Valley County an even less affordable place to live.</p> <p>Remember from Table 1 above that the number one industry in Valley County is “accommodations and Food Services.” The problem with this is that this industry is also one of the lowest paid industries in Valley County. This necessarily means that increases in the price to rent or buy a home in Valley County will impact Valley County’s largest group of workers the most.</p> <p>Because there is a lack of available workers, because of the working shifts at the mine provide ample time off to travel back to wherever your home might be, and because there is not very much available housing and that housing that is available is expensive, it is unlikely that Valley County will be the residence of the mine workers. The Special Economic Report that was produced as part of the Supplemental DEIS process also points out that the house rental market in Valley County is becoming less affordable:</p> <p>“Conversely, median rental rates increased in Valley County by 4.5 percent (\$727 in 2010 to \$760 in 2018) ... Between 2010 and 2018, the percentage of Valley County households paying more than 30 percent of their household income on rent grew from 33.5 percent to 59.1 percent (Census 2010, 2018b). This increase indicates that the local rental market is becoming less affordable”</p>		
Power Consulting Incorporated		24	<p>Often, when a mine is sited in a rural area, the communities around the mine are encouraged by the mining company to think about all the desirable things that the local communities could do with the new tax revenue that would flow to local governments from the mines. The picture that is often painted is of local municipalities with coffers that suddenly overflow with tax revenue from the new mine. However, depending on the way that the taxes are structured, it may be very important to see how the taxes are allocated to other beneficiaries even if they are collected by the local governments. There are some</p>	SOC	<p>SDEIS Section 4.21.2.2 describes the distribution of tax revenues between local and state government. In addition to the property taxes paid directly to local counties, the Idaho tax commission returns portions of the sales tax and other taxes to counties and cities plus other funding allocated for county and city road departments. The percentage of sales tax revenues</p>

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			<p>taxes, for example, a general sales tax and its redistribution in Idaho, that is distributed to communities largely based on population. This is important to understand because although there may be an increase in the collection of a sales tax, the distribution of that sales tax may not be representative of a change in the physical place where it is collected. Boise, for example, will see a far larger benefit from a mine buying supplies in Valley County, with respect to the sales tax, than those in Valley County. Valley County should also think about the potential increase in the demand for services that it might see directly or indirectly. While it can be very lucrative, for example, for a rural county to have a new metal mine, there may be a series of costs that come with the mine and its impacts. For example, what will be the impact on the roads, the schools, the EMS services, etc.? It would be important to be able to weigh the cost of the new mine in terms of the services local governments would have to provide to them. Directly or indirectly the mine would impose costs on the County, that the County would have to be able to pay for out of the new revenue that the County stands to gain from the mine. In this case, for Valley County, there appear to be no local fiscal benefits from the construction phase of the mine at all. All of the projected taxes are state or federal.</p> <p>For the operations phase of the proposed mine there is \$300,000 annually paid in property taxes which will go to the local government, but all the other taxes are state and federal taxes. These cold facts are summed up in the DEIS:</p> <p>“As a result, Alternative 1 construction activities are expected to result in negligible tax revenue benefits for the local area’s economy.”</p> <p>With respect to the \$300,000 in property tax that is paid annually by the proposed mine during the operations phase, we must remember that there is a cost that the mine is imposing on the local area. There is likely to be an increase in use of Emergency Medical Services (EMS), roads, schools, etc. The important question is then if the property taxes that are paid by the mine will offset the costs that the mine imposes on the local area. This point is made in the DEIS, but not explored.</p>		<p>shared utilize a population-based calculation. The Idaho tax commission provides details on tax revenue sharing with counties and cities quarterly via its website (tax.idaho.gov).</p> <p>Because of the sales tax sharing and transportation funding, the annual property taxes paid to the county are just one component of funding available to address effects on roads, infrastructure, and public services.</p>
Power Consulting Incorporated		25	<p>The reason that we looked a little deeper into the school issue as it relates to the additional cost of in-migrating miners, is to show how little of the costs have been quantified in the DEIS or by Perpetua Resources. We have already shown that the additional property taxes will not cover the cost of the additional students enrolled in school. This does not address all the other costs that Valley County will incur if hundreds of new miners move in. For example, it does not cover the cost of the damage that will be done to the roads in Valley County as all the heavy mining equipment and supplies for the mine pass through. The state of North Carolina looked at all the highway cost allocation studies that they could find and summarized them in their own cost allocation and revenue attribution study, and found that, in all of the State sponsored studies that they could find, heavy trucks, like the ones that will move equipment and supplied through Valley County, going to and from the potential mine, underpaid their incremental costs significantly.⁴⁴ The studies specifically noted that the heavier the vehicle, the more they underpaid. In Oregon, the underpayment was as much as 66.87 percent, in Nevada it was 73 percent, in Texas it was 35-49 percent, and in Idaho it was 27-33 percent. In every state study that was presented, the heavier the haul truck, the more they underpaid for the damage that they did to the roads. The corollary is obvious here, but we will lay it out to be crystal clear: The state of Idaho and Valley County will incur road damage from Stibnite bringing in the things that the mine needs to operate and the concentrate that the mine ships back out. The fees that the mine will pay will not cover the cost of those damages. This does not consider the potential for increased traffic accidents with large trucks, increased congestion in Valley County, or the nuisance of having thousands of large trucks constantly travelling through Valley County. It will also not cover the nuisance in the back country that is the attraction that the visitors and local recreationalists seek. These are some of the costs associated with the proposed mine that should have been discussed and quantified in the DEIS. There will undoubtedly be additional costs to the police, the fire department, the hospitals, the sewers, the roads, the telecommunications, etc.:</p>	SOC	<p>As described in Section 4.16.2.2, there would be a Road Maintenance Agreement with Valley County to address effects of mine traffic on county roads. This agreement involves mine operator assumption of road maintenance obligations to meet Valley County standards.</p> <p>Effects of the Project on public services are described in Section 4.21.2.2. These include the 127 children of in-migrating mine employees and indirect and induced employees. Perpetua has developed assistance programs to offset effects of in-migration on public services.</p>
Power Consulting Incorporated		26	<p>There are other potential costs associated with the siting of large industrial facilities in a “small town, rural area,” other than the potential overuse of public and private infrastructure that then requires higher regular repair and maintenance costs and, possibly earlier replacement. Just as population growth could lead to the demand for housing to rise faster than housing supply, driving housing costs up, raising the</p>	SOC	<p>Comment noted. No response required.</p>

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			<p>local cost of living, something similar can happen when a large increase in the demand for workers is created by a large new industrial development.</p> <p>The projected gross wage that Perpetua expects that it will be paying its Stibnite Mine work force will be about \$91,000 per year. This is far in excess of the prevailing wage in Valley County, even the prevailing wage for mining jobs in Valley County. The SDEIS reports on the average wages by industry in Valley County using the Idaho Department of Labor data. The average wage across 12 different industries in Valley County was about \$36,000 per employee. The average wage in Mining was about \$80,000, over twice as much.</p> <p>Perpetua will be seeking its workforce for the proposed mine from local, as well as regional, and national, labor markets. This will, in effect, set up a competition for skilled workers within Valley County and the surrounding labor markets within commuting distance of the mine. Both government agencies and private businesses will find that some of their more capable employees will be attracted by the much higher wages that Perpetua will be offering potential employees. To retain their current work team, government agencies and private businesses will have to pay higher wages or accept less productive employees. This will increase the operating costs of organizations or reduce their productivity. For local government organizations that are already likely to be stressed by the increased usage of the infrastructure for which they are responsible, this will be a double cost burden.</p> <p>Labor cost increases could adversely affect the capacity for public agencies that rely on lower paid, skilled workers for their operations (i.e., school bus drivers, garbage haulers, etc.) to continue providing their services. In addition to increasing their operating costs, in more serious cases, the labor shortages could result in business contractions and reduced public services if their work positions remain unstaffed. Contraction also could occur for private businesses relying on lower-wage or competing wage workers.</p> <p>The DEIS and the socio-economic report that much of Section 4 of the DEIS is based on, clearly believe that the miners will move to the local area. What we are attempting to do here is to say that we do not find much evidence to support this, but if it happens, the costs, which are largely unreported, will be far larger than the benefits, which have been reported by Perpetua and the Stibnite DEIS. While we will not attempt to explicitly quantify the costs of having the miners move to Valley County, we will continue to lay out some of the social costs associated with having them in Valley County. We feel that this is important so that the local people of Valley County know exactly what is being proposed for their communities.</p>		<p>SDEIS Section 4.21.2.2 describes the wage competition associated with higher paying mine positions. The analysis describes potential impacts on hiring replacement workers, but the increased wage rates have a potential positive effect on overall income within the County.</p>
Power Consulting Incorporated		27	<p>While some of the impacts of the potential miners living in the local area are possible to quantify, many are not. For example, if we knew how many of the miners were moving to the local area, and if we knew how many of them had kids of school age, then we could quantify the cost of having the additional children in the schools in Valley County. This potential cost to Valley County was noted, but not quantified in the DEIS. As quoted above:</p> <p>“Furthermore, if the in-migrating student population consists of more similarly aged children, then the increase for their corresponding grades would be higher and more likely to be difficult for the local school systems to accommodate. If this occurs, the adverse impact on the public school system could be very substantial if the current programs and facilities have insufficient capacity to absorb that additional student enrollment.”</p> <p>What is more difficult to quantify is the impact that the mine may have on the social fabric of Valley County. The proposed mine represents something of an anomaly for the local area. The miners will be living at the mine site for 2 weeks at a time in what are often referred to as a “man camp”. When the workers two weeks of work are up, they will be bussed back through the local area, and, if you accept the numbers in the DEIS, hundreds of them will live in the local area.</p> <p>While we believe that most of them will live either in the greater Boise area or elsewhere in the U.S., it is instructive to look at some of the social issues associated with miners living in local communities.</p>	SOC	<p>The Forest Service analysis does not engage in speculation around people that seek employment in the mining industry nor attempts to disparage them based on their choice of employment.</p> <p>The SDEIS discusses potential changes in demand on public services and housing associated with the potential in-migrant or transient workforces (Section 4.21.2.2). The SDEIS does not attempt to evaluate the desirability or compatibility of cultural values and social aspects of an in-migrating workforce in comparison to the cultural and social aspects of existing resident populations.</p> <p>SDEIS Section 4.21.2.2 describes the expected in-migration of 190 workers with an equivalent number expected to commute from other areas. The SDEIS examines the potential effects of children of 190 in-migrating workers on school enrollments.</p>

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			<p>With a well-paid, predominantly young, male workforce, with weeks at a time off work, there are some social problems that can be expected to accompany this type of industrial development. If we assume that two hundred mine workers take up residence in Valley County, they will be outsiders by virtue of their odd schedule, even before they may or may not engage in some of the other social maladies are considered in the text below. Working away from your community, and for some workers, their family, for two weeks, and then not working and living in the community for two weeks, is not a schedule that most people would want to keep. Adding in a higher-than-average pay, a predominately young male demographic, and a culture that is created in a remote camp for weeks at a time, necessarily separates the workers from the other people that call Valley County home. In fact, there are other places that have dealt with this for some time that we can look to and see how they fared with similar mining work, demographics of workers, and similar work schedules. Places like the Bakken in North Dakota and Montana and remote mining locations in Canada and Australia provide a “natural experiment” to study the impact of this type of transient workforce. There are many important social issues associated with mining in rural areas that have significant impacts on the well-being of residents and communities, and workers, e.g., increases in alcohol and drug consumption, increased pressure on local law enforcement, increased incidence of sexual and aggravated physical assaults, increased presence of convicted felons, etc. These impacts will not show up in the typical commercial statistics on jobs and income that are typically used to document the benefits of expanded mineral extraction, but these social changes can have substantial impacts on resident well-being. These impacts can be felt as workers move to the local area to work for the mine, but they can also be felt when the mine shuts down, as pointed out in the Social and Economic Conditions Specialist Report from the Forest Service that was part of the SDEIS.</p>		
Power Consulting Incorporated		28	<p>“However, as discussed above, in the absence of interim measures, there would be potential for substantial “bust” impacts following the cessation of the SGP’s mining operations from the subsequent local job and income losses. If there are insufficient replacement job opportunities for the local residents no longer employed (directly or indirectly), then the local area economy would experience increased unemployment and reduced economic activity. Depending on the severity and duration of the economic dislocation and recovery, many of the local residents formerly employed (direct or indirectly) by the SGP’s mining operations may choose to relocate out of the local area to find employment.”</p> <p>An increased population requires the police and other social services providers to do more work. While this is likely happening already in Valley County, as the population has been expanding rapidly for at least the last 30 years, it is likely that a new population of miners in Valley County might put a larger strain on EMS than the in-migrants of the last 30 years.</p> <p>Archbold studied this in “Policing the Patch”, where “the Patch” referred to the Bakken “oil patch” on the North Dakota-Montana border. In that study Archbold reported that 80 percent of the police officers interviewed said the oil boom had affected their work. While the impacts were many and varied, the most basic impact was that the officers were called out for service significantly more than they had been before the oil boom in the Bakken. In fact, “...Four out of the eight police agencies included in this study have had triple the number of calls for service since 2008. One agency had double the number of calls for service...” Police get called out on all sorts of service calls, but the basic fact that the Bakken area had 2-3 times the service calls to the police during the oil boom points to something in the community dramatically changing.</p> <p>Whatever changed, it was serious enough that residents asked the police for assistance much more often than they previously had. That there was an increase in violent crime in the Bakken mirrors directly the experience in the Marcellus Shale region of Pennsylvania which saw a 30 percent increase in violent crime as the unconventional gas boom developed there. The same sort of story is told in Australia where mining towns in Queensland experienced rates of violence to which police responded increased between 1.4 and 2.3 times the state average at the five different mining communities studied. While no two communities are identical, the added presence of a significant number of new mine workers is likely to increase the service calls to the police and other public social services, and there will likely be a rise in the number of assault cases.</p>	SOC	<p>The Forest Service analysis does not engage in speculation around people that seek employment in the mining industry nor attempts to disparage them based on their choice of employment.</p> <p>SDEIS Section 4.21.2.2 describes the expected in-migration of 190 workers with an equivalent number expected to commute from other areas. The SDEIS examines the potential effects of 190 in-migrating workers and their dependents on police and public services.</p>

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			<p>Much of the literature on mining camps and mining town maladies attempts to draw a correlation between community dependence on mining and alcohol and other drug use and abuse. In the Northwest Territories of Canada, which have seen a large increase in mining in the last decade, Gibson has quoted the Royal Canadian Mounted Police (the RCMP): “The RCMP estimates that 80% of crime is directly or indirectly related to alcohol or drug abuse.” In the United States, in fact, mining has had the top billing as the drunkest industry. According to Bush:</p> <p>“Workers in the mining (17.5 percent) and construction (16.5 percent) industries had the highest rates of past month heavy alcohol use.”</p> <p>This was the second time in a row that mining had topped this list of industries by level of alcohol use. While we might be tempted to think that this was just a U.S. problem, studies focused on mining-impacted communities around the world show that heavy alcohol use is a common problem no matter where the mining town is located.</p> <p>The influx of strangers into areas experiencing a mining boom may undermine existing community’s social controls on resident behavior and create an environment attractive to those with a history of criminal behavior. One study of energy development in the Greater Yellowstone region found that the number of Registered Sex Offenders grew about 2-3 times faster in counties dependent on oil and gas extraction relative to those dependent on recreation or agriculture.</p> <p>One should not be shocked by these findings. A large group of relatively young, single, transient, males, generally unburdened by families, who work long and demanding hours out of sync with the local standard work week, who have a large amount of money to spend and long blocks of idle time, are not likely to make good neighbors without significant public planning and provision of support services. While the miners’ barracks or man- camps may indeed be “dry” in the sense that alcohol is banned on mining company property and the mining company may have very stringent rules about what the miners can and cannot do when on company property, the same rules cannot, and likely should not, be applied to towns in the vicinity of the mine when the miners are on their own time pursuing their private interests. Many of the cultural dislocations that they acutely experience are felt throughout mining towns all around the world. Parkins recognized those experiences in his paper on social structure, fragmentation, and substance abuse in resource-based communities: “Specifically, the linkages between social structure, community fragmentation, and family dysfunction offer a way of understanding differential resistance and susceptibility to substance abuse. Five thematic areas were linked to susceptibility in this study: (1) an economy based on multiple divergent sectors, which gives rise to income disparity and social inequality; (2) a highly transient population, which results in social distancing and lack of social support; (3) shift work, which prevents opportunities for consistent and productive family and community relationships; (4) high incomes, which lead to material competition and financial stress; and (5) a culture of entitlement, which produces certain expectations and perceived privileges among some workers and their families.”</p> <p>These “thematic” areas are exactly those that must be carefully considered when evaluating the social impacts of mining. It is the combination of these social impacts that leads a mining town, or a man camp, or the local area around a mine to become separated from the mine workers and leads to social dysfunction. A separate culture is created by the mine that, because of its structure, work scheduling, its pay, and the diverse cultures of its workforce, may not fit well with the existing residents of the towns and cities that are closest to the mine. The results are the specific social maladies discussed above. In this report we are not attempting to say that if the Stibnite mine is developed, then Valley County will be overrun by menacing mine workers. We are trying to point out that there will likely be an increased need for many of the services that Valley County provides. These services include emergency medical services, the police, and various social services that should all come together and plan to help mitigate some of the social maladies that are associated with mining which we discussed above. There will be increased time, money, and energy that needs to be spent in Valley County to accommodate the rather unique workforce that could be the Stibnite mine.</p>		

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Power Consulting Incorporated		29	For several decades economists and economic development analysts have puzzled over the fact that among rural American counties, where slow economic growth and loss of population have usually been the rule, there have been a significant number of rural counties showing considerable local economic vitality in the form of population growth tied to net in-migration. Often that population gain has taken place despite the decline in the fortunes of the land-based economic activities that historically dominated the local rural economy: mining, agriculture, forest products, fishing, etc. ⁶⁰ Clearly, people, voting with their feet, were indicating a more positive evaluation of the economic potential of some of these rural counties that were attracting in-migrants, often to some of the poorest areas of the nation.	SOC	Comment noted. No response required.
Power Consulting Incorporated		30	The underlying economic logic behind the reality of “amenity-driven” or “amenity supported” local economic vitality may look more familiar if we briefly talk about residential real estate markets. Some aspects of the value of residential property can be easily quantified: the square feet of floor area, the size of the lot, the age of the home, the number of bathrooms and bedrooms. It is not that these quantitative measures can be combined to determine exactly what purchasers would be willing to pay for the residence or what sellers would accept as a reasonable price, but this information is somewhat correlated with the likely market price of a residential property.	SOC	Comment noted. No response required.
Power Consulting Incorporated		31	<p>Most of the discussion above has focused on the environmental or recreational values associated with locations in and around Valley County and how recognizing those amenities helps us explain some land use patterns and outcomes. Recognition of the existence of these environmental values also warns us that if we are not careful about how we manage special landscapes, we may degrade significant existing amenities of considerable value, i.e. we can degrade an amenity, potentially leaving a dis-amenity behind that leaves many people worse off. We can burden ourselves and others with losses, leaving them worse off because they have lost something of value to them and/or have had to take costly steps to shield themselves from that loss.</p> <p>Of course, the same economic tools that can be used to estimate the value of the amenities at a particular location can be used to measure the cost of a dis-amenity created by degrading existing environmental qualities. In fact, those economic tools often have been used to calculate the damage done by the creation of noxious sites at particular locations, e.g. the locating of polluting activities such as coal-fired electric generators, the building of radioactive waste processing facilities, the locating of large regional waste disposal facilities. The noise associated with many contemporary economic activities: The hum associated with operating large numbers of electronic servers; the noise associated with regional airports and congested trucking routes; noxious odors associated with the ponds of animal waste created at “factory farming” sites or urban sewage treatment and disposal facilities. Etc.</p> <p>Metal mining has the potential to convert what are now amenities, namely world class natural landscapes of mountains, forests, streams and rivers, and the wildlife that inhabits them, into dis-amenities. Existing valuable benefits may be converted into their opposites: waste lands that may deteriorate indefinitely into the future.</p>	SOC	The existing condition of the Project site is an unreclaimed, historical mining operation that does not represent an amenity as described in the comment.
Power Consulting Incorporated		32	Mining, mineral processing, and transportation of potential noxious or toxic material can degrade environmental quality from the mine to the concentrators to the huge waste tailings storage facilities that often permanently damage ground water and present the risk of catastrophic failure of the dams holding back huge amounts of toxic liquified waste to the local population. It is important to keep in mind that the proposed Stibnite Gold Project would site a large industrial chemical project in the head waters of one of the most important recreational rivers in the Inland West, namely, the Salmon River. The Stibnite Mine is located on the East Fork of the South Fork of the Salmon River. The Salmon River would become the mine’s waste disposal facility. In one important sense, the proposed Stibnite Project represents a gamble that puts at risk a known and existing recreational economy that is supporting economic vitality in Valley County. What is being offered in its stead is a speculative but threatening open pit mining venture that, if it is commercially successful, will bring only a relatively small and short-run “bump” in additional economic activity in Valley County.	SOC	<p>SDEIS Section 4.2.2.2 describes the risks associated with the TSF facility.</p> <p>Because the Project involves removal of historical mining wastes, water quality in tributaries to the Salmon River is expected to improve or remain the same compared to existing conditions (see SDEIS Section 4.9.2.2). Therefore, there is no water quality effect from mine wastes expected on recreational activity (see SDEIS Section 4.19.2.2).</p>

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Power Consulting Incorporated		33	<p>When a mine or other types of industrial facilities are proposed near where people live, the people that live in the area, as well as the people that know about the new facility and the area, whether they live there or simply travel there, may change the way that they think about that area. To help understand how this might play out, we present two scenarios to help illuminate how people might think differently about an area after an industrial facility or mine is sited nearby. In one scenario, there is a mine that is sited right on the boundary of a National Park, directly adjacent to a river that flows into the park. In the second scenario, there is an industrial facility that is sited right next to multiple other industrial facilities in a manufacturing hub in the upper mid-west of the U.S. In the first scenario, it is likely that there would be some sort of public outcry. This would likely happen because if the mine is permitted and begins operating, people’s view of the National Park and the nearby towns might change to some degree. It is likely that people would not see the National Park, the river that flows into it, and the nearby towns as environmentally pristine as they did before. In the second scenario, there might not be much of a mindset shift because the area in which the industrial facility was sited already had been thought of as polluted and dirty. However, in both scenarios the facilities would be thought of as having a “stigma” attached to them associated with the environmental degradation assumed to be associated with a particular industry located there.</p>	SOC	<p>The SDEIS describes social conditions of Valley County residents in Section 3.21.4.4.</p> <p>Project effects on local characteristics are influenced by the fact that the current condition of the site is an unreclaimed historical mining operation. Resumption of operations would result in a continuation of mining activity rather than initiation of a new operation.</p> <p>The SDEIS describes Project effects on air quality (Section 4.3.2.2), water quality (Section 4.9.2.2), noise (Section 4.6.2.2), and traffic (Section 4.16.2.2). The air quality, water quality, and noise effects are more than 10 miles from residential areas.</p> <p>SDEIS Section 4.21.2.2 describes the employment and income effects of the Project which are expected to be moderate to major for the area.</p> <p>Because the Project is located away from residential areas in an existing mining district, it is not expected to directly affect the characteristics of neighborhoods. The presence of resumed mine operation has the potential to affect sense of place; however, the SDEIS does not attempt to analyze the impacts of individuals simply knowing about resumed operations.</p>
Power Consulting Incorporated		34	<p>The phenomenon of stigma is something that economists have been studying for some time. In fact, there is a relevant economic literature dealing with how the stigma associated with a place might affect economic decisions. The stigma that this literature analyzes was created by concerns about an environmental pollutant or a source that taints people’s perception of the attractiveness of an area. This could be a landfill, a coal mine, a metal mine, an industrial facility, a polluted river, etc. For example, a place that would otherwise be considered desirable to live in, to move to, to vacation or recreate at, has a stigma associated with the environmental degradation from an industrial facility nearby that discourages people from going there. This literature has paid special attention to what is called the “new West” as much of the western U.S. has transitioned from resource-based economies to service-based economies. With that transition, many former mining towns, like Park City, UT. for example, have been able to erase and/or mitigate their stigma to become high-amenity destinations. Colocousis succinctly described stigma in this way:</p> <p>“However, scholars have more recently documented the relationship between negative external perceptions of poor communities and their inability to attract new investment, a dynamic in which community stigma functions as a sort of “Achilles heel” in attempts at redevelopment (e.g., Erickson et al., 2008; Sampson and Raudenbush, 2005)...The processes through which certain places become stigmatized on the basis of perceived environmental risks and are therefore viewed as undesirable have also become a focus of study in recent years.”</p> <p>What Colocousis found was that even in high amenity areas, areas that were situated near intact forests, mountains, or near rivers that people would otherwise want to visit or live near, in-migration, tourism, and redevelopment were not evenly distributed. Skouloudis links a “place-identity” to local areas that can be impacted by high-risk industrial facilities. This is an argument that almost everyone will readily recognize. When we think of the areas that we would like to visit, or have visited, that are high-amenity locations, we attach a place-identity to them when we think of them as in the National Park example above. McCall, ID., for example, is another location that is associated with pristine high-mountain lakes that are surrounded by mountains and forests. The identity to McCall is inseparable from that of a high-quality mountainous lake environment. This desirable mountainous area is presumably the reason that, as we pointed out earlier in this report, almost 70 percent of the homes in Valley County are second homes of people who spend their free time in the area. This attachment of place and identity is why, when an industrial facility is sited in one of these high-amenity areas, the potential for a negative impact on that area could be considered.</p> <p>“Wester-Herber’s review paper (2004) points out the need to include local attachment to a specific geographical place in the debate on industrial risks and delineates how aspects of place-identity can be negatively affected when changes are made to a landscape by the introduction of high-risk industrial ventures.” In the most recent Supplemental Draft Environmental Impact Statement that was released in</p>	SOC	<p>The existing condition of the Project site is an unreclaimed, historical mining operation. As such, it is not a high-amenity location as described in the comment and redevelopment of the mine site would not result in a new stigma for the area.</p> <p>Historical mine wastes that are currently in contact with the environment would be removed as part of the proposed mining activities which would place mine wastes in engineered containments that inhibit interaction between the mine wastes and the environment.</p>

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			<p>October of 2022, there was a Social and Economic Conditions Specialist Report that pointed out the same attachment that is described in the economic literature. Instead of a “place identity” that we just described, they call it a “sense of place.”</p> <p>“The central Idaho region provides residents and visitors a natural and rural setting with a remote character, outdoor recreation opportunities, natural beauty, and scenic quality of public lands. Many area residents value these characteristics. The “sense of place” experienced and valued by central Idaho communities is based on the region’s remote and rural setting, natural and undeveloped landscape, along with topography and vegetation, and the presence of cultural and traditional uses (e.g., open rangelands). “Sense of place,” can be described as an unquantifiable value that attracts people to specific locations, generates a community identity, and ultimately contributes to the overall quality of life for residents (Williams 2014).”</p> <p>The quote above is exactly in keeping with our analysis. It is a connection with the land that the local people feel. They are drawn to the area because the lands are “prized for their remoteness and natural beauty. In recent years, both counties have attracted new residents including recreationists and retirees looking for small towns, natural beauty, and wide-open areas and landscapes.” Again, this is exactly what our report is attempting to point out. The extra step that we are taking now, that is not taken in the Special Report nor in the DEIS/SDEIS, is that there is a very real potential that the proposed mine will impact the character of Valley County and make it a less attractive place to live.</p> <p>What this stigma literature makes clear is that even if we are focused on a high-quality amenity area like Valley County, it can be negatively impacted by the possibility of a new high-risk industrial source, like the proposed Stibnite mine. Even though a particular town might be in a high-amenity area, if it had a source of known industrial pollution nearby, or the potential for a new source of industrial pollution, its growth might not be the same as the county or regional growth. For example, in rural Coos County, NH., and the City of Berlin, NH. that were studied by Colocousis, the “tourism sector is the second largest in the state and account for a fifth of Coos County’s economy, but only 4% of the city’s.” In other words, in the County that was known for tourism (Coos), that was specifically related to high amenity outdoor experiences, the town that had these same amenities but had been stigmatized by their past industrial pollution, there was a drop of 16 percent between the tourism that the County received (20 percent of their total economy) and the 4 percent that the stigmatized City received. Or put another way, tourism represented 5 times as large a place in the County’s economy as it did in the City’s. In fact, this City has taken to encouraging motorized recreation, which is more resource intensive and has a much larger impact on the local land, as opposed to Coos County, which has in general adopted lower-impact recreational activities like mountain biking, hiking, and less resource-intensive activities. In this case, the stigma associated with the industrial pollution has dramatically altered a small town’s ability to capture tourism dollars and has forced them to embrace a much more resource-intensive section of the tourism economy that is not faring as well. The city, and the surrounding area, are perceived as being polluted and so it has, as a strategy to deal with its stigma, catered to a type of outdoor recreation that perpetuates that perception with real negative economic consequences.</p>		
Power Consulting Incorporated		35	<p>The proposed Stibnite mine is in a remote location in Valley County. Regardless of which one of the different alternatives is being considered, the supplies that the mine needs to operate will have to be sourced from far away. A few of the supplies will come from Valley County, but the vast majority, as we have carefully laid out in the preceding sections, will come from outside of Valley County, and many from outside of Idaho. Because the Stibnite DEIS was so vague about the potential for a spill while transporting supplies to the proposed mine, the Idaho Conservation League and Advocates for the West hired Susan Lubetkin to review the Stibnite DEIS in 2020. The result of that review is a rather sobering take on the potential for a spill along the transportation corridor to the mine.</p> <p>“More than 30 different hazardous materials will be brought to and from the mine site if the SGP is approved. Those hazardous materials include fuels, explosives, acids, and toxic materials, but the dangers posed by the reagents are not discussed. Under Alternatives 1, 3, and 4, more than 7.7 million gallons of bulk liquid hazardous materials in at least 1,100 truckloads, as well as more than 143,000 tons of bulk solid hazardous materials in at least 5,300 truckloads, will be transported along the roadways</p>	SOC	<p>SDEIS Table 4.7-1 lists the hazardous materials and usage amounts associated with the 2021 MMP.</p> <p>Section 4.7.2.2 describes the analysis of the likelihood and consequences for spills, with effects on water quality described in Section 4.9.2.2 and aquatic resources in Section 4.12.2.2.</p> <p>The spill likelihood and consequence analysis in Section 4.7.2.2 includes the design features, risk management plans, and emergency response plan in its assessment that spills on the mine site would be more frequent than spills along access roads but would have localized consequences until remediated. Spills along access roads with the potential to release hazardous materials to the environment would have low frequency but would have greater consequences necessitating the emergency response planning and equipment placements for spill containment and countermeasures.</p>

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			<p>every year. Under Alternative 2, more than 9.2 million gallons of bulk liquid hazardous materials in at least 1,300 truckloads and more than 95,000 tons of bulk solid hazardous materials in at least 3,300 truckloads will be moved along the transportation corridor annually. Although the SGP DEIS promises that there will be a pilot vehicle to accompany bulk liquid transport, only 522 pilot cars per year are shown in traffic impact studies. Spills from SPCC facilities may be twice as likely as spills from vehicles, but the SGP DEIS did not discuss the possibility of spills from storage facilities.”</p> <p>While we will get into the possibility, that is mentioned at the end of the quote above, of a spill from a Tailings Storage Facility, here we are focused on the transportation of materials. As the quote above alludes to, and we have spent some time discussing, most of the material for the mine will be sourced outside of Valley County. The result is that the mine materials, many of them hazardous, will have to come from far away and be brought through Valley County to the proposed mine site.</p> <p>“I was able to find potential distributor locations nearest to Cascade, Idaho for 21 supplies that would be used at SGP. Only five supplies (propane, gasoline, nitric acid, sulfuric acid, and hydrogen peroxide) were available within 100 miles of Cascade, Idaho. Diesel fuel was available inside a 250-mile radius. The remaining reagents I was able to find distributors for were only available from cities that were up 500 or 1,000 miles away.”</p> <p>The problem with sourcing the mining supplies from far away is, of course, that they need to travel a much longer distance before they reach the mine. The way that the potential for a spill is calculated is based on the mileage that the material will have to travel as well as the type of road and the conditions of the road that the truck that is hauling the supplies must travel on. The farther away, or the rougher the road, the more potential there is for a spill. Since many of the supplies must travel a great distance and there is a lot of dirt road that needs to be traveled to get the supplies to the proposed mine, this increases the chance that there will be a spill.</p> <p>Because there are often rivers and bodies of water in this portion of Idaho, there is also an increased potential that if there is a spill, it will impact a body of water. After considering more appropriate and recognized spill rates, considering the condition of the roads, and considering more than just the SH-55 to mine portion of the haul routes, Lubetkin found that:</p> <p>“Overall, spills and crashes involving heavy vehicles are near certain to occur for all Alternatives. The calculations shown here serve as an example of the general process for estimating spill and crash numbers and likely underestimate the risks. Still, these numbers indicate that the impacts that spills and accidents may have on the environment and human safety along the transportation corridor should be seriously and thoroughly considered.</p> <p>The SGP DEIS’s rudimentary attempt at quantitatively estimating the risk of hazardous materials spills was constrained to a limited analysis area and a single source (trucks) of potential spills. This narrow consideration of the possible impacts of the transportation corridor and hazardous materials misses other effects. Transportation impacts extend beyond the risk of spills. Mine-related spills of hazardous materials can come from many processes besides transportation. The conclusions in the DEIS that spills along the roadway will have limited if any impacts on fish and the aquatic environment are not justified. Neither are conclusions that spills from chemical storage will be rare or small.“</p>		<p>As noted in the comment, material suppliers are located at various distances from the mine site with many deliveries coming from more than 100 miles away. As described in SDEIS Section 3.7.3, transportation of materials along public roadways is regulated by Idaho and Federal agencies and their permitting processes for producers and transporters (i.e., OSHA, MSHA, Idaho Transportation Department, U.S. Department of Transportation, the Bureau of Alcohol, Tobacco, Firearms, and Explosives, U.S. EPA). These regulations and permits are in place to manage and allow for hazardous material transportation in addition to any Project-specific design features or Forest Service requirements.</p>
Power Consulting Incorporated		36	<p>Tailing Storage Facilities (TSF) are the permanent storage features at a mine that will hold back the toxic sediments that are left over from processing the ore to obtain the metals. In the modern age of mining, and especially when dealing with open pit mines, there is an incredible volume of rock that is moved to recover a very small amount of metal (in this case gold, antimony, and silver). The metal that is recovered, measured in single grams per ton of rock moved, is between 1 and 2 in this case. In other words, the percentage of gold in the rock ore being mined is thousandth of one percent. Aside from this being an amazing example of the value of gold, we bring this up also to point out that 99.999 percent of the rock that is mined and processed will have to be carefully stored in or as part of the TSF. The overburden, and any other rock that is either below the threshold that makes sense for them to process and or does not react poorly with the air or with water, can be used to help buttress the “downstream” TSF. This specific TSF design (downstream) is among the soundest TSF designs that are currently being</p>	SOC	<p>As described in Section 4.2.2.2 of the SDEIS, the TSF design and construction utilizes a tailings embankment and a buttress that maintain Factors of Safety indicative of a geotechnically competent TSF through operations and into the future. Therefore, a TSF failure is not considered a reasonably foreseeable event. Hence, the economic implications of a TSF failure are also not considered reasonably foreseeable.</p>

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			<p>used. The waste rock from the processing, as well as waste rock that cannot be in contact with the air and or with meteoric water (rain), will have to be stored in the TSF. The TSF will then be entrusted with keeping those toxic sediments out of the Salmon River until the end of time.</p> <p>This is one of the most serious problems with metal mining in the world. Although the design of the TSF for the proposed Stibnite Mine appears to be a good one, it will eventually suffer the same fate of all TSF, it will fail. No one knows when the Stibnite TSF will fail, and it has been designed so that it can, for example, stand up to a once in 475-year seismic event. But the fact is that it will eventually fail. While one might think that this seismic event is a very high standard to require a TSF to meet, what it means is that in any given 50-year period, there is a 10 percent chance that there will be an earthquake that exceeds this standard. While this might seem like a low probability event, the potential damage that comes with it is extreme. These low probability, high impact events need to be taken very seriously and approached with extreme caution. We are not exaggerating the risks associated with the possibility of the TSF failing. In recent research, and research that we report on here, the rate of TSF failure is increasing and not decreasing as one would expect with technological advances, and or time. average age of 45.2 years for the TSF failures between 1940 and 1999. Although the data is sparse, they indicate that the average age of facilities at which TSF failures occur has not greatly improved with advances in tailings dam construction. This is not surprising considering that most tailings dam failures occur at active dams (see table 3 below). In other words, the technology clearly has not been improving with the mining methods because TSFs are failing before the mining is over. The TSF, in years old, is not even zero years since it has not begun its "long watch" which begins when the mine is officially closed.</p> <p>In January of 2017, the Center for Science in Public Participation released an updated list of worldwide TSF failures. This list includes data on 291 TSF failures including the location and year of the failure; for 42 of the locations the list also includes the date that the associated mine or processing facility became active. We used this list and added the active starting date for 56 additional facilities with failures that occurred since 2000 to determine the maximum age of storage facilities that failed. Out of the 59 TSF failures that occurred since 2000, we could determine the active starting date for 46 facilities. The average age of TSF that between 2007 and 2016 failed is 43.4 years with a maximum TSF age of 134 years and a minimum TSF age of 1 year. This average age of TSF failures is slightly less, but not significantly different from the average age of 45.2 years for the TSF failures between 1940 and 1999. Although the data is sparse, they indicate that the average age of facilities at which TSF failures occur has not greatly improved with advances in tailings dam construction. This is not surprising considering that most tailings dam failures occur at active dams (see table 3 below). In other words, the technology clearly has not been improving with the mining methods because TSFs are failing before the mining is over. The TSF, in years old, is not even zero years since it has not begun its "long watch" which begins when the mine is officially closed.</p> <p>Further, a 2015 study of TSF failures shows that the occurrence of "Serious" or "Very Serious" TSF failures has increased decade-by-decade since 1940. This study also shows a negative correlation between increased number of serious or very serious TSF failures and copper ore grade, copper production cost, and copper price (See the table 4 below). In other words, as either the price of copper, the production cost of copper, or the grade of copper ore decrease, the number of serious or very serious failures increases. While we do not want to speculate on the mechanisms that cause the failure, the correlation would suggest that when there is less money coming into the mine, the failure rate increases. As we have shown, as mines go after lower and lower grades of ore, the size of the TSF must increase at an exponential rate. For example, an ore that has 1 percent gold has 99 percent waste rock that must be stored somewhere. A mine that has .1 percent gold, or 10 percent of the initial value has ten times as much waste rock as our initial condition, or 99.9 percent waste rock.</p> <p>The authors further conclude that, with respect to TSF design, the ability to recover smaller percentages of valuable minerals has not been accompanied by better TSF:</p> <p>"The advances in mining technology over the past 100 years which have made it economically feasible to mine lower grades of ore against a century of declining prices have not been counterbalanced with</p>		

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			<p>advances in economically efficient means of managing the exponentially expanding volume of associated environmental liabilities in waste rock, tailings and waste waters.”</p> <p>Finally, with respect to studies on TSF dam failures, the most recent data, from 2022, comes to the same conclusions:</p> <p>“...since 1915, a total of 257 failures have been recorded with circa 2,650 fatalities and 250 million m3 of contaminated residues released to the environment. Almost 50% (115 million m3) of the released volumes have been recorded after 2000, with circa 640 fatalities. These data highlight that the challenge of safely storing mine waste is growing in scale and complexity”</p> <p>In other words, advances in TSF design and safety have not kept up with advances in mining, resulting in greater environmental risk associated with TSF from more recent construction. It is our understanding that this, in large part, has to do with the massive volumes of waste rock that are created at these open pit mines coupled with the increased incidence of heavy rainfall events. The proposed Stibnite mine is no different. A recent study by Piciullo et al. sums things up quite neatly:</p> <p>“Tailings dams are commonly built incrementally to increase the storage capacity of the Tailings Storage Facility (TSF), usually without interrupting the mining activities. Dam management practices, lack of knowledge on tailings behavior and the poor performance of monitoring and management processes have resulted in disastrous tailings dam failures with human and economic losses, as well as huge environmental consequences to ecosystems and local communities.”</p> <p>We bring up these failures with TSF to highlight that there is a very real chance that the TSF will fail while Valley County is still a populated human settlement. If that failure happens and the Salmon River is polluted by the waste rock and cyanide that is used to process the gold, then there will be a massive environmental cleanup that has to take place. That cleanup will have some stigma attached to it and it will, as we have described above, negatively impact Valley County. In fact, there does not have to be a spill from the proposed Stibnite mine for the stigma to impact Valley County. Just the presence of a gold mine with the potential to create a massive environmental disaster in Valley County is enough to have some stigma attached to Valley County. While we are not using this example as a direct corollary or forecast a massive TSF breach that poisons the Salmon River, or that there will be a 16 percent drop in tourism associated with the proposed mine as described earlier in this section, Valley County should certainly think long and hard about the potential for the proposed mine to impact their economy.</p>		
Power Consulting Incorporated		37	<p>As discussed above, residents of and visitors to Valley County recognize the important economic values associated with the natural and social setting of McCall and Valley County. The 2018 McCall Area Comprehensive Plan, developed under the guidance of the Valley County Commissioners and McCall City Council, reported on a survey of 3,000 residents and visitors it carried out as to what the values were that made Valley County an attractive place to live, work, and do business.</p> <p>“[T]he number one value for residents and visitors [was] the mountain character and small town feel of McCall. That character was defined by the natural setting, open space, agricultural lands, good air and water quality.” “Access to nature-based amenities and an abundance of recreational opportunities were ranked second and third in the top reported values of survey participants for the Valley County-City of McCall area. These features are part of what make McCall a thriving destination for visitors and place to live for residents...”</p> <p>Our discussion also documented the high level of economic vitality that Valley County has been able to attain and maintain over the last half-century. Compared to all of Idaho’s other non-metropolitan counties as a group, Valley County has significantly outperformed these other non-metropolitan counties. One often-used measure of overall economic “prosperity” in a particular area is average real income per person. That is calculated by summing up all of the annual income that flowed to individuals in the geographic area being studied and spreading all of that income over the total population, i.e. dividing total personal income by the population. If we are interested in how this average income per</p>	SOC	<p>Comment noted. No response required.</p> <p>The relative income of the economic area (including Valley County) is described in SDEIS Section 4.21.2.2, with additional income effects realized in other areas of Idaho. This income would be generated from National Forest System lands not designated as conservation areas and where extractive activities are allowable.</p>

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			<p>person has changed over time, the impact of inflation should be removed by deflating the income data to the current value of the dollar.</p> <p>Figure 11, below, shows this inflation adjusted average annual income per person in Valley County over the last half-century. As can be seen, over the 50-year period we have been using, Valley County always had a higher average income per person than the group of all Idaho non-metropolitan counties. The distance between the two lines in the chart shows the size of the advantage Valley County had over the whole group of non-metropolitan counties. That “bonus” average income that residents of Valley County received varied significantly over time, from a high of \$12,000 per person per year to a low of \$4,000. The average “bonus” to Valley County residents compared to the group of non-metropolitan counties was \$7,400 a year per person in 2020 dollars. The sum of those benefits across all Valley County residents in 2020 was \$87.3 million per year.</p> <p>Of course, to the extent that the productivity of the local economy can be maintained, this “bonus” income will be a recurring annual benefit to the residents of Valley County. A stream of income over time, of course, is worth more than just one of those payments.</p> <p>The hypothesis offered to explain the relatively high measures of local economic vitality in the City of McCall and Valley County “Comprehensive Plan” was that the landscapes in and surrounding Valley County were largely managed for conservation purposes by Federal Agencies. These lands provided a wealth of recreational opportunities to residents and visitors. In addition, the City of McCall had managed to protect its small-town community “feel” despite the relatively fast growth and transformation of the city into a recreation destination. This attracted visitors some of whom became residents and helped the city to hold on to its residents, supporting modest ongoing growth.</p> <p>This hypothesis, that protected natural landscapes would stimulate local economic vitality was analyzed in a 2013 study, appropriately titled “The Effect of Protected Federal Lands on Economic Prosperity in the Non-metropolitan West.” “Protected” lands were public lands managed by government agencies for conservation purposes rather than commercial extractive activities. National Parks, National Wilderness Areas, wildlife refuges, and Wild and Scenic Rivers etc. are examples of such “protected lands”. Valley County was one of the western non-metropolitan counties that was included in the study. The study calculated the part of the average income per person in each county that was due to the amount of protected federal lands in that county.</p> <p>There were 284 non-metro counties in the west, containing 46.2 million acres of protected public lands. Sixty-one non-metro western counties contained no protected public lands. Only nine non-metro western counties contained more than one million acres of protected public lands. Valley County was one of those: Valley County had the third highest number of protected public acres in the west.</p> <p>The study’s conclusion about the impact of this high level of protected federal lands on average income per person in Valley County was that in 2010 dollars, average income per person in Valley County was \$11,626 higher than it otherwise would have been. That added about one-third to what the average income per person in Valley County would have been without any protected public lands.</p> <p>As the study summarized its results:</p> <p>“These estimates represent the average effects of protected public lands after accounting for the presence of other public lands, the presence of other natural amenities, the degree of access to markets, the growth or decline in commodity sectors, and the presence of protected public lands in neighboring counties.”</p> <p>If we adjust this impact on income per person in Valley County for inflation between 2010 and 2020 and use the population of Valley County in 2020, the implied total additional income due to the protected federal lands in Valley County was \$163.1 million per year.</p> <p>Figure 11, above, provides a less sophisticated measure of the advantage residents of Valley County have over the group of all non-metropolitan counties in Idaho as measured by real income per person. The average difference between real income per person in Valley County and the same income measure</p>		

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			for the group of all Idaho non-metropolitan counties was \$7,400 per person. The sum of these annual bonuses in income per person across all residents of Valley County would be \$87.3 million per year.		
Power Consulting Incorporated		38	<p>We have spent some time and care in describing the link between the Valley County economy and the natural environment in which it is immersed. That economy is very sensitive to the potential for environmental degradation at the proposed mine. We will not go into details about what a potential spill might look like or how it might happen. We have already laid out the literature that describes how often a TSF releases toxic material in one form or another, and we have already discussed the stigma that comes with a mine and or a spill from a mine. What we seek to do here is to present a scenario where there is some sort of toxic release, or a series of releases, from the proposed mine and the South Fork of the Salmon River is impacted. Again, we will not talk about a specific event, but we will assume here that there is a need to mitigate the damage done to the river system and that it will take time to evaluate the damage and design and carry out remediation measures. For this exercise, we will assume that there is a series of spills over the life of the mine and that it takes an additional ten years to complete the cleanup once the mine has finished operations. We are not suggesting that the spill will be so massive that it takes ten years to clean it up. We are suggesting that remediation takes some time to be planned, carried out, and monitored. The extent of the pollution must be quantified, a plan to clean up the mine site and the downstream affected environment must be thought through, and then the cleanup process must be completed. Once the cleanup has been completed, it will take some time for the natural environment to recover, and it will also take some time for the stigma associated with the mine and the environmental degradation to abate.</p> <p>In our scenario this process is assumed to take 25 total years. This is the 15 years that the mine is planning to operate as well as the time that it will take to close the mine, plus an additional ten years to clean up, allow the environment to recover, and the stigma associated with the mine and the spill to wear off. This is a time frame that is consistent with recent monitoring work on mine abatement work in the U.S. that showed that:</p> <p>“A new study based on long-term monitoring data from four sites in the western United States shows that cleanup efforts can allow affected streams to recover to near natural conditions within 10 to 15 years after the start of abatement work.”</p> <p>In this scenario, the visitor and recreation sectors of the Valley County economy as well as the Non-Labor Income sector of the economy are assumed to take a relatively small hit. Those sectors of the Valley County economy, which we have already shown are directly related to the natural amenities of Valley County, will decline by 2 percent during this period. Again, we are not assuming that these sectors of the economy will decline by 2 percent if the mine is allowed to begin operations. It is quite possible that the impact could be far larger. What we seek to do here is to show that even if there is a relatively small decline in these sectors of the economy, it will have an impact that rivals the potential benefits that the mine could provide to Valley County. Recall from our earlier discussions that the Visitor and Recreation sectors of the Valley County Economy are about one-third of the total in terms of employment in 2020,⁹⁸ and that the Non-Labor Income represents about 58 percent of total personal income.⁹⁹ We are also not assuming that these sectors of the economy would be growing steadily as they have in the past, with a few exceptions associated with the Great Recession and the Covid Pandemic. We are taking a static view of the year 2020 and looking at the potential impact on the existing economy in Valley County if it did not change for the next 25 years. While this is an unlikely scenario, we are not attempting to accurately project what the Valley County economy will look like in 25 years. We are simply trying to show that a small slowdown in these important sectors can have an outsized impact on the overall county economy. Since both the Visitor and Recreation sectors and the Non-Labor Income in Valley County are likely to continue to grow, while we know that the proposed mine’s resident workforce will not, we are confident that this exercise will produce a conservative result.</p> <p>Remember that the proposed Stibnite mine is projected to directly employ 200 “local” people and that their total pay is projected to be \$18.7 million annually.¹⁰⁰ When we look at the combination of the Visitor-Recreation sectors and the Non-Labor Income, it totals \$447 million annually. If we assume that the proposed mine will run for the longer of the time periods given (15 years), then it will produce a total</p>	SOC	<p>Historical mining which discharged mined materials directly to surface waters in a way that continues to affect environmental quality through current conditions did not result in a release event that affected the Valley County economy to the extent conceptualized by this scenario. Therefore, discharges realizing the scenario's economic impact under designed and regulated conditions are not considered reasonably foreseeable.</p> <p>The representation that the cost implications of catastrophic events can outweigh the benefits of any type project is universally applicable. Therefore, the risk management is applied to reduce the potential for catastrophic events to an acceptable level.</p>

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			<p>of \$280.5 million dollars in direct pay to the 200 local workers. The total of the Visitor-Recreation sectors and the Non-Labor Income, over the 25 years that the stigma is associated with the mine, is \$11.2 billion. In this scenario, the impact of the mine workers' direct pay is 2.5 percent of the total of the Visitor-Recreation sectors plus the Non-Labor Income. In other words, the benefit of having 200 highly paid miners in Valley County for 15 years could be almost completely wiped out by a 2 percent decline in the Visitor-Recreation sectors plus the Non-Labor Income.</p> <p>This small modeling exercise should not come as a surprise. Above we discussed economic analysis by Rasker that showed that more than one -third of Valley County income per person was directly tied to the natural amenities in the form of public land, in and around Valley County. In the preceding sections we investigated the large amount of Non-Labor income and how people effectively “vote with their feet” by moving to areas with high quality natural amenities.</p> <p>Remember also that the Non-Labor Income represents a larger portion of the economy than labor income does in Valley County. Finally, it is important to remember the dramatic differences in response by local economies to environmental impacts that we presented in the stigma section of this report. Areas that become stigmatized because of industrial pollution of one kind or another can have vastly different impacts on Visitor and Recreation sectors of their economy, even when the two economies are geographically very close. While it is very likely that the Valley County Visitor and Recreation sectors and the Non-Labor Income sector of the economy are likely to continue to grow and will continue to represent a larger portion of the Valley County economy, there is no growth projected for the SGP work force. The mine plan seeks to remove all the economically feasible minerals found there.</p> <p>All this evidence points to a basic modeling exercise that is likely to be a conservative estimate of the potential impacts of the proposed mine having some type of spill or toxic release that impacts the Salmon River. What this shows us is that even a very small impact to the Valley County economy, because of the proposed mine polluting the Salmon River, will very likely wipe out all of the benefits that Valley County has been told it would enjoy from the Stibnite mine being developed.</p>		
Power Consulting Incorporated		39	<p>There has been a lot of coverage of the new “green economy” in the news recently and the supply chain shortages that have plagued the U.S. and the world since the beginning of the pandemic. To address some of these issues, and because the U.S. must procure many different things, including metals and metal ore concentrates, from countries with whom we are not on very good terms, the U.S. federal government has deemed certain minerals “critical” to our national security. Antimony, a metal that is on that critical list for the Inflation Reduction Act, is one of the metals that could be mined at the proposed Stibnite mine and its production could allow Perpetua Resources a small tax cut, from the Federal Government for their production of antimony. How that plays into the new green economy will be something that we will explore a little later in this part of our report. Also in the Inflation Reduction Act are tax credits that will be given to Americans who purchase electric vehicles that are assembled in the U.S. As many news stories have pointed out recently, the demand for electric vehicles, and the potential tax cut for Americans, far outweighs the current production of those vehicles which makes it “difficult or impossible to take advantage of the tax credits in the short term while manufacturers adjust.” As battery technology rapidly evolves and we are all forced to learn a little more about what makes up these new “green” technologies, minerals that formerly merely occupied a part of the periodic table, to which most of us never really paid much attention, are now ever present in the news. For example, lithium is hard to find in the U.S., although there are now many different mines that are vying for permits to mine lithium in the U.S. to help satisfy the demand for it. While there may be a long line of different mining companies trying to begin mining for lithium, the process is long and cumbersome, thanks in part to antiquated mining laws like the 1872 Mining Law that still governs federal mining claims. As states and local municipalities scramble to keep up with the proposed mines and understand where they might fit into the new green economy, the Federal Government is trying to sort out the complicated system that tries to both encourage mining on federal lands as well as make sure that it does not permanently degrade those same lands. In this part of the report, we will attempt to sort out where the U.S. is attempting to go to meet the demands of the new green economy and where the proposed Stibnite mine may fit in.</p>	SOC	<p>SDEIS Section 2.4.1 describes the anticipated production of gold, silver, and antimony from the Project. Revenues derived from each individual metal would be dependent on temporally changing metal prices over the lifetime of the Project. Based on an assumption that current metal prices are applicable to Project production, the revenue associated with sale of metals produced by the Project is estimated at \$7 billion. These revenues reflect market demand and supply for relevant minerals, including antimony. Under these price assumptions, the majority of the revenue is attributable to gold production. However, market demand and prices may be influenced by national security and green economy policies, or speculation surrounding those policies.</p> <p>Details on the type of use and location of use for metals produced by the Project are not predictable due to evolving market conditions and technology applications. However, these metals are produced in connection with operations authorized by the U.S. mining law.</p>

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			<p>While the Perpetua website advertises a variety of claimed benefits that the proposed Stibnite mine will provide to the U.S. and our transition to a green economy,¹⁰⁴ the fact is that the Stibnite mine is a gold mine and not an antimony mine. This is not meant to be a criticism; it is a simple statement of fact. Many, if not most, mines have other valuable trace metals or secondary objectives that can add real value in making the mine more profitable, and that is certainly the case with the proposed Stibnite mine. We mention this because, if you look at the Perpetua website, you might not know that the proposed Stibnite mine is a gold mine first and foremost. The name, Stibnite Gold Project should remind us as to what Perpetua is pursuing. However, much of what Perpetua is talking about is the antimony that they will potentially produce, or the cleanup of environmental damages from past mining, but that is not what the mine is being developed for. If we look at the mine in terms of the value of the resources that Perpetua plans to produce, which we feel is the most sobering assessment possible, then we can see that most of the value of the proposed Stibnite mine is in its potential for gold.</p> <p>About 11 percent of the total projected value of the mine is antimony, with about 1 percent being silver, and about 89 percent being gold. A different valuation process, carried out by the previous owner, Midas Gold, for its Feasibility Study, placed the value at 94 percent for gold, ¼ of a percent for silver, and about 5.5 percent for antimony. Whatever the percentages are, the point is that this is a gold mine and not an antimony mine. This is important because this is not an antimony mine that is being developed to ease the pressure of the U.S. reliance on other countries for critical metals. This is a gold mine that will produce some antimony. That the U.S. happens to designate antimony, one of fifty critical metals to get the designation, is a coincidence that Perpetua is now trying to take advantage of by highlighting what would otherwise be a small component of its proposed mining operation. We are not denigrating the ‘critical’ designation that antimony has been given, we are simply pointing out that Perpetua is here for the gold and happy to talk about the antimony.</p> <p>While it is true that Perpetua would like to produce antimony, it is unclear where the antimony will go once it is concentrated. When the DEIS was written the antimony’s destination was not specified.</p> <p>“The antimony concentrate would be transported from the mine site for off-site smelting and refining. It is unknown at this time where or how the concentrate from the mine would be processed, and depending on the buyer, it could be processed by any number of companies, in any number of states or foreign countries.”</p> <p>It would seem then that this source of antimony will not necessarily secure America’s green energy future after all since its destination is unknown. Or at least it was unknown when the DEIS was published. Since that time, “Perpetua Resources entered into a partnership to supply a portion of our antimony production to support the commercialization of Ambri’s liquid metal battery for large-scale storage of clean energy.” Here again, we are left wondering what “a portion of our antimony” really means and how much of the critical metal will stay within the U.S. We are not the only people that are questioning this claim about the antimony that Perpetua wants to produce. In an opinion piece in the Idaho Statesman in September of 2022, Will Tiedemann asks many of the same questions that we do, taking it one step further stating:</p> <p>“First, Perpetua has not yet secured a domestic refinery to process the SGP antimony ore into a finished product of usable grade for battery applications. To our knowledge, no domestic refinery currently has the capability or capacity to do so. Instead, international refineries, likely in either Mexico or Oman, will have to be contracted to process SGP’s antimony ore. By utilizing international refineries, it remains unknown whether Perpetua will retain ownership of their processed antimony ore and to whom it ultimately will be sold.”</p> <p>The only antimony processing facility in the U.S., is in Montana and that facility is “in a sold-out condition” meaning that they cannot process any of Stibnite’s antimony. Even if Ambri could process the antimony in the U.S., they do not, as of yet, have a commercial scale battery that is available for commercial use. What the antimony from Stibnite will not do is go into the electric vehicles that we have heard so much about recently and will not be associated with the tax cuts that citizens can get from purchasing an electric vehicle or the battery related production location specifications of the Inflation</p>		

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			Reduction Act. What has been laid out in the DEIS and by Perpetua, is that a small component of the total value of the proposed mine (11 percent) will be antimony. Of that small component, an unknown amount will go to a U.S. based battery manufacturer to produce “low-cost, large-scale batteries”, that have no current commercially available products, and the destination of the rest of the antimony is unknown and could go to “any number of states or foreign countries.” Again, the point that we are trying to raise here, is that Perpetua wants to run a gold mine but is happy to talk about the very small volume of antimony that might be available to support American efforts to reduce carbon emissions.		
Power Consulting Incorporated		40	<p>As the country attempts to wean itself from the critical metals that we procure from rather dubious sources, there has been a rather strong pull to look at the permitting process for mines in the U.S. On the 150th anniversary of the most notorious of U.S. mining laws, the General Mining Law of 1872, the Biden administration convened an interagency working group (IWG) to review the antiquated law.</p> <p>“This meeting was the first external engagement of the Department of Interior-led Interagency Working Group on Mining Regulations, Laws, and Permitting, which is charged with providing recommendations to Congress on how to reform the mining law to ensure new production meets strong environmental standards throughout the lifecycle of the project, ensure meaningful community consultation and consultation with Tribal nations, and reduce the time, cost, and risk of mine permitting. “</p> <p>Anyone that has been involved in the mine permitting process can see the immediate need for this type of reform. Likely anyone that takes the time to critically read this report will be able to agree with this sentiment also. This is reform that was asked for by the Government Accountability Office in 1989. An example of part of the 1872 law that needs reform, is the money, or lack thereof, that is paid to the Federal Government for a mining claim. Currently, somewhere between \$2.50 and \$5 per acre is paid for mining claims on federal land depending on whether it is a “lode or placer claim.” The IWG is made up of experts from all different fields and has a list of objectives too long to quote in this report. What is clear from their goals is that they want to make sure that the U.S. gets a fair return for allowing mining to take place on its land, that the natural environment will be looked out for during the construction, operation, and closure of mines, that the land be restored, the environmental problems mitigated, and that the currently convoluted process of mine permitting be sped up. We bring this up here because all of this is needed, in this specific mine, although it is unlikely to help in this case. Any objective viewer can see that the U.S. needs to be able to source some of its critical minerals from the U.S., but we need to be able to do so in a fair and environmentally responsible way. That is the rub in the argument for the proposed Stibnite mine. If they were going after critical minerals that would help the U.S. effort to transition to a greener economy, and if the mine were permitted in a way that could ensure that the water, land, and environment would be looked after during the entire mining process and once the mine is gone, as the revision of the antiquated 1872 Mining Law promises, then perhaps this mine would be worth pursuing. That question, however, is not one that we have been asked to answer. What we are trying to point out is that the Federal Government is trying to reform the mining laws so that these questions are not so hard to answer, and if the answer is that the mine should be permitted, then it is done in a much safer and more expedient fashion.</p> <p>In conclusion, we find that the proposed Stibnite mine is a gold mine with the value of the gold representing at least eight times that of antimony. The antimony, although designated a critical metal by the Biden administration, will largely go to an unknown refinery, likely outside of the U.S. The antimony that stays within the U.S., which is an unspecified fraction, will be sold to a company that wants to produce industrial scale batteries and not, as many will assume, batteries for the electric cars. The mining laws within the U.S. are antiquated and complicated and put far too large of a burden on local areas that will host the mines. Because of this, the Federal Government is in the process of overhauling the 1872 Mining Law. It is the hope of the Biden administration that when that law is revised, it will allow local communities, like Valley County, to make sure that the mines are responsibly developed to ensure that the U.S. can source the critical metals that it needs while also ensuring that the local environment is protected, and the mining companies fairly compensate U.S. citizens for the leasing of public land and removal of valuable minerals. While it is likely that the mining laws will not be reformed in time for the decisions that need to be made with respect to the proposed Stibnite mine, it</p>	SOC	Comment noted. No response required.

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			helps to highlight the complicated nature of deciding to open a metal mine and what the impacts, short and long term, will be on local communities.		
Power Consulting Incorporated		41	<p>Metal mining is notoriously volatile, and gold is a charter member of the club of volatility. In the last 50 years or so, the price of gold has fluctuated from a high, in real 2022 dollars, of a little more than \$2,500 per ounce in January of 1980, to a low of \$264 per ounce in August of 1970. Put another way, the price of gold has fluctuated by almost an order of magnitude in the last 50 plus years. Lest one think that we are cherry picking the data, and it is only low at the beginning of the last fifty years which was shortly after the United States gave up on the Gold Standard, in April of 2001, gold fell to \$430 per ounce. For a more complete view of things, see figure 12 below.</p> <p>Keeping the figure above in mind, even if we only look at the volatility of the last 5 years, we can see that there was a high of \$2208 per ounce in August of 2020 and a low of \$1382 per ounce in September of 2018. The difference between the two, separated by less than two years, is \$826, which is 60 percent of the lower, September 2018 value. Anyone with a basic understanding of business would be able to tell you that if your business loses 83 percent of its value over a two-year period, as was the case between 2000 and 2018, that the business is going to have trouble surviving. Of course, the reciprocal can happen also. Perhaps you would rather focus on the fact that the same hypothetical business increased its value by more than a factor of 5 over a ten-year period, between April 2001 and September 2011? For the point that we are making, both are a symptom of the same issue, and that is the volatility of international metal markets. In this case it is the international gold market, but the same can be said about most of the metal markets. Metal markets are notoriously volatile.</p> <p>In this case, when we are talking about the potential to have the Stibnite mine located in Valley County, we are then talking about the mine's ability to continuously operate in the face of the roiling seas of the international metal market. If we look back to Figure 12 again, we can see that the horizontal portion of each of the gridded boxes in the background of the figure can be representative of the 5 years. Since the mine plans to operate for 12- 15 years, the lifetime of the mine can then be thought of as three grid squares. There are a couple of periods where one might be able to argue that there was continuous growth in the gold market, but for most 15-year periods, there is rather serious volatility. In the face of such volatility, there are only a couple of things that can be done. If the price of the gold is increasing, then you might well attempt to increase your output. If the price is decreasing, then you will likely reduce your output or idle your mine. Now, clearly this will not happen if the price of gold changes by some very small amount, as it does daily. However, if, over a 3-year period, the value of the gold that you produced dropped by 63 percent, as it did between 1980 and 1982, then you would be very likely to idle your operation in hopes of a speedy market recovery.</p> <p>The reason that this is important to consider, is that metal mines that are idled do not pay the people that work in the mines. If those people recently moved to your local community, as the DEIS and Perpetua assume, then your community will have a lot of newly unemployed people in it. While we have shown that the fiscal contributions to the local tax base are relatively small, totaling \$300,000 per year while the mine is operating, if Valley County comes to depend on this revenue, then a closed mine would be an added cost that the County would have to shoulder. If we assume that the multipliers are correct, as discussed in section 2 of this report, then there will be six tenths of a job created for every direct job at the mine. If Perpetua will hire 200 people to work in their mine, this would then be 120 local people who would be indirectly working for the mine in the local area. If the mine were to idle, for example because the price of gold drops dramatically, then the local area would have 320 workers that are now unemployed. As we have pointed out repeatedly, we believe that most of the workers will be living in the greater Boise area or the U.S. in general, but if you believe Perpetua, then many of these people will live in Valley County. It is worth at least considering the idea that hundreds of people would be laid off as the mine is idled due to low commodity prices.</p> <p>However, perhaps the larger issue, and one that incorporates the ups and downs of the international metal market, is the economic wellbeing of mining dependent communities in the U.S. over a longer period.</p>	SOC	SDEIS Section 4.21.2.2 acknowledges the effects of potential "boom" and "bust" aspects of mining Projects that could result from changes in metal prices and mining economics. The SDEIS describes the potential negative effects of reduced employment and economic activity associated with mine closure along with activities that would lessen the effects of unexpected or planned mine closure.

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Power Consulting Incorporated		42	<p>Mining has long been described as having a boom followed by a bust. The figure on gold prices above clearly shows at least 3 large boom bust periods and a host of smaller perturbations in the price over the last 50 years. When we think of the impact of those commodity prices on a mine, those booms and busts are generally, but not always, directly related to production. The mine produces as much as possible when the price is high and slows down production as much as possible when the price is low. With some mines, for example, the production of natural gas in the unconventional wells across the U.S. in the last 20 years, this has sometimes meant producing at a loss. In those cases, it may be quite hard to idle a well once it is tapped and there may be a shortened timeline associated with the wells as they are interconnected with other wells. In those cases, the extraction companies may be forced to produce at a loss to recover as much of their costs as they can. However, gold mines generally do not operate in this fashion. In some cases, it is that the resource in question has played out, but often it is because the value of the commodity drops or rises significantly. Often, mines can come back online when the commodity prices rebound, but there may be a cost associated with this price volatility to those communities that have mines in them.</p> <p>While mining dependent communities, when they are mining, often have higher than average wages and salaries associated with that mining, they also live in fear of the next drop in commodity prices. One could imagine being a County Commissioner and being reticent to invest in schools for the children of miners that may not be around in the next five to ten years. The same can be said about most shared public infrastructure. Things like sewers, hospitals, roads, the size of the police and fire departments etc. All those public services are paid for through taxes that are largely collected by local governments, and they are directly proportional to the number of taxpayers that they are collecting from. They are sized and staffed based on the expected load or population that will be using them. While there might be an immediate need to expand some of those services while a mine is in operation, and there are miners to help shoulder the additional burden that they put on a municipality, when those miners go, the local governments may be stuck paying for those upgrades or increases in services that they no longer have the same demand for. There is also the very real possibility that when the mine leaves, the community and the natural environment are in worse shape than before they came, and there is a real and sustained negative impact on the local community indefinitely. This is exactly what has happened to many different mining communities and whole mining regions across the U.S. The other option that a local municipality has, is to not pay for the upgrades or increases and deal with an increased demand for the same local service, while the mine is operating. Local communities must decide if there is enough time to pay for the investment that is necessary to accommodate for the increased use of the community infrastructure. This can be the tradeoff or quandary associated with the mining industry in a small community. There is a real possibility to have local people receive higher than average pay, but that pay will be dependent on international metal markets and the resources that are available locally to be mined.</p> <p>There are clear examples of historic mining districts that have not fared very well, even though they created immense wealth in the time that they operated, and all we need to do is look at other mining dependent areas in the United States for examples of what has happened in the past. Before we present a few of the larger studies that have looked at these topics, if you have traveled to some of the classic examples of mining dependence in the U.S. cities like Butte, MT., then you will understand what the outcome looks like. Butte was once described as the “Richest Hill on Earth” and is now a struggling hard scrabble town that has, as its chief point of reference, the monstrous Berkeley Pit which is the remains of an open pit copper mine that dominates historic Butte. There is the Copper Triangle in Arizona, the Appalachian Coal fields of the east coast of the U.S., the Bakken oil shale boom of North Dakota and Montana, and on and on. In fact, there are whole states that have had their economic hopes pinned on resource extraction and have recently felt the pinch of that dependence. The state of Alaska, long famous for giving every resident a “dividend” from the production of oil on the North Slope of Alaska, now finds itself in a financial crisis. Alaska, now infamous for its dependence on different commodities, has chased furs, gold, military infrastructure from World War II, and now oil to pay little to no property or income taxes. Recently however, Alaska, in the face of flagging oil production and a drop in the price of oil, has found itself nearly bankrupt having pinned almost its entire fiscal health on the taxes associated with the production of oil.</p>	SOC	<p>The SDEIS economic analysis as presented in Section 4.21.2.2 does present the economic development benefits of the Project as "obvious". Instead, it looks at conditions related to economic development and acknowledges changes in those conditions that may be beneficial, adverse, or neutral. The analysis does not aggregate those effects, but instead acknowledges the positive and negative effects associated with each economic development component.</p> <p>SDEIS Section 4.21.2.2 also describes the potential boom and bust effects of the Project on the local economy and identifies Valley County economic development planning outside of the mining industry as a means to reduce adverse impacts associated with mine closure.</p> <p>The Project effects on environmental conditions are analyzed throughout SDEIS Chapter 4 (e.g., air quality in Section 4.3.2.2, soils in Section 4.5.2.2, water quality in Section 4.9.2.2, fish in Section 4.12.2.2, and scenic resources in Section 4.20.2.2). While the Project would have effects on environmental conditions, Project design features, reclamation, and other Forest Service requirements minimize those effects and improve the environment overall compared to existing conditions.</p>

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			<p>“The national economic expansion from 2009 to 2020 was the longest recorded in the history of the United States. The unemployment rate fell dramatically, and real gross domestic product (GDP) steadily increased. However, many petroleum-producing states experienced local recessions during this period because of declining oil prices. One of these states was Alaska, which was in a recession from March 2015 to April 2018.... Falling oil prices also hurt the state government, which relied on petroleum (oil and gas) for 92 percent of its total revenue in 2011.”</p> <p>Clearly Valley County has not pinned 92 percent of the total revenue that it collects on the proposed Stibnite mine, but the comparison is instructive. Depending on a commodity, whose value is linked to the international commodity market, is necessarily betting that the market will remain strong over the time that the governments or communities are most dependent on it. In the case of Alaska, this worked well when Alaska was producing large volumes of oil and the price of oil was relatively strong. Recently, it has not worked well for them, as their oil fields have been depleted, their production went down dramatically, and the price of oil began to fluctuate more widely. There is a large and growing body of literature that looks at the impact of mining on the socioeconomics of different communities. Freudenburg, in 2003, did a meta-analysis of all the available literature related to mining and local economic well-being: “In this article, we assemble literally all of the relevant quantitative findings on mining that we have been able to identify in published and/or technical literature from the United States.” “...in the case of poverty or unemployment rates—as well as for the overall body of findings—the results are consistently and significantly negative, whether the neutral/indeterminate findings are combined with negative ones or omitted from the equations altogether. Until or unless future studies produce dramatically different findings, there appears to be no scientific basis for accepting the widespread, “obvious” assumption that mining will lead to economic improvement.”</p> <p>Although 2003 was now almost two decades ago, the results certainly still appear to hold true. Given the evidence from Freudenburg, it would appear prudent to have as diversified an economy as possible, and not look to mining for the “obvious” assumption that mining will lead to economic improvement, since their analysis showed quite the opposite. In the context of the Valley County economy, which is relatively diversified and is no longer dependent on the extractive industries, it would be wise to make sure that Valley County stays diversified. In the context of the necessary upgrades that may be necessary to accommodate for the increased presence of miners associated with the proposed mine, it would be prudent to think long and hard about what investments will be made to accommodate the demands to extend government services for them, since there is no obvious economic improvement that will come with the mine, at least empirically. When looking at a very large geographic area, that of Appalachia, that has been dominated by the coal industry for much of the last 100 years, it appears that mining dependent counties show slowed economic growth and less educational attainment. “...the coal industry provides incentives for less educational attainment, and that lower educational attainment levels in coal-producing counties explain part of their lower growth rates.”</p> <p>And “No doubt, coal mining provides opportunities for relatively high-wage employment in the region, but its effect on prosperity appears to be negative in the longer run. Our results suggest that a significant portion of that negative effect may be attributed to coal-industry disincentives to the accumulation and regional retention of human capital.”</p> <p>According to the quote above, from Douglas et al., coal mining is associated with lower educational attainment for the people of Appalachia as well as a slowed growth rate. The “natural bounty” of the earth cannot be assumed to be a gift that all communities should receive with open arms. One could argue that gold mining in Valley County, ID. is a far cry from Appalachia, however the fact remains that communities that are faced with a decision on whether to allow mining on their local lands would do well to collect as much evidence as they can of the experiences of others. The potential benefits are well known, and Perpetua will tell you exactly what they are. All one need do is look at their website or look at the socioeconomic section of the DEIS, which was based on work that Midas Gold and Perpetua paid to have done. Here we will not seek to affirm or deny the validity of that work. What we are seeking to do is to say that we agree that the jobs that the miners will get will pay them well above average wages, but there will also be costs associated with having the mine in Valley County, and those costs have not</p>		

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			<p>been explored. Here we are attempting to present some of the economic evidence of the impact of mining on the communities that live with those mines. We have already gone over some of the potential “maladies” that mining related communities can face. In that literature, much of the impact of a mine on a local community is described through the lens of the miners that move into the local area. Those miners are predominantly male, young, well paid, don’t necessarily have ties to the local community or family with them, and work odd hours, for example two weeks on and two weeks off. All these things may contribute to them not fitting in with a local community as well as more traditional in-migrants might. Social scientists have looked at things like drug related mortality rates across all the U.S. to try and figure out what factors may play important roles in those deaths. A recent study tried to control for all the possible different factors that could contribute to drug related death in the U.S. and found that the single largest contributing factor was whether the community was dependent on mining.</p> <p>“The average county-level age-adjusted drug-related mortality rate was 16.6 deaths per 100,000 population (2006–2015), but there were substantial geographic disparities in rates. Controlling for county demographic characteristics, average mortality rates were significantly higher in counties with greater economic and family distress and in counties economically dependent on mining.”</p> <p>This rather remarkable finding, found that mining was associated with a greater than 13 percent increase in “age adjusted mortality rate.” This was by far the largest increase of the labor markets that were analyzed and was about a half a percentage point behind the largest age adjusted mortality rate increase which was associated with “family distress.” We are not social workers or sociologists who are trying to tell you that if the proposed Stibnite mine goes in there will then be massive increases in drug overdoses. What we are trying to point out is that there is a very clear link between mining and the communities associated with the mines. Mines are generally in smaller towns in rural portions of the U.S. and those places may have a harder time dealing with some of the negative impacts that come with the mine. As Perpetua has correctly shown, those people who reside in Valley County and have mining jobs will have significantly higher than average pay when compared to other Valley County residents. This is known. What is unknown, and what we are trying to lay out, is what some of the costs associated with having the Stibnite mine in Valley County will be. From the economic and social science literature, there will be costs in the form of retarded economic growth, increased pressure on services that Valley County provides, reduced educational attainment, and increased negative social interactions as a transient workforce tries to integrate into the local community. What we have also shown is that Valley County’s economy is currently thriving and the reason that the economy is so robust, in large part, is because of the natural amenities that Valley County has. The possibility of short-term gain associated with the proposed mine should be weighed against the potential for long term harm to an otherwise thriving economy.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	360	<p>W. Socio-economics</p> <p>1. The SDEIS must take a hard look at the potential socio-economic impacts from the proposed SGP, including potential adverse impacts to housing prices, housing availability, public services, community culture, long-term economic health, etc.</p> <p>Projecting the fiscal impacts for locals as well as the state and nation, the direct and secondary jobs (local, state, and national), and the incredible wealth that Stibnite is projected to create, must, under NEPA, be balanced by a "hard look" at the potential costs.</p> <p>While the SDEIS clearly took a hard look at the benefits, it failed to take the same hard look at the potential socioeconomic impacts, or costs. Significantly overlooked were cost increases to schools when miners' children move to Valley County, cost increases associated with the heavy truck traffic on roads, and the cost increases in housing associated with 200 highly paid miners moving to Valley County. A whole host of other things also include increased cost of EMS services (police, fire, hospital), strain on the cellular networks, and sewer system, detailed in the following sections.</p> <p>The following section is excerpted from the Executive Summary of “An Evaluation of the Potential Socioeconomic Impacts of the Proposed Stibnite Mine on Valley County, Idaho”. Prepared for the Idaho Headwaters Economic Study Group, by Power Consulting Inc., December 2022.406 The study was</p>	SOC	Refer to responses to the Power Consulting Incorporated comments #1 through #42.

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			independently commissioned to address the lack of information in the DEIS and SDEIS on the socioeconomic impacts to affected communities.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	361	<p>a. The existing Valley County economy</p> <p>In the last half century Valley County has tripled in population while jobs have nearly quadrupled. The Valley County economy outperformed the national economy across a broad range of indicators of local economic vitality: population, employment, and real personal income. In the last ten years or so, the combination of natural growth and net in-migration added about 2,500 new residents in Valley County, but 87 percent of that growth was due to net in-migration, i.e., people “voting with their feet”. Many of the people that moved into Valley County, brought with them a significant amount of “non-labor” income. In 2020 the non-labor sources of personal income in Valley County totaled \$355 million. In comparison, the labor earnings came to \$261 million. That is, the non-labor personal income was 36 percent larger than the total labor earnings.</p> <p>The historically important goods production in Valley County, timber and mining, have declined in the last several decades as a source of jobs. That is not a unique trend found only in Valley County. Rather, it is a state and national economic change. Jobs in goods production (Non-Services-Related), a category that includes timber and mining, were largely stagnant over the thirty-year period 1970 to 2000 relative to the growth in jobs in services sectors. During that 30-year period, jobs in Services Related industries rose steadily, almost quadrupling (3.9-fold) over that 30-year period.</p>	SOC	Comment noted. No response required.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	362	<p>b. Analyzing how the proposed mine’s work force and supplies will be obtained and the reason this may limit the positive impacts on the local economy.</p> <p>In this section, Power (2022) discusses the projected economic impacts associated with the Stibnite Gold Project (SGP). While Power Consulting was able to assess a variety of the local socio-economic impacts of SGP on Valley County, as presented in this study, we find it troubling that issues of SH-55 transportation, spill risk, local wage scale problems, housing availability/affordability, and general infrastructure concerns were not adequately examined in either the Draft Environmental Impact Statement (DEIS) or the Supplemental DEIS (SDEIS). Public officials, elected leaders, and concerned citizens should not be making decisions about the future of their communities without a full comprehensive impact analysis having been carried out to inform their decisions. Specifically, we find that the DEIS and the SDEIS socioeconomic sections presented a ‘benefits only’ analysis. We will spend much of this section and parts of the following sections describing and quantifying that shortcoming.</p> <p>Knowing where a proposed mine will get its operating supplies and its workers will help to determine what the economic impacts of the mine will be on the local area. If the mine is in a relatively remote setting, as is the case with the proposed Stibnite mine, then it is quite likely that the positive local economic impacts of the mine will be muted on the local area. The reason for this is that there are fewer economic links between the mine and the local towns that might otherwise provide the mine with the supplies that it needs to operate. Valley County may be the source of a lot of wealth being created, and the physical location of the mine, but it will not retain much of the wealth that is created. If we look at the construction phase of the proposed mine, for example, more than 91 percent of the spending will occur outside of the local area. If we look a little deeper, into the total spending that the local area is modeled to receive, we see that only 8 percent of it will be in the local area. Of that 8 percent, 64 percent of that spending will be on direct wages for the people who are modeled to live in the local area. Furthermore, we suspect most of the workers will not live in the local area, therefore, this relatively small percentage will shrink to a few percent since those “local” workers will no longer live in the local area and will no longer spend their direct wages in the local area.</p> <p>A complicating factor in all of this is that even if the local area was able to provide the workers for the mine, the 100 in-migrants that are projected to work at the mine will have a hard time finding housing. That is because Valley County does not have a lot of idle houses that are available to rent or purchase. The Stibnite Supplemental DEIS specifically notes that the local rental market is becoming less affordable and the data that we have collected from the American Community Survey indicates that</p>	SOC	Refer to responses to the Power Consulting Incorporated comments #1 through #42.

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			<p>there are not enough vacant houses for sale for all the “local miners” to purchase one. What this adds up to is a housing market that is more expensive than the national average, more expensive than nearby Boise, and a market that will become increasingly less affordable for the locals if the mine is built and operated.</p> <p>When we look at the potential fiscal impacts of the proposed mine on the local area, much of the same pattern holds. For the operations phase of the proposed mine, there will be \$300,000 annually paid in property taxes which will go to Valley County during the operations phase, but all the other taxes are paid to state and federal governments. The \$300,000 must then cover the cost increases that the mine puts on Valley County which include schools, roads, infrastructure, and emergency medical services. If we use the DEIS’s methodology, then this increase in property taxes will not even cover the full costs of the miners’ children attending school, while leaving no tax revenues for the other increases in demand for public services that the miners may put on Valley County.</p> <p>With a well-paid, predominantly young, male workforce, with weeks at a time off, there are some social problems that can accompany this type of mining. Places like the Bakken in North Dakota and Montana and remote mining locations in Canada and Australia have been a natural research area to study the impact of this type of transient workforce. Since the miners will live at the mine site for two weeks while they work and then have two weeks off at a time, a separate culture will be created by the mine. Because of its structure, its pay, and the diverse cultures of its workforce, that separate mining culture may not fit well with the existing residents of the towns and cities that are closest to that mine.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	363	<p>c. Amenity values and community perception</p> <p>People have chosen to move to Valley County because of its natural beauty and the outdoor recreational opportunities that surround them. Additionally, people have been moving in at rates higher than the national, state, or rural county average, and they have brought “non-labor” income with them. In the economic literature these attractive local characteristics are called “amenities” and treated as economic values that improve the well-being of residents — just as the purchase of a home in an attractive neighborhood would. Recognition of the existence of these environmental values at certain locations also warns us that if we are not careful about how we manage special attractive natural landscapes, we may degrade significant existing amenities of considerable value, potentially creating a “dis-amenity” that leaves many people worse off.</p> <p>In one important sense, the proposed Stibnite Gold Project represents a gamble that puts at risk a known and existing outdoor economy that is supporting economic vitality in Valley County. What is being offered in its stead is a speculative but threatening multiple open pit mining venture that, if it is commercially successful, will bring only a relatively small and short “bump” in additional economic activity in Valley County. When a mine or other types of industrial facilities are proposed near where people live, the people that live in the area, as well as the people who know about the new facility and the area, may change the way that they think about that area. That is, a “stigma”, or negative perception, about an area caused by the negative characteristics associated with the industrial facility such as degraded air and water quality, noise, congestion, general run-down characteristics of the neighborhoods, falling property values, etc.</p> <p>The stigma can be the result of many different local industrial degradations, but for the purpose of this report, we will consider spills from truck traffic delivering supplies to the mine and spills from Tailings Storage Facility (TSF). There will be a dramatic increase in truck traffic as thousands of loads of materials are hauled from around the U.S. to the proposed mine site which will dramatically alter traffic patterns in the local area and all but assure that there will be spills. TSF are the permanent storage features at a mine that will hold back the toxic sediments that are left over from processing the ore to obtain the minerals. In the modern age of mining, and especially when dealing with open pit mines, there is an incredible volume of rock that is moved to recover a very small percentage of the mass moved as metal (in this case gold, antimony, and silver). The amount that is recovered, measured in grams per ton of rock moved, is between 1 and 2 in this case. TSF design, in recent years, has not kept up with</p>	SOC	Refer to responses to the Power Consulting Incorporated comments #1 through #42.

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			<p>advances in mining technology and the statistics on failure show that the newer TSF are failing at a higher rate than the older ones.</p> <p>The problem with having the proposed mine in Valley County is that so much of Valley County's economy is based on the high-quality natural landscapes that are in it and all around it. When we compare Valley County's economic vitality to that of the other Idaho non-metropolitan counties, we see that Valley County has significantly outperformed them. That is, people in Valley County received more income than their Idaho peers in other non-metropolitan counties. The average "bonus" to Valley County residents compared to the group of non-metropolitan counties was \$7,400 a year per person in 2020 dollars. However, a SGP related spill that casts a shadow of stigma over Valley County, could easily erase all potential benefits that the proposed mine could bring to Valley County during the mine operation phase. For example, a spill that caused a 2 percent decline in the Visitor-Recreation and Non-Labor Income in Valley County, could erase nearly all of the benefits of having 200 highly paid miners living in Valley County.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	364	<p>d. Socio-Economic Volatility in Mining Communities</p> <p>Metal mining is notoriously volatile, and gold is a charter member of the club of volatility. In fact, the price of gold has fluctuated by almost a factor of 10 in the last 50 plus years. However, regardless of gold price fluctuations, Valley County and the City of McCall will still have to make decisions about infrastructure. Things like schools, sewers, hospitals, roads, the size of the police and fire departments etc., will still require additional investments, because of the increased use by the miners.</p> <p>While mining jobs will likely pay above average wages, there will also be costs associated with having a mine in Valley County, and those costs have not been explored. Mines are generally located near small towns in rural portions of the U.S. that will have a harder time dealing with some of the negative impacts that come with the mine. What is unknown is what some of the costs associated with having the Stibnite mine in Valley County will be. The economic and social science literature tells us that there will be costs in the form of retarded economic growth, increased pressure on public services that Valley County provides, reduced educational attainment, and increased negative social interactions as a transient workforce tries to integrate into the local community. What this report also will show is that Valley County's economy is currently thriving and the reason that the economy is so robust, in large part, is because of the natural amenities that Valley County has. The possibility of short-term gain associated with the proposed mine should be carefully weighed against the potential for long term harm to an otherwise thriving economy.</p>	SOC	Refer to responses to the Power Consulting Incorporated comments #1 through #42.
R. Skipper Brandt, Ted Linsely, Denis Duman		6	<p>Our local economy is, in part, dependent on a healthy fish population. While there are many factors impacting the salmon population, it is positive to see private industry taking steps to enhance habitat and access. If done correctly, the rehabilitation of the East Fork of the South Fork of the Salmon River could set a positive example of river restoration activity throughout Idaho where streams have been heavily impacted by past mining activity. We know that barriers to fish passage negatively impact the population, the fish passage tunnel design could also set a very interesting precedent as a solution that could be used elsewhere in Idaho.</p>	SOC	Comment noted. No response required.
Diana Bryant		6	<p>I will end my comments with saying that the expanded megalithic mining proposal and the access to it, both during construction and during the life of the mine will destroy my business, one now of hosting backcountry visitors seeking solitude and wilderness atmosphere, and will severely impact my lifestyle, property and tranquility. My hope is that the project can be scaled down, the mine will operate only when the Burnt Log Road access is complete, and the mine operators will be held strictly responsible for the road maintenance and repair and any damage to the ecology of the area. Recent news of DOD funding makes that a forlorn hope, I fear.</p>	SOC	<p>Effects of the Project on the backcountry outfitters are described in Section 4.21.2.2 with effects on wilderness described in Section 4.20.2.2.</p> <p>Under the 2021 MMP, operations would rely on a completed Burntlog Route for mine access. However, the Johnson Creek Route would need to be utilized during the construction period until the time that the Burntlog Route was completed.</p> <p>A road maintenance agreement between Valley County and Perpetua would establish responsibilities for road maintenance and repairs.</p>
Samuel Cousins		22	<p>16. Emergency Services Overwhelmed. The local fire, emergency medical, and law enforcement services are understaffed and underfunded already, and will be seriously overburdened by the mining operations at Stibnite. This will threaten public health and safety of the citizens. The rural fire protection</p>	SOC	The Project's Transportation Risk Management Plan addresses preventative and emergency response measures and equipment for responding to incidents involving vehicle use (see SDEIS Section 4.16).

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			<p>district would be incapable of providing service to Stibnite. Specific problems that Perpetua has failed to address include: evacuating medical emergency patients from Stibnite, especially in winter, storms, ice, blowdowns, and other bad weather; extrication of accident victims from wrecked trucks and heavy mechanized vehicles without supplemental rescue machinery; emergency HAZMAT spill rescue and response; lack of response training; and other health and safety threats. Perpetua, not the taxpayer, must develop, commit to, and fund the needed mitigations for these problems caused by their Project. Effective mitigation measures to prevent these problems need to be developed and committed to by Midas before the project can be allowed to commence. Those measures that need to be in place upfront, not just promised, before the Project can begin. The SD EIS needs to fully disclose this specifically.</p>		<p>Perpetua would be responsible for implementation of the Transportation Management Plan. The Cascade Rural Fire District has indicated that it does not have the resources to provide service to Stibnite. Therefore, fire protection and response measures have been incorporated into the Project.</p>
Wayne Hammon, CEO		2	<p>Throughout the lifetime of this proposed project, Perpetua has committed to hiring, contracting with, and purchasing supplies and services from Idaho-based vendors benefits for local general contractors, laborers, engineers, and other construction professionals. During full operations of the mine, Perpetua expects to provide up to another 580 jobs for the local communities surrounding the site, with potential annual payroll reaching up to \$53 million. The jobs created during operations would range from management and administration to equipment operators and general laborers to mechanics, electricians, engineers, and more.</p> <p>And these are just the jobs that Perpetua as a company would directly create. Indirectly, the construction phase would support another approximately 800 jobs while operations would support 370 jobs in Central Idaho plus additional induced jobs. The overall local income impact to Valley and Adams Counties is quite significant. The Supplemental EIS estimates approximately \$30 million in annual income will be injected into local communities. This will help support and diversify the local recreation and service industry-based economy in the area with stable, non-seasonal, high paying jobs offering strong benefits.</p> <p>On top of the jobs this project would support, there is also the economic value added by the tax contributions the Stibnite Gold Project would make to the local and state economy. According to the economic impact analysis discussed in section 4.21, the project would cost a total of approximately \$1.1 billion to build and roughly \$230 million each year to operate, contributing significant local and state tax revenue and injecting hundreds of millions of dollars into the larger economy.</p> <p>After closely reviewing the Supplemental Draft Environmental Impact Statement released by the U.S. Forest Service, it appears that even your own agency recognizes this project's economic potential. The benefits are detailed in section 4.21, but it is difficult to determine total job impacts or income benefits of the project without closely reading beyond the executive summary. The final document would be improved if these economic benefits to Idaho from the Stibnite Gold Project were more clearly presented in the summary.</p> <p>Out of all the options that have been analyzed for the project in the DEIS and supplemental EIS, the Modified Mine Plan is far and away the most effective solution that will yield the largest environmental and economic benefit for Idahoans, and we support the decision of the USFS to select this as the preferred alternative. Moreover, additional delay to move this project forward would equate to continued inaction at the site, essentially preventing Idaho from ever seeing any restorative or economic benefits whatsoever.</p> <p>whenever possible. In fact, the company has already spent nearly \$100 million right here in Idaho by working with local vendors and contractors. Seeing this project through to its completion will create a supply chain of Idaho-based companies, strengthening the economic outlook for dozens or hundreds of local businesses and providing new opportunities for growth while supporting a stronger, more stable workforce.</p> <p>Based on projections in the Supplemental EIS section 4.21, the construction phase of the Stibnite Gold Project alone would directly employ up to 640 people, with an annual payroll that could reach up to \$66 million. Construction would of course provide numerous</p>	SOC	<p>Comment noted. No response required.</p> <p>The socioeconomic effects of the Project are summarized in the EIS Executive Summary with details provided in Section 4.21.2.2.</p>

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L. Bryan Williams, President		2	I am concerned that no attention has been given to the higher educational impact on our region. Hundreds of miners and their families will be arriving in Valley County and the surrounding region. Not all of these individuals will be trained to the levels needed for a successful mine. While many of the technical educational needs will, I assume, be handled by the mine, some employees who have deficiencies in the basic educational requirements will be searching for higher education. McCall College specializes in providing the GED and remedial education to our students. We are willing to help. However, no conversations on this topic have occurred with us. An assessment regarding the educational needs of the miners and the impact of these new students on our regional educational infrastructure needs to be addressed. While this concern should not delay the initiation of the mine, it should be addressed early to allow the region to prepare.	SOC	SDEIS Section 4.21.2.2 provides an estimate of the number of employees and school-aged family members expected to in-migrate into the area and describes the effect of that population increase on public education. The EIS has been revised to acknowledge that additional demands may be placed on local capacity for GED and other community college or adult education services.
Alan Prouty		5	The Project Will Provide Economic Benefits to Rural Idaho Historically, like a number of rural counties in Idaho, both Adams and Valley counties had strong timber and mining businesses that provided relatively high paying jobs. With declines in both of these industries, and the growth in both of these counties as recreation/"second home"/destination locales, the local economy has transitioned primarily to a service based economy. This has resulted in lower individual income and earning potentials. The existing average annual wage for Adams and Valley counties ranges from \$35,948 to \$37,465. This project will provide high paying jobs. The average (unburdened) wage associated with the SGP is \$67,700. This is a considerable increase and would provide opportunities for economic growth in these counties. It should also be noted that spending associated with mine construction and operation will provide additional economic opportunities for the local rural economy.	SOC	Comment noted. No response required.
Chris Schwarzhoff, Lois Schwarzhoff		2	We believe the proposal will likely have a devastating economic impact on the Village of Yellow Pine & will strongly impact cabin owners and residents in YP & Big Creek. Three years of no snowmobile access to Yellow Pine will close the few remaining businesses that are open year round. If this proposal avoided truly significant financial costs for the mine or avoided any kind of environmental impact then the proposal would have some merit, but neither are true for this proposal. This proposal just negatively impacts businesses in Yellow Pine, Winter recreation activities & access to private property.	SOC	Project effects on businesses (Section 4.21.2.2), recreation (4.19.2.2), and access (4.16.2.2) are described in the SDEIS. The SDEIS analysis indicates that there would be negative effects to these resources associated with the Project. However, as described in Sections 2.5.1 and 4.19.2.2, snowmobile access would be re-routed rather than eliminated. The re-routed snowmobile trail would parallel the existing Johnson Creek Road route. There would also be winter-time road vehicle access along Johnson Creek Road for the three winters where it is maintained for site access.

Environmental Justice

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	9	Supplementing the environmental justice analysis with EJScreen and considering mitigation measures for impacts including but not limited to loss of access and effects to subsistence.	ENJ	The Forest Service applied its methodology (Forest Service 2014d) to determine the presence of communities with Environmental Justice concerns and additional analysis was deemed unnecessary. Mitigation measures associated with Tribal Rights and Interests are described in Section 4.24 and are not duplicated in the Environmental Justice section.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	51	EJScreen The Forest Service employs a clear methodology for identifying people of color and low-income populations in the SEIS analysis and considers the need for a state-specific threshold to identify these communities. In addition to the methodology outlined by the Forest Service, EPA continues to recommend the FEIS supplement the analysis by including an EJScreen analysis and considering its datasets with the most recent version of EJScreen, EJScreen 2.1. EPA considers a project to be in an area	ENJ	The Forest Service applied its methodology (Forest Service 2014d) to determine the presence of communities with Environmental Justice concerns and additional analysis was deemed unnecessary.

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			of potential environmental justice (EJ) concern when an EJScreen for the impacted area shows one or more of the EJ Indexes at or above the 80th percentile in the nation and/or state.		
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	52	<p>Traditional Ecological Knowledge</p> <p>EPA appreciates that the DSEIS includes ethnographies of the analysis area prepared by the Nez Perce Tribe, the Shoshone-Paiute Tribes, and the Shoshone-Bannock Tribes. EPA recommends the FEIS include the identification, inclusion, and integration of Traditional Ecological Knowledge (TEK) into the NEPA analysis. In addition to anticipated impacts from the project, as well as traditional hunting and land use patterns in the area, this can include the collection of local and traditional knowledge concerning the affected environment and could be used to support the understanding of how climate change has impacted local environmental resources and subsistence resources. In addition to reviewing any pertinent traditional environmental knowledge currently available, additional studies and outreach may be conducted as necessary to clearly identify potential impacts, including cumulative impacts, from the proposed project and project alternatives, and help inform avoidance, minimization, and compensation strategies across affected environmental resources. As an example, this could include potential impacts from increased noise and air emissions that may affect fish and wildlife that are of cultural and subsistence importance to communities with EJ concerns.</p>	ENJ	Because the communities identified with Environmental Justice concerns are three tribal communities, the description of impact effects on the communities (e.g., noise, wildlife, fish) are included in Section 4.24 which analyzes project impacts to Tribal Rights and Interests. As noted in Section 3.24, ethnographies for the three Tribes were completed and were focused on the project area and the local resources. Therefore, the analysis in Section 4.24 identified impacts to those resources of importance to the Tribes.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	53	<p>Mitigation</p> <p>EPA notes that the DSEIS indicates that at this time, no mitigation measures have been identified for Environmental Justice and for several of the resource sections that are relevant to Environmental Justice. For the FEIS, EPA recommends including mitigation measures developed upon contribution and feedback from the communities with EJ concerns if the information can be publicly disclosed, or alternatively, note that mitigation measures have been developed or are contingent upon contribution and feedback from the communities with EJ concerns.</p>	ENJ	Because the communities identified with Environmental Justice concerns are three tribal communities, the description of mitigation measures associated with impacts to those communities are included in Section 4.24 (Tribal Rights and Interests). Although at the time of the SDEIS, no mitigation had been identified, additional consultation with the Tribes has been conducted. Mitigation narrative has been updated in the Final EIS.
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	54	<p>Access Mitigation</p> <p>The ~14,221 acres of public lands within the Operations Area Boundary will become inaccessible to communities with EJ concerns. This restricted access has potential to result in additional adverse and disproportionate impacts by limiting subsistence or traditional use by communities with EJ concerns, including tribal members and indigenous peoples. The DSEIS indicates that the action alternatives will remove access to a culturally important area for approximately 20 years. The DSEIS indicates that a mitigation measure for access impact would be incorporated into any decision on the SGP due to long-term loss of access to land while the lands are occupied for mining.</p> <p>To the extent information can be publicly disclosed, EPA recommends including in the FEIS additional information on proposed access mitigation. EPA continues to recommend working with communities with EJ concerns to identify priority areas that will be affected by SGP, and using input from these communities to identify access opportunities, develop mitigation plans, and developing plan to restore access at the conclusion of the project. If there is interest from communities with EJ concerns in maintaining partial access to specific high-priority areas within the Operations Area Boundary, then EPA encourages Forest Service to work with these communities and the project proponent to determine specific times that may be reserved for safe access, if possible.</p>	ENJ	Because the communities identified with Environmental Justice concerns are three tribal communities, the description of access limitations and the provisions for safe access are described to the extent that is feasible publicly in Section 4.24 (Tribal Rights and Interests).
Chu, Rebecca (Chief, Policy and Environmental Review Branch)	18834	55	<p>Replacement Cost Method for Subsistence Foods</p> <p>EPA recommends that the Forest Service consider the potential use of the replacement cost method (RCM) to quantify the monetary cost of replacing subsistence foods that may be lost because of SGP activities. RCM is a standard technique for evaluating the dollar value of an ecosystem service. Subsistence harvest patterns could be disrupted by harvesters' self-imposed restrictions on resources considered to be tainted, or as a result of space-use conflicts (e.g., increased number of users resulting from changes to access), or due to the temporarily avoidance of subsistence use areas due to noise impacts and habitat loss expected from construction and operation. When subsistence foods are not available, nutritionally comparable substitutes must be purchased, placing a direct financial burden on</p>	ENJ	Because the current Project area consists of a historically unreclaimed mine site, there is no documentation of subsistence food gathering in the area, thus no additional work with the communities are deemed necessary for this issue.

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			subsistence users in the form of lost harvest, as well as an indirect burden from stranded assets that users purchase for harvest activities (e.g., fishing or hunting equipment, 4x4 vehicles). EPA recommends that Forest Service work with communities with EJ concerns to consider potentially developing and adopting mitigation measures that will compensate for potential losses in harvest using the RCM.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	378	<p>BB. Environmental justice</p> <p>The SDEIS (P. ES-32) predicts “Adverse impacts to tribal rights and interests under either alternative, including preventing access to traditional lands, harming traditional fishing and hunting rights, impacting endangered salmon and concerns that it would harm the tribe’s salmon restoration efforts.”</p> <p>On December 1, 2022, the Biden administration announced new best practices for Tribal Treaty and Reserved Rights to integrate Tribal treaty and reserved rights into agency decision-making processes, including decisions by DOI, DOD, DOA, and other agencies. As recognized by the Biden-Harris administration, indigenous people have been disproportionately harmed by mining.</p> <p>In a December 2022, press release, Agriculture Secretary Tom Vilsack, stated that the “USDA is committed to addressing deeply embedded rules and policies that disadvantage Tribal nations and communities.” In response to the notice of new best practices, Secretary Vilsack stated that “These regulations and policies will protect Indigenous interests and resources from mining impacts and give them a voice in mining activities before they begin.”</p> <p>In addition, on November 15, 2021, the Department of the Interior and the Department of Agriculture issued Joint Secretarial Order No. 3403: “Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters.” The order’s purpose is to ensure that the Departments manage “Federal lands and waters in a manner that seeks to protect the treaty, religious, subsistence, and cultural interests of federally recognized Indian Tribes,” including “areas where Indian Tribes have reserved the right to hunt, fish, gather, and pray pursuant to ratified treaties and agreements with the United States.” Notably, the Department of the Interior and the Department of Agriculture “recognize and affirm that the United States’ trust and treaty obligations are an integral part of each Department’s responsibilities in managing Federal lands,” and that “the Departments will benefit by incorporating Tribal expertise and Indigenous knowledge into Federal land and resources management.”</p> <p>Treaty rights must be respected. We support and incorporate by reference the comments from the Nez Perce Tribe on these issues. The SDEIS must describe how these issues are addressed in the NEPA process related to the proposed mine plan and associated FEIS and ROD issued by the Forest Service and BLM, along with recent decisions by the Department of Defense to authorize funding from the DPA Investments Program for SGP.</p>	ENJ	<p>Adverse impacts to tribal rights and interest are described in Section 4.24 (Tribal Rights and Interests). Mitigation measures developed for those impacts are also described in the section and will be incorporated into the ROD for the Project.</p> <p>Information on the government-to-government consultation process used to develop the impact analysis and mitigation measures appear in Chapter 6 of the EIS.</p>
Samuel Penney (Chairman)	19396	163	<p>Environmental Justice</p> <p>Environmental Justice is more than Executive Order 12898. On January 27, 2021, President Biden signed Executive Order 14008 on Tackling the Climate Crisis at Home and Abroad. In E.O. 14008, President Biden made clear that securing environmental justice must be a key consideration in how the United States governs. One key undertaking is the Justice40 initiative, requiring that 40 percent of the overall benefits of certain federal investments flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution. The categories of investments include climate change, clean energy and energy efficiency, remediation and reduction of legacy pollution, and development of critical clean water and wastewater infrastructure. On January 10, 2022, USDA issued a memo to agencies that provided guidance on how each mission area can effectively integrate and operationalize Justice40 (“J40”) implementation as part of the agency equity action plans. USDA mission areas identified J40 Covered Programs, the program benefits to drive toward underserved communities, and metrics for each program to track success.</p> <p>USDA, under Secretary for Natural Resources and Environment, established a Forest Service Equity Action Plan representing a broad set of high-leverage actions with potential for creating high impact and enduring systemic change that benefit employees, tribes, partners, and the public.</p>	ENJ	<p>The incorporation of Executive Order 14008 for communities with Environmental Justice concerns was incorporated into Section 3.22.3 of the EIS. Executive Order 14008 was also included in analysis of climate change effects in Sections 3.4.3. This Project does not fall under a Justice 40 initiative program.</p> <p>Information regarding the Forest Service efforts with regard to its tribal trust responsibilities appears in Chapter 6 of the EIS. Incorporation of the analysis of effects on Tribal Rights and Interests is described in Section 4.24.</p>

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			As part of this Forest Service Equity Action Plan update, the agency developed a Forest Service J40 implementation plan. J40 is considered one of the key priorities USDA is leveraging to support the goals of Executive Order 13985 on advancing racial equity, namely, reducing barriers and increasing investments in underserved communities. In addition, Executive Order 13985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, requires the head of each agency to prepare a plan for addressing any barriers to full and equal participation in programs, services, procurement, contracting, and other funding opportunities. In this plan, the Forest Service committed to assessing barriers and identifying equity outcomes for underserved communities by focusing on several actions including increasing tribal trust responsibilities and participation in Forest Service activities that honor tribal rights and interests.		
Samuel Penney (Chairman)	19396	402	<p>Environmental Justice</p> <p>The Forest’s analysis of environmental justice impacts is inaccurate and requires revision. The Agency’s obligations under applicable executive orders and policies relating to environmental justice impacts are not limited to physical and biological environmental justice impacts on reservation lands. Indeed, the Tribe’s treaty-reserved rights secured in the 1855 and 1863 Treaties are necessarily rooted in the Tribe’s and United States’ mutual understanding that the Reservation would not be sufficient in geographic scope and resource availability to continue to provide for the cultural, subsistence, ceremonial, spiritual, and economic needs of the Tribe. Through the 1855 Treaty, the Tribe therefore reserved to itself, and the United States secured, the right to travel off reservation and fish at all usual and accustomed fishing places, and hunt, gather, and pasture on open and unclaimed land. The Tribe’s reservation of rights which it has exercised as a sovereign since time immemorial -to continue to access and use resources across its homeland – was fundamental to the Tribe’s agreement to cede millions of acres of this land to the United States.</p> <p>Accordingly, the Forest’s direction to limit its analysis of physical and biological environmental justice concerns to reservation lands, while ignoring the intent and scope of the Tribe’s off reservation treaty-reserved rights, is erroneous. Fully evaluating and addressing the physical and biological impacts on the Tribe’s treaty resources is not only a treaty obligation rooted in the Agency’s obligations under the U.S. Constitution but is also necessary to fully understand the environmental justice impacts that disproportionately affect the Tribe.</p>	ENJ	<p>The Forest Service applied its methodology (Forest Service 2014d) to determine the presence of communities with Environmental Justice concerns.</p> <p>Through application of this methodology, the Nez Perce Tribe was identified as a community with Environmental Justice concerns.</p> <p>The analysis recognized tribal member use of accustomed fishing places and hunting, gathering, and pasturing on unclaimed land. These effects are discussed in Section 4.24 of the EIS (Tribal Rights and Interests).</p>
Samuel Penney (Chairman)	19396	403	<p>Mitigation</p> <p>The SDEIS fails to adequately discuss mitigation measures for the Project. NEPA implicitly requires the discussion of mitigation measures in impact statements by requiring the discussion of “any adverse environmental effects which cannot be avoided.” Council on Environmental Quality regulations implement this implicit requirement by requiring the discussion of mitigation measures in impact statements.⁴ Agencies must discuss measures in sufficient detail to ensure there has been a fair evaluation of environmental consequences. The discussion must also be reasonably complete.⁶¹⁶ An inadequate discussion of mitigation measures in the impact statement is a violation of NEPA.</p> <p>The SDEIS repeatedly states, “[m]itigation measures and monitoring actions [that will] not be known fully until required permits have been issued.” The SDEIS also states that, following the Record of Decision, Perpetua would integrate all required Forest requirements and mitigation commitments into the current draft Environmental Monitoring and Management Program, which consists of a program framework and appendices containing component monitoring and management plans.</p>	ENJ	<p>Applicable mitigation measures identified at the time of the SDEIS publication were described for each resource.</p> <p>Further mitigation measures identified via the public comments on the SDEIS, and as applicable, have been incorporated into the Final EIS and mandated by the project’s ROD.</p>

Special Designations

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Snake River Fund	16536	5	The South Fork Salmon River, an eligible Wild and Scenic section of river, is situated downstream of the proposed SGP. Forest Service-identified eligible and suitable rivers must be protected sufficiently to maintain free flow and outstandingly remarkable values (FSH 1909.12; 84.3). It is no great stretch of the imagination to see how upstream activities on the SGP could impact the Outstandingly Remarkable scenery, recreation, cultural resource sites, and fisheries of the South Fork Salmon.	SPE	Under planned operating and closure conditions, water quality of surface flow departing from the SGP would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (EIS Section 4.9). As noted in Section 4.23.2.2, there would be no impact to the free-flowing characteristics of the South Fork Salmon River. Impacts to ORVs associated with the segment would be of limited geographic extent and associated with the existing disturbance of the crossing of Warm Lake Road over the South Fork Salmon River. Therefore, long-term direct impacts to scenery ORVs would be minor. There would be no construction impacts to geological, cultural, botanical, and fisheries ORVs. Construction activities could briefly limit recreational access to the Recreational SFSR during widening of the transmission line ROW where it crosses the river at Warm Lake Road which would be temporary, negligible to minor, and localized.
Lehrer, Laura	16878	7	7.Degrading the nearby Frank Church-River of No Return Wilderness with noise and light from mining activities. Idaho contains some of the few remaining dark sky areas. Our remote noise and light-free areas may not be quantifiable in monetary terms in the way that gold and antimony are, but I would argue that their intrinsic value and the irreplaceable role they fill in the natural system deserve equal weight in the decision making process.	SPE	Dark skies were analyzed in Section 4.23.2.2 Wilderness/Untrammled and noise near the FCRNRW was analyzed in 4.6.2.2 of the SDEIS.
John Lewinski	17003	2	There are many terrible consequences if this project goes forward. I will comment on the roadless characteristics that will be gone as well as the effects on big game species. I have lived in the area for 42 years and have hunted elk extensively in the Stibnite area. I have killed five elk within just a few miles of the project boundary, two within two miles. The project proposes to build a temporary extension of the Burntlog road to provide access to the mining project. If this road is built I do not believe that it will ever be put back into a roadless condition. All one has to do is travel to the West side of the Payette Forest to see what happens when roads are put into an area only to be supposedly be put to bed later. The west side of the Forest is riddled with ATV trails that were supposedly closed to the public after a logging project was completed. The hauling road may have a few berms made and some brush or trees put over the roadbed but soon ATVers will wildcat around the berms or boulders and cut through the fallen snags or brush piles and soon the old road becomes an ATV trail and big game wildlife use plummets. Any good elk hunter will tell you that when an area becomes an ATV area used by the general public most of the elk are gone. I have served on the Payette Forest Coalition for seven years since my retirement. I asked a Forest Service employee to find out how many citations were issued find out how many citations were issued for illegal motorized use on the Forest for a year period. The answer was nine. A total of nine citations were given on the entire Forest for a yearlong period by Forest Service personnel. I cannot believe that building a haul road, large enough to service mining trucks is ever going to be put back into a roadless condition. The history of such projects foretells disaster. And it is right next to the Frank Church Wilderness. The elk in the area will be replaced by an ATV dirt track long-term if this mining proposal goes forward.	SPE	Since the SDEIS, a mitigation measure to restrict public access on the new segments of the Burntlog Route has been added to the Final EIS. The EIS discloses potential impacts to the nature of roadless areas and wilderness values.
Kevin Proescholdt	17616	3	Wilderness Analysis Rather than looking at impacts to Wilderness as a whole, the SDEIS and supporting materials fragment the wilderness analysis. The Stibnite Gold Project Special Designations Specialist Report (SD) states: Issue: The SGP could change the quality of wilderness character in designated or recommended wilderness areas. Indicators:	SPE	SDEIS Section 4.23.2.2 describes the effects on wilderness character qualities including untrammled, natural (plants, fish, wildlife, air, water, and ecological processes), and undeveloped. These descriptions examine the implications of other environmental resource effects (e.g., air quality) on the wilderness character.

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			<p>*Distance of SGP facilities from designated or recommended wilderness.</p> <p>*Distance of designated or recommended wilderness from sights and sounds of human activity.</p> <p>*Change in opportunities for self-reliant recreation within designated or recommended wilderness.</p> <p>SD at 26. See also SDEIS at 4-623. This downplays the threats to Wilderness by limiting those indicators and/or relegating wilderness impacts elsewhere in the SDEIS. For example, even the SDEIS admits impacts to Wilderness are not confined to the Frank Church-River of No Return by mentioning potential air quality impacts to surrounding areas designated as Wilderness including the Selway-Bitterroot, Gospel-Hump, Sawtooth, Hells Canyon, and two of the three wildernesses in the Boulder White Clouds (See SDEIS at 3.3-2 and analysts beginning at 4-22)*. However, the analysis of the other areas only looks at Clean Air Act issues without an adequate analysis of impacts to Wilderness, thereby inappropriately conflating the requirements of the Clean Air Act with those of the Wilderness Act. Both sets of impacts should have been analyzed.</p>		
Kevin Proescholdt	17616	4	<p>Furthermore, the Frank Church-River of No Return Wilderness and seven other areas designated as Wilderness (see Figure 3.3-2) do not have a provision in their respective laws prohibiting the establishment of buffer zones.</p> <p>Because of this, the Forest Service is required to analyze the impacts to designated Wilderness from activities outside of the wilderness boundaries (See Izaak Walton League of Am., Inc. v. Kimbell, 516 F.Supp. 2d 982).</p> <p>Yet, the SDEIS does not discuss the interplay between the substantive requirements of the Wilderness Act, including preservation of wilderness character and the Forest Service's Manual Direction meant to do that by preventing degradation, and the recognized impacts on air quality from this proposal. The SDEIS simply and erroneously dismisses potential degradation in the Frank Church-River of No Return Wilderness as minor without recognizing even minor degradation is antithetical to preserving wilderness character (SDEIS at 4-631).</p>	SPE	Application of the Wilderness Act of 1964 is described in SDEIS Section 3.23.3. SDEIS Section 4.23.2.2 describes the potential minor indirect effects on wilderness character associated with the proposed Project which is located outside the wilderness boundaries. The Forest Service considers those effects and the requirements of the Wilderness Act as part of its project decision.
Kevin Proescholdt	17616	5	<p>Similarly, the SDEIS makes no conclusion as to whether the preferred alternative is consistent with the letter or spirit of the Wilderness Act regarding the indicators that are analyzed for the Frank Church-River of No Return Wilderness. The agency has full authority to reject the preferred alternative based upon negative impacts to Wilderness. For example, the following four serious problems that come from the Burntlog route** in the preferred alternative illustrate the problems of this alternative:</p> <p>*The SDEIS admits to additional impacts to the Wilderness in terms of wildlife displacement (SDEIS at 4-629), yearlong access in this remote area (SDEIS at 4-626), sediment damage to fisheries and water quality into the Wilderness (SDEIS at 4-631).</p> <p>*The SDEIS notes a new road segment would be built in roadless country on the wilderness boundary (SDEIS at 4-627 and 4-628). While it is claimed the impacts would be 100 feet (ibid.) from the Wilderness, the small-scale maps in the SDEIS show it right on the boundary, which in this place is a ridge (see Figures 2-1 and 1-3).</p> <p>Further, the most logical location for the road would be on top of the extant pack trail, which dips in and out of the Wilderness. See https://data.fs.usda.gov/geodata/rastergateway/states-regions/states.php for the official Forest Service topo map of Chilcoat Peak showing the trail. The risk of inadvertently building part of this road in Wilderness is too great in this remote area.</p> <p>*The SDEIS fails to quantify or mitigate against the increased probability of illegal motorized or mechanized use in the Wilderness. Having a high-standard road open year round right on the boundary of the Wilderness would likely increase illegal use summer and winter.</p> <p>Simply put, the selection of the Burntlog route would violate the Wilderness Act.</p>	SPE	<p>Since the SDEIS, a mitigation measure to restrict public access on the new segments of the Burntlog Route has been added to the Final EIS. The EIS discloses potential impacts to the nature of roadless areas and wilderness values.</p> <p>The road design avoids the wilderness boundary and Project approval would require that avoidance.</p>

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Kevin Proescholdt	17616	6	The SDEIS does not analyze impacts to the Frank Church-River of No Return Wilderness or Gospel-Hump Wilderness downstream of the project area. The lower portion of the South Fork Salmon River is within the Frank Church-River of No Return Wilderness and the Main Salmon below the South Fork Confluence forms the boundary between the two wilderness units. Water quality impacts in the upper East Fork of the South Fork will flow downstream.	SPE	SDEIS Section 4.9.2.2 describes the water quality effects of the Project. Water quality effects extending to wilderness areas downstream of the Project area are not anticipated.
Kevin Proescholdt	17616	10	** Aside from the damage to Wilderness, it would appear the Idaho Roadless Rule intended to limit road construction for "Minerals activities in Idaho Roadless Areas." (emphasis added) 36 CFR 294.25. See also 36 CFR 294.23. The proposed mine itself is outside of roadless areas with extant road access.	SPE	The Idaho Roadless Commission has approved of the Project, and the Project would be in compliance with the applicable Roadless rule/laws. Impacts to other resources were disclosed in their respective SDEIS sections, regardless of IRA boundaries. Since the SDEIS, a mitigation measure to restrict public access on the new segments of the Burntlog Route has been added to the Final EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	3	The South Fork Salmon is a major tributary to the second longest free-flowing river in the lower 48 states, the Wild and Scenic Main Salmon River. Most of the South Fork Salmon and many sections of its tributaries have been deemed eligible and suitable under the Wild and Scenic Rivers Act by the U.S. Forest Service. It continues to boast critically important spawning habitat for migratory fish. Recognizing this importance, federal agencies, tribes, and other organizations have expended significant efforts to improve the ecological health of the watershed. The South Fork Salmon watershed is indeed a cornerstone in ongoing efforts to restore threatened Chinook salmon and steelhead to Idaho.	SPE	No further response required. General in nature or position statement.
Amelia Weber	18155	7	As proposed, the SGP raises numerous concerns for rivers protected under the Wild and Scenic Rivers Act (WSRA). The project itself is located at the headwaters of the suitable South Salmon River, which feeds directly into the designated Main Salmon River. However, the scope of analysis does not include any potential impacts that extend downstream of the site boundary to review these sections of river. Additionally, Johnson Creek and Burntlog Creek, both eligible under the WSRA, will both face degradation and risk of a catastrophic toxic spill if this project moves forward.	SPE	SDEIS Section 4.23.2.2 describes the effect of the project on Wild and Scenic Rivers. Impacts associated with the Project are not anticipated to extend from the Project area to downstream eligible or suitable WSRs. Project effects (including spills) on Johnson Creek and Burntlog Creek are included in the SDEIS analysis with further information regarding the effects of spill described in SDEIS Section 4.7.2.2.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	51	Section 1.3. Wild and Scenic Rivers The river segments that are the focus of this analysis include: Burnt Log Creek (eligible - recreational), Johnson Creek (eligible - recreational), and South Fork Salmon River (suitable - recreational) (Forest Service 2003a, 2010). Are these river sections only eligible for recreational? These should be listed for cultural and customary properties, significant to the Shoshone-Bannock Tribes.	SPE	As noted in Section 3.23.4.2 of the SDEIS and Section 6.1.2 of the Special Designations Specialist Report, the three stream segments are WSR eligible or suitable under a Recreation classification. However, also noted is cultural significance for Native American interests.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	52	An approximately 2.9-mile segment of Johnson Creek located in BNF MA 21 is eligible for inclusion in the National System, with a preliminary classification of recreational. Figure 6-3 shows its location. The VQO for Recreational WSR segments is partial retention. This reach of Johnson Creek is eligible for WSR status because of its ORV for cultural (heritage) resources. There are numerous known historic and prehistoric sites along Johnson Creek (both in and outside of the eligible corridor); those that are eligible for listing on the National Register of Historic Places are historic properties (Forest Service 2022e). Any historic properties located within the 2.9-mile eligible corridor would contribute to its Heritage ORV (Forest Service 2010). The existing Idaho Power Company Line 328 (transmission line) was built to service the Stibnite Mine during World War II and is recognized as a contributing Heritage resource under which Johnson Creek is eligible (Forest Service 2013). This transmission line would be replaced with a higher-capacity line as part of the SGP. If the existing Idaho Power line 328 is recognized as contributing to Heritage resource for Johnson Creek-how can this transmission line be replaced and still maintain the status as Heritage?	SPE	Subsequent to the release of the SDEIS, Idaho Power reevaluated Line 328 and revised its NRHP evaluation to Not Eligible. This rationale for this was reviewed by Idaho SHPO and the SHPO concurred that the transmission line is Not Eligible for the NRHP. Therefore, upgrading the transmission line would not be an adverse impact.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	53	Burnt Log Creek, located in MA 20 Upper Johnson Creek, is eligible for inclusion in the National System from its headwaters to its confluence with Johnson Creek. Burnt Log Creek has an ORV for fish (Forest Service 2010), as it is a Pacfish/Infish priority watershed that supports spawning and rearing habitat for wild Chinook salmon, steelhead, cutthroat trout, redband trout, and bull trout. From its headwaters to the crossing of Burnt Log Road (FR 447), Burnt Log Creek is eligible as a recreational river. Downstream of Burnt Log Road it is eligible as a wild river. Figure 6-2 shows its	SPE	The ORV that supports the Burnt Log Creek's eligible status as a Wild and Scenic River segment is fish for both the wild and recreational segments. At the time of the Forest Service evaluation, no tribal heritage resources had been identified to support a cultural or heritage ORV.

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			location. The VQO for the recreational segment is partial retention. The VQO for the wild segment is preservation. Burnt Log Road crosses Burnt Log Creek and several of its tributaries. It separates the recreational segment upstream of the road from the wild segment downstream. The entire section of Burnt log creek should be designated as Cultural and heritage.		
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	54	Table 6-11 IRAs and Lands Contiguous to Unroaded Areas Special Features. Add Shoshone-Bannock Tribe cultural and customary areas to this table, special gathering areas.	SPE	In both the Final EIS and the Special Designations Specialist Report, a sentence was added to the narrative that states: "Another special feature of all the IRAs and contiguous unroaded lands may include the exercise of treaty rights and traditional uses as these landscapes and plant resources therein generally retain a high degree of integrity (Forest Service 2008a). Additional information regarding tribal cultural, customary, and traditional use areas is provided in the Tribal Rights and Interests Specialist Report (Forest Service 2023)." Tribal gathering areas and other areas of importance are addressed in the Tribal Rights and Interests sections of the SDEIS and Specialist Report.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	56	7.2.2.2 2021 MMP Existing or new mining activity on a Forest Service-identified Wild, Scenic, and Recreational eligible or suitable river segment are subject to regulations in 36 CFR part 228 and must be conducted in a manner that minimizes surface disturbance, sedimentation, pollution, and visual impairment (FSH 1909.12, Chapter 84.3). Burnt Log Road (FR 447) crosses the WSR-eligible Burnt Log Creek and its tributaries. The road would change from a summer-only route with primarily recreational traffic to year-round use involving plowing, de-icing, and serving heavy industrial vehicles. Rock, gravel, and sand required to construct and maintain the road surface would be quarried from locations along the route. How does this action comply with FSH 1909.12, Chapter 84.3? Changing to year-round industrial use does not comply. 15 years is not temporary. It is permanent.	SPE	As stated in Sections 1.10.3.4 and 4.23.2 there would not be any adverse effects that would affect the eligible segment and there would be no impairment to the free-flowing characteristics of the segment. Therefore, the Project would comply with FSH 1909.12, Chapter 84.3.
Zack Waterman (Northern Rockies Conservation Director)	19317	5	Impacts to eligible, suitable, and congressionally designated Wild & Scenic Rivers have not been considered. The SDEIS completely fails to address potential adverse impacts to the congressionally designated Main Salmon and Middle Fork Salmon rivers. Impacts to water quality in the South Fork Salmon River and its headwaters may negatively impact the Outstandingly Remarkable Values (ORVs) of the Main Salmon River. The Middle Fork Salmon River will likely be impacted, as the Burntlog access route uses significant portions of the high divide that separates the South Fork Salmon River and Middle Fork Salmon River watersheds. Light, visual, water, and dust pollution may impact the scenery ORV of the Middle Fork Salmon River. Additionally, three rivers within the project analysis area have been deemed to be eligible or suitable for inclusion in the National Wild and Scenic Rivers System: Burntlog Creek (eligible), Johnson Creek (eligible), and the South Fork Salmon River (suitable). While the SDEIS acknowledges that mining activities would adversely impact ORVs for water quality and fish, there is no consideration of mitigation measures to reduce impacts - such as graveling access roads to reduce sedimentation.	SPE	Under planned operating and closure conditions, water quality of surface flow departing from the SGP would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (SDEIS Section 4.9). The Main Salmon River is over 40 miles from the closest project component (Johnson Creek Route - intersection of Johnson Creek and Stibnite roads). There would be no impacts to recreation use of or to the values of the designated Wild and Scenic Main Salmon River. The Middle Fork Salmon River is more than 20 miles east of the SGP, is separated by mountainous topography, and is within a different hydrologic basin; it would not be affected by light, visual, water, or dust impacts. As noted in Section 2.4.4.4 of the EIS, ditch and culvert repair, gravel, and dust suppression are proposed as part of the minor surface improvements during use of the Johnson Creek Road. Burntlog Route construction would include sub-base material and gravel, as well as application of a road binding agent to suppress dust and reduce sediment runoff. These are part of Project design.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	688	"As such, the 2021 MMP, in combination with the RFFAs, could cumulatively impact the untrammeled quality of wilderness character " This sentence seems to conflict with what precedes it in this section. Also, "the RFFAs" in the preceding passage are considered as a whole, and the specific operating hours and management practices are not qualified. Please revise to clarify how this conclusion of cumulative impacts is made.	SPE	Revisions made to improve clarity.
Alan Haslam (Vice President, Permitting, Perpetua	19325	689	"Reducing sediment in the drainage would improve water quality and indirectly fish habitat quality. " Please add restoration and enhancement of physical habitat to this list.	SPE	Revision rejected as this statement is specific to reducing sediment.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	690	"Effects on IRAs and the lands contiguous to unroaded areas could overlap in space and time with the direct and indirect effects and the following RFFAs " Please define the CEA in this section.	SPE	Added description of CEA.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	691	"Surveys and treatments implemented for the Johnson Creek Route Alternative and the RFFAs would cumulatively reduce the effects on the natural roadless character. " This would also be true for the MMP. Please include in that section as well.	SPE	Added.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	692	"The RFFAs that could contribute to cumulative changes in research values, ecological site conditions, or change ecological processes within the CEA are: " Please define the CEA in this section.	SPE	Added description of CEA.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	568	Figure 3.23-2 This figure should include the analysis area on it for WSRs. Please revise.	SPE	South Fork Salmon River watershed added to Figure 3.23-2.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	569	Figure 3.23-4 Please indicate what the solid gold coloring is adjacent to the RCAs on this figure. This figure should contain the analysis area on it to confirm both RNAs fall within it. Please revise.	SPE	The hatched gold areas are the RNAs themselves and the names of the RNAs are indicated adjacent to the RNA. Measurements were taken to ensure that the two RNAs included on the figure are within 5 miles of SGP facilities. No revisions to the figure were made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	570	"The existing conditions of wilderness within the analysis area relative to the five qualities of wilderness identified in the Wilderness Act (untrammled, natural, undeveloped, opportunities for solitude or primitive and unconfined recreation, and other features of value) are summarized " If these qualities are quantifiable please include them in the following sections, (i.e. how many acres of these qualities exist within the SGP analysis area for this resource).	SPE	The five qualities of wilderness are not directly quantifiable. The Forest Service incidentally tracks encounter data that provides some idea of the type of solitude that could be expected within a given area, but it would be extremely difficult to quantify how this relates to areas within the SGP analysis area. However, it is to be expected that the closer one travels to the designated wilderness boundary, the more likely the user would be to encounter evidence of civilization.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	571	"This river segment is in BNF MA 19 Warm Lake and is estimated at 27.5 miles. " For this river segment and all others identified in this section please quantify how many miles of described segment fall within the SGP analysis area for this resource.	SPE	As stated in Section 3.23.4.2, the analysis area for WSRs includes the three streams so no quantification is needed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	572	"4.2 – Roaded Recreation Emphasis5.1 – Restoration and Maintenance Emphasis within Forested Landscapes " This bullet does not sync with table 3.23-2 below. Should MPC 5.1 in the table be MPC 4.2 or visa versa? Please edit table or list for consistency.	SPE	A hard return was missing before 5.1 - Restoration and Maintenance Emphasis within Forest Landscapes. Confirmation of the MPCs has been conducted.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	573	"Table 3.23-3 lists the MPCs for the approximately 9,361 acres of lands in the analysis area that are contiguous to unroaded areas administered by the BNF or the Salmon-Challis National Forest shown on Figure 6-4 of the SGP Special Designations Specialist Report (Forest Service 2022p). " This acreage is not easily discernable in Table 3.23-3. If it is a combination of management areas, please explain.	SPE	The acreage should have been the table total, which was incorrect. It should be 9,498 acres. This has been updated in both the EIS and the Special Designations Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	574	Please add a column to this table to indicate what portion of this part of the IRA falls within the SGP analysis area.	SPE	Column added as requested.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	575	Please add a column to this table to indicate what portion of this part of the IRA falls within the SGP analysis area.	SPE	Column added as requested.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	576	"WSR Indicators: <ul style="list-style-type: none"> • Free-flowing conditions for eligible and suitable WSR segments; • Water quality for eligible and suitable WSR segments; • ORVs for which eligible and suitable WSR segments are designated or nominated; • Potential changes to classification of eligible and suitable WSR segments as Wild, Scenic, or Recreational. " Please revise this list to be the same as Table 1.10-1, as shown below. WSR Indicators: <ul style="list-style-type: none"> •Changes to free-flowing conditions for eligible and suitable WSR segments; •Changes in water quality for eligible and suitable WSR segments; •Changes to ORVs for which eligible and suitable WSR segments are designated or nominated; •Changes to classification of eligible and suitable WSR segments as Wild, Scenic, or Recreational. 	SPE	Revised as requested in both the EIS and the Special Designations Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	22	Applicable SDEIS sections have been reviewed and comments are provided for Sections 3.23 and 4.23.	SPE	Comment noted.
Jon Robison	19330	2	I first paddled the East Fork South Fork Salmon River, Johnson Creek and South Fork Salmon River more than 20 years ago. I had worked as a river guide in North Carolina and Utah and was lucky enough to have kayaked in Pakistan, Nepal, Chile and New Zealand. I found that the East Fork South Fork Salmon River and the South Fork Salmon to be fully as remarkable and outstanding as world-renowned rivers. Since my first visit there, I have returned to the area to paddle, camp, hike, bike, backcountry snowboard, fish, birdwatch, and enjoy hot springs. I had also driven up to Stibnite in the early 2000's and was appalled to see the degradation that mining had left on our public lands. I became increasingly concerned about how activities in the Stibnite area	SPE	No further response required. General in nature or position statement.

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			might increase pollution there or disperse pollutants farther downstream or downwind. I have kayaked several rivers that have been damaged by historic mining and the negative impacts include public health risks and greatly diminished or non-existing fisheries. As a result, I avoid rivers with mining impacts and prefer to paddle more pristine rivers with administrative or Congressional protections. The South Fork Salmon River, Johnson Creek and other rivers in the area are suitable for protections under the Wild and Scenic Rivers Act which would largely protect their Outstandingly Remarkable Values from degradation by mining activities.		
Jon Robison	19330	9	I greatly enjoy unroaded, undeveloped backcountry areas and am opposed to the 15 miles of new construction related to the Burntlog Route. Selection of this route will lead to additional human disturbance in this remote area and displace wildlife like wolverine. The Forest Service appears to make every excuse to permit this road and ignores that fact that this road increases impacts to wildlife, whitebark pine, non-motorized recreationists, botanical resources, Wilderness character, and outstandingly remarkable values for Burnt Log Creek, an eligible Wild and Scenic River.	SPE	No further response required. General in nature or position statement.
Jesse Lutz	19386	3	The operations proposed withing the Stibnite Gold Project (SGP) area represent a direct negative impact to the characteristics of Wilderness listed above. There is also missing information within the analysis area and the analysis area should be further expanded.	SPE	As noted in Section 3.23.2, the analysis area for wilderness consists of the FCRNRW in the PNF MA 14, BNF MA 22, and a portion of the Salmon-Challis National Forest with Big Creek as the northern boundary and the Middle Fork Salmon River as the eastern and southern boundary. The analysis area also includes recommended wilderness within PNF MA 12 SFSR and BNF MAs 18 Cascade Reservoir and 19 Warm Lake. This area would encompass potential impacts to wilderness.
Jesse Lutz	19386	4	With access being blocked or delayed for an estimated amount of time of two years along the Big Creek and East Fork of the South Fork of the Salmon River Roads the public land access behind those hindrances should be included in the affected project area AND worded as such. All 'may's should be changed to 'will's. Doings so would give a more accurate representation to the area that that will be influenced by road closures and traffic delays during ALL alternatives for however long they last. For instance on the "Payette National Forest Table 3.23-2" it does not include the Marble Creek, Mosquito Ridge, Pueblo Summit, Missouri Ridge, South Fork, or Rattlesnake trail heads. Also, from the aforementioned trail heads public lands that lie withing the current analysis area can be accessed, therefore providing more reason to include them and increase the analysis area size. I would suggest including the entire portion of the Wilderness areas that the three national forests manage; as it is a contiguous area, unbroken by roads. I will explain further while hitting key points to show other flaws within the DEIS that negatively affect Wilderness character as described in italics above (and should also be unacceptable). As stated above, Wilderness management by the Forest Service is directed to "Protect Wilderness values as defined in the 1964 Wilderness Act..." not degrade them; more importantly because the MPC 1.2 areas already lie within the current analysis area 'actions must be designed and implemented in a manner that DOES NOT COMPROMISE Wilderness values..."	SPE	Access along the Stibnite road would prevent access to Big Creek Road during construction for approximately one year. However, Big Creek could be accessed utilizing the Warren-Profile Gap Road. The use of "will" would be pre-decisional and therefore is not utilized in the EIS.
Jesse Lutz	19386	5	With the influence of road closures and delays it is stated that national forest users will be relocate or be pushed to other areas. It is my observation that forest users not only do this but they also adapt in different ways. With a decrease in road access and an increase in travel delays national forest users will most likely adapt by choosing alternative methods of transportation to provide quicker/easier access. That being said, there will most likely be an increase in aviation traffic. Although that would be a positive thing for the local aviation industry, this would have a prolonged negative effect on the Solitude management characteristic of a users wilderness experience. This could be compared to data that already exists from the decade of Wilderness Solitude Monitoring Data that the Payette National Forest already holds.	SPE	Aviation traffic use would be limited by available airstrips, as listed in Table 6-4 of the Access and Transportation Specialist Report, and available pilots. An increase in recreational air traffic would be speculative and is not included in the EIS.
Jesse Lutz	19386	10	24 hour/7 days a week ambient noise within 1.7 miles of the surrounding Wilderness area degrades managed characteristics as well. Outfitter and Guide data is produced in the SDEIS, yet it is still not very specific to the impacts to the entire group of individuals available. The forest does keep record of outfitter and guide use as required	SPE	Data on outfitters was provided in the recreation sections (3.19 and 4.19) of the SDEIS, as well as in the Recreation Specialist Report.

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			by law. Therefore it should be available for viewing and consideration as this project clearly states will have negative impact on access to National Forest System lands. By omitting that information the forest is not acknowledging the impacts that will face them accurately if the proposed project is permitted. As an important group operating within the current analysis area, they should also be included in the user groups listed in Recreation; along with Kayaking/boating/floating and aviation, tribal use so they can each be studied individually.		
Jesse Lutz	19386	13	<p>These sounds level impacts degrade not only the Natural Wilderness characteristic the USFS is tasked to maintain and improve but also those to the associated National Forest System and Tribal Lands. They also negatively impact the Undeveloped character quality by introducing human caused sounds of machinery and literal developmental activities. They are not localized and minimal because of the frequency they will occur; the extended period of time. These sounds will become 'normal' and therefore 'acceptable' and 'expected' when traveling within or around Wilderness areas where those sounds are in reality - not normal or natural. They are caused by the act of development and human caused devices/machinery.</p> <p>For example. When traveling in the Wilderness if I were to hear one airplane, helicopter, explosion, or large truck go by - that would be one impact at a low frequency. But, if I were to hear airplanes, helicopters, explosions, or large trucks (or any combination of them) for all times during the day (including times at night) there would be much larger and substantial impact - Which is exactly what this project is proposing. A longer frequency of impacts that are not isolated to one exact time or place. Just think - there goes another one, and another one, and ... you guessed it, another one. Where could I go if not the largest contiguous Wilderness in the continental United States evade these sounds? This removes the choice of establishing a place to remove ones self from the burdens of modernity and development by humans. It will become normal; which is exactly the opposite of Wilderness designation, Wilderness Management guidelines listed prior, and above all - the Wilderness Act. The quality of the Wilderness impacts of this proposal is in great need for reevaluation...</p>	SPE	Noise impacts to the FCRNRW were disclosed for the alternatives under the Untrammeled wilderness character quality subsections in Section 4.23 of the SDEIS. Section 4.6 (Noise) states that noise from the mine site would attenuate to the threshold of 55 dBA approximately 0.8 mile from the source of the activity based on distance alone. Accounting for ground and atmospheric absorption, noise from the mine site would attenuate to 55 dBA at about 0.38 mile from the activity source. Once completed, traffic noise levels on the Burntlog Route (adjacent and near the FCRNRW) would be approximately 49 dBA at 50 feet from the roadway, below the impact threshold of 55 dBA. In Section 4.6.2.2. of the SDEIS, noise levels were calculated at incremental distances of 500 up to 8,000 feet into the area since there are no discrete Noise Sensitive Receptors identified within the FCRNRW. As noted in Section 4.6.2.2 of the SDEIS, construction of access roads under the 2021 MMP would impact areas of the FCRNRW; noise would gradually attenuate to not noticeable at about 8,000 feet into the wilderness. During operations, direct effects on recreationists within approximately 4,000 feet of the roadway could include general annoyance. Indirect effects could include a reduction in the overall quality of the remote wilderness experience. Noise level impacts would be lower farther from the Burntlog Route and would attenuate to a less than perceptible difference at approximately 6,000 feet (1.15 miles).
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	180	<p>1. ROW impacts within Inventoried Roadless Areas</p> <p>Several of these utilities upgrades will pass through and either directly or indirectly impact inventoried roadless areas (IRAs), diminishing the outstanding values and qualities associated with pristine wild lands including, but not limited to: visual resources; big game security; water quality; quiet/solitude; and intact habitat with limited fragmentation. We appreciate the Forest Service including the analysis of potential impacts to IRAs in this SDEIS as it was not included in the 2020 DEIS.</p>	SPE	Comment noted.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	188	<p>Another utility associated with the Stibnite Gold Project are radio and cell phone communications towers. A new 60' cell tower, with a 30' x 60' base, would be located near the Meadow Creek lookout or on one of two sites within the operations area boundary: on a summit east of Blowout Creek drainage or near the proposed transmission line alignment upslope of the proposed Hangar Flats pit. The base would be 30' x 60' but the perimeter fencing, associated equipment and access routes would result in a greater area being disturbed. This tower should be located out of the line of sight from recreationists in the Frank Church River of No Return Wilderness. The SDEIS states that the two locations within the operations area boundary would not be visible from the Frank Church River of No Return Wilderness; however, these towers would be visible from the surrounding IRAs and the Meadow Creek tower would potential impact the NRHP eligibility criterion for the historic property (see our Heritage Resource comments) but does not confirm if the Meadows Creek location is within sight of the Frank Church, although it appears as though it would be. The Forest Service should conduct additional visual studies to confirm this. Towers and repeaters should be located consistently with existing recreational opportunity spectrum (ROS) designations.</p>	SPE	<p>As noted in Section 2.4.4.8, the cell tower would be located within the Operations Area Boundary near the proposed transmission line upslope of the Hangar Flats pit (Figure 2.4-2). A VHF repeater would be located near Meadow Creek Lookout which consists of a 10-foot tower on a 3 by 3-foot concrete pad. No additional disturbance would be required for its construction or maintenance. It is unlikely a 10-foot tall repeater tower would draw the attention of a viewer except in close proximity.</p> <p>The viewshed analysis (Appendix C of the Scenic Resources Specialist Report) indicates mine components would likely be visible from high points within the FCRNRW; however, it is not specific to the cell tower.</p> <p>Potential impacts to the Meadow Creek Lookout due to the repeater site are being addressed in the Programmatic Agreement.</p>
Bonnie Gestring (Northwest Program Director,	17634	196	The Burntlog Route will alter the character and nature of roadless areas and wilderness values associated with the Black Lake, Burnt Log, and the FCRNRW. Increased traffic volumes will	SPE	Since the SDEIS, a mitigation measure to restrict public access on the new segments of the Burntlog Route has been added to the Final EIS. The EIS discloses potential impacts to the nature of roadless areas and wilderness values.

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Earthworks) and seven others			significantly increase noise levels and light pollution along the route and detract from the primitive and solitude values associated with the designated areas.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	198	We also believe it is unreasonable to assume that traffic along the Burnt Log Road would not increase due to the newly created access attributed to Perpetua's winter maintenance and have adverse effects to wildlife, roadless, and wilderness values. The West Central Idaho mountains are a destination location for local snowmobile enthusiasts, as well as visitors from across the state and Pacific Northwest. Further, backcountry non-motorized recreationists will also take advantage of the newly created "access" and available terrain. Perpetua and the Forest Service offer no mitigation plans to handle this increased traffic volume or to mitigate the potential impacts.	SPE	Since the SDEIS, a mitigation measure to restrict public access on the new segments of the Burntlog Route has been added to the Final EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	229	<p>1. Wilderness</p> <p>The 2.3 million-acre Frank Church - River of No Return Wilderness (FCRNRW) is the largest contiguous federally managed wilderness area in the lower 48 states. The Wilderness is a part of the Payette National Forest, Salmon-Challis National Forest, Boise National Forest, Bitterroot National Forest, and the Nez Perce National Forest. The Middle Fork and Main Salmon Rivers run through part of the Wilderness, providing multiple opportunities for whitewater rafting. The Middle Fork and Main Salmon Rivers are federally designated waterways through the Wild and Scenic Rivers Act, a law that U.S. Senator Frank Church helped to create. The FCRNRW offers unparalleled opportunities for solitude, mixed with unique access through grandfathered airstrips and motorized river use on the Main Salmon River. It is a special area because of its sheer size; by and large these motorized activities don't intrude on the wild character of the wilderness due to the vast area of the Frank Church. Hikers have vast areas of wilderness, including trailless areas that offer unique access to solitude, away from other hikers. Senator Frank Church of Idaho was a wilderness pioneer. He was a leading advocate for the original Wilderness Act of 1964, as well as the Wild and Scenic Rivers Act of 1968. In 1980, he capped his career by successfully designating the River of No Return as a federal Wilderness area in the Central Idaho Wilderness Act. After Senator Church developed cancer, Congress renamed the Wilderness to include his name, now known as the Frank Church - River of No Return Wilderness. Congress renamed the Wilderness just four weeks before the late Senator passed. The Stibnite Gold Project, especially the 5.3-mile segment of the Burntlog Route high up in the Riordan Creek drainage, will impact the Wilderness characteristics of the FCRNRW. Mining, road construction, and mine access will produce noise, light, visual impacts, and dust pollution that is likely to affect the Wilderness nearby through direct impacts and edge effects that will degrade the area's unique ecological values and reduce the solitude sought out by hikers in a wild, trailless area and the scenery sought by river runners. Designated Wilderness is any area of land designated by Congress as part of the National Wilderness Preservation System that was established in the Wilderness Act of 1964. Wilderness is "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain." 16 U.S.C. § 1131(c). Wilderness is further defined in the Wilderness Act as an area that "has outstanding opportunities for solitude or primitive and unconfined type of recreation." 16 U.S.C. § 1131(c)(2) (emphasis added). The FCRNRW plan recognizes that "the FCRNRW is one of the last intact wild places in the lower 48 and it therefore managed to provide .. opportunity for solitude on its rivers and land." Further, "[t]he FCRNRW is a place where visitors can escape the modernized, mechanized, populated society. It is a place that visitors can use as a refuge from noise and pollution, a place where visitors can experience the wild and free forces of nature at work."</p>	SPE	No further response required; general in nature.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	230	a. Both the DEIS and SDEIS fail to adequately consider multiple impacts to the Wilderness characteristics of the Frank Church - River of No Return Wilderness Both documents fail to adequately assess the impacts that the Stibnite Gold Project will have on the FCRNRW and user experiences there. Activities adjacent to Wilderness areas must be scrutinized to address whether they will have a significant effect on the Wilderness characteristics that originally spurred Congress to designate an area as Wilderness. Wilderness is not just a designation that prevents development; it is a place where people can find solitude or experience primitive and unconfined recreation. 16 U.S.C. § 1131(c)(2). The analysis and disclosure of impacts to Wilderness from activities outside the	SPE	<p>The bullet "SGP activities undertaken outside of the wilderness boundary are not designed with the intention of influencing populations or ecological functions within the wilderness or recommended wilderness." has been deleted from the EIS as it is irrelevant.</p> <p>Impacts are presented in a range of intensity as some impacts would be negligible, such as plume emissions and air emissions (below NAAQS), and others would be moderate, depending on location, such as lighting and noise at the edge of the Burntlog Route.</p>

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			<p>Wilderness boundary are critical. The Central Idaho Wilderness Act of 1980 does not contain any “no buffer” language as other wilderness areas sometimes incorporate.</p> <p>In describing the context for wilderness impacts, the Special Resources Specialist Report appears to excuse impacts to Wilderness by noting that none of these impacts are intentional: SGP activities undertaken outside of the wilderness boundary are not designed with the intention of influencing populations or ecological functions within the wilderness or recommended wilderness. However, the Forest Service notes that impacts will still occur: During construction, operations, and closure and reclamation there would be less area within the FCRNRW or recommended wilderness areas where solitude, remoteness, and primitive recreation opportunities quality of wilderness character would be available. SDEIS 4-633. The Forest Service appropriately notes that many of these impacts would be long term, but inappropriately characterizes them as “negligible to moderate” in that same section, fails to develop additional alternatives or design features to avoid, minimize and mitigate these significant impacts. The Forest Service has a legal duty to avoid activities outside the Wilderness area that degrade the area’s Wilderness characteristics. Section 4(b) of the Wilderness Act of 1964 requires that “each agency administering an area designated as wilderness shall be responsible for preserving the wilderness character of an area and shall so administer such area for such other purposes for which it may have been established as also to preserve its wilderness character.” 16 U.S.C. § 1133(b). According to legal scholars, preserving wilderness character is the primary legal requirement from the 1964 Wilderness Act and all subsequent wilderness legislation to the agencies that administer wilderness. If wilderness character is not being preserved, then the agencies are not fulfilling their legal mandate in their administration of wilderness. “Wilderness character” occurs four times in the Wilderness Act (once in Section 2(a), twice in Section 4(b), and once in Section 4(d)(3)) and all four times the Wilderness Act states that wilderness character “shall” be preserved or protected. While the Wilderness Act clearly allows a variety of uses in wilderness, the administering agencies are still legally required to preserve the wilderness character of the area.</p> <p>An interagency team identified the following five main wilderness characters:</p> <ul style="list-style-type: none"> ● Untrammelled—wilderness ecological systems are unhindered and free from intentional actions of modern human control or manipulation, ● Natural—wilderness ecological systems are substantially free from the effects of modern civilization, ● Undeveloped—wilderness is essentially without structures or installations, the use of motors, or mechanical transport, ● Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation — wilderness provides outstanding opportunities for solitude or primitive and unconfined recreation, ● Other Features of Value—wilderness may have unique ecological, geological, cultural or other features of scientific, educational, scenic, or historical value. <p>According to the Special Designations Specialist Report, each of these characters could be impacted by mining activities: Potential effects on the five qualities of wilderness character could occur during all phases (construction, operations, closure and reclamation) of the SGP. The duration of effects on wilderness character considered includes temporary, short-term, or long-term. Federal courts have interpreted this requirement to maintain Wilderness characteristics to mean that an “agency’s duty to preserve the wilderness ... is wholly independent of the source or location of that activity.” In Izaak Walton League, the court found that the use of snowmobiles bordering the Boundary Water Canoe Area Wilderness was not a per se ban; however, if an activity results in noise that is louder, more constant, more frequent or of a different quality, the activity would likely degrade the Wilderness character and violate section 4(b) of the 1964 Wilderness Act. Furthermore, the solitude characteristics must be maintained in Wilderness areas even if they are not used, as it is the opportunity for solitude that must be maintained under the Wilderness Act.</p>		<p>Since the SDEIS, a mitigation measure to restrict public access on the new segments of the Burntlog Route has been added to the Final EIS.</p> <p>The Johnson Creek Route was considered in the SDEIS as evident in the Johnson Creek Route Alternative. Underground mining was considered and eliminated from further analysis as presented in Section 2.6.1.1.</p>

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			<p>In terms of impacts to the FCRNRW, active mining operations are proposed just 3.4 km (2.1 miles) from the nearest wilderness boundary, the Operations Area Boundary borders the FCRNRW for 1.3 miles along the Meadow Creek Lookout Road and the proposed Burntlog Route would be adjacent to the FCRNR Wilderness Boundary for 5.3 miles. The SDEIS describes several ways in which mining activities could impact Wilderness characteristics, including, but not limited to, the following effects:</p> <ul style="list-style-type: none"> • Clouds of dust, plume blight, plume visibility from mining operations, • Noise from blasting and other operations, • Light pollution from mining activities, • Displaced wildlife due to mining activities in the larger area, • Additional motorized incursions facilitated by the Burntlog Route, • Increases in wilderness visitation in some areas and decreases in other areas • Noxious weed introduction and expansion from mine related traffic and disturbance. <p>As noted elsewhere, some of these effects could be avoided and minimized through more careful planning and consideration of the Johnson Creek Route and underground operations instead of open pit mining. If the Burntlog Route is selected, this route should not be open to public motorized access as access to Thunder Mountain is already provided through the mine site.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	231	<p>b. The Wilderness Act and the Central Idaho Wilderness Act require the Forest Service to consider impacts to the FCRNRW from activities outside the Wilderness area boundary Unlike many Wilderness bills, the Central Idaho Wilderness Act does not prohibit buffers next to Wilderness areas. The no buffer language commonly found in Wilderness legislation since the 1980s is intended to prevent Wilderness from expanding administratively, as Congress delineated the boundaries to preserve the most valuable Wilderness areas and avoid major conflicting uses. Congress intended the Central Idaho Wilderness Act (CIWA) to settle management disputes by providing a clear boundary. Lands outside of the Wilderness are to be managed in accordance with the purpose set out in section 2(b)(2) of the CIWA to “end the controversy over which lands within the central Idaho region will be designated wilderness—thereby assuring that certain adjacent lands better suited for multiple uses other than wilderness will be managed by the Forest Service under existing laws and applicable land management plans.” Pub. L. 96–312 § 2(b)(2), 94 Stat 948. The disputes cited in congressional testimony focused primarily on the timber communities, where determination of the edge of the Wilderness would allow timber harvests to proceed without concern for violating Wilderness protection due to changing borders. H.R. Rep. No. 96-1126 at 10-12. However, as discussed above, any non-wilderness uses outside of the Wilderness borders must still comply with the Wilderness Act’s requirement to preserve the wilderness character of the FCRNRW.</p> <p>Even where special mining zones were created in the FCRNRW, courts have carefully balanced the validity of the mining claims against Wilderness protection, as in the case of the Golden Hand Mine. Wilderness areas are special, and while the mining rights in the FCRNRW may be valid, the US District Court ruled that the Forest Service must analyze the minimum intrusion necessary to effectuate these rights. Here, there is no evidence that Congress condoned impacts that would result from an open pit mine near the FCRNRW or a mining road directly adjacent to the FCRNRW. The Inventoried Roadless Areas that adjoin the FCRNRW provide an important ecological buffer to be managed under the Forest Service mandate. While not a legally designated buffer zone itself, it still provides the benefit of a protective buffer zone that helps to preserve the Wilderness through mitigation of edge effects. A recently published scientific article, Conservation Value of National Forest Roadless Areas, provides important and highly relevant insights into the importance of roadless areas that are adjacent to protected national parks and Wilderness areas. Among other things, the study found that roadless areas adjacent to the FCRNRW increased the effective size of the protected core area by 38 percent. The study concluded that “IRAs reduce the isolation of – and provide buffers for – national parks, wilderness areas, and other existing protected areas.” Furthermore, “[t]he role IRAs</p>	SPE	<p>The EIS has disclosed potential impacts from the Project on Wilderness and the FCRNRW and recommended wilderness areas.</p> <p>The Idaho Roadless Commission has approved of the Project, and the Project would be in compliance with the applicable Roadless rule/laws. Impacts to other resources were disclosed in their respective SDEIS sections, regardless of IRA boundaries. Since the SDEIS, a mitigation measure to restrict public access on the new segments of the Burntlog Route has been added to the Final EIS.</p>

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			<p>play in buffering protected areas from development may be even more critical in the future as developed areas continue to expand.” As such, activities that fragment the IRAs can have both direct and indirect effects on wilderness character. For example, the construction of the Burntlog Route would fragment the roadless areas adjacent to the Wilderness. This new fragmentation will have edge effects on wildlife and the flora in both the IRAs and the FCRNRW. These edge effects due to the Burntlog Route will directly harm the Wilderness character of the FCRNRW and increase the ability for invasive plants to colonize the landscape due to a degraded ecosystem. In addition, activities outside the wilderness have the potential to change recreation and disturbance patterns in IRAs, the FCRNRW and even Recommended Wilderness Areas: The connection of Burntlog Route to Meadow Creek Lookout Road (FR 51290) could indirectly increase recreation use and duration of recreation activities within areas of the FCRNRW accessed from these roads. If recreation use increased, people and pack animals could compact soils, indirectly increasing erosion potential on portions of trails within the FCRNRW. The intensity of the effect on ecological processes from increased recreation use within the FCRNRW is influenced by site conditions, vegetation, and the duration of use at a specific site. The number and size of vehicles using Burntlog Route for mine operation and closure and reclamation could result in wilderness visitors avoiding areas of the FCRNRW and this avoidance could indirectly increase recreation use in recommended wilderness areas or other areas of the FCRNRW, such as Big Creek. The increase in recreation use could result in areas where human influence impedes the free play of natural forces or interferes with natural processes in localized areas of the FCRNRW and recommended wilderness areas. Depending upon the magnitude, there could be long-term local changes in ecological processes within the FCRNRW and recommended wilderness areas. The natural quality of wilderness character could be impacted where there are changes in ecological processes. SDEIS 4-632 to 4-633. We recommend that the Forest Service further analyze these impacts and take additional measures to avoid, minimize and mitigate these impacts in a supplement to the SDEIS.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	233	<p>d. Models used to calculate impacts should also evaluate wilderness impacts at distances closer to mining activities We are concerned that some of the models used to calculate potential impacts to Wilderness Characters and the experience of FCRNRW visitors used reference areas farther away than the closest Wilderness impacts that would actually occur: To account for dispersed emission sources, accepted modeling practice is to determine a theoretical single-point plume origin correction distance. The calculated distance in this case was 17.8 km. Subsequently, this distance was added to the hypothetical observer distance at the FCRNRW area boundary, and the combined observer distance was used in the VISCREEN inputs. SDEIS 4-29. Three wilderness trails (Mule Hill Trail, Big Chief Trail and Indian Creek Trail) all drop into the FCRNRW from the wilderness boundary; the same boundary along which the Burntlog Route would be co-located. These wilderness trails have 0.5 km or less of distance from the Burntlog Route. Opportunities for solitude in these areas that would be shattered by the Stibnite Gold Project and Burntlog Route.</p>	SPE	<p>Air quality impacts were disclosed under the Natural wilderness character quality subsections of the SDEIS Section 4.23, as well as in Section 4.3 (Air Quality). As stated in SDEIS Section 4.23.4.2, the SGP would result in emissions that could affect air quality in the FCRNRW. However, emissions would be below NAAQS thresholds under either Action Alternative. The predicted regional haze from operations outside the Operations Area Boundary to 31 miles, which is within the FCRNRW, would be less than a 5 percent change in current conditions.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	237	<p>f. Effects on air traffic are not adequately considered</p> <p>During periods of low water, many guided and private parties opt to fly in to Indian Creek. There is no analysis in the SDEIS about how the mine, dust cloud and traffic may be visible by air traffic and how that will affect visitor experiences. For many, the flight over the undeveloped wilderness in the FCRNRW is one of the highlights of the trip. The visibility of the mine project should be disclosed for flights coming from McCall, Cascade, Boise, Stanley, Challis, and Salmon. Another issue is how helicopter traffic related to mining activities may affect aviation. The Middle Fork Salmon already receives a certain amount of air traffic and many visitors are not interested in seeing increased levels of air traffic. The Forest Service needs to disclose if and how mine-related helicopter traffic may affect wilderness visitors or commercial or private flights. The SDEIS also does not consider the many backcountry airstrips that are grandfathered into the FCRNRW and that the flight paths to those airstrips may pass over the Stibnite Gold Project. This would provide a direct view of the open pit mine, which would greatly expand the current scar on the landscape. For this and many other reasons,</p>	SPE	<p>The SGP would be visible to air traffic depending on location. As noted in Section 4.16.2.2. of the SDEIS and Section 7.2.2.6 of the Special Designations Specialist Report, helicopters would be used to deliver drill rigs and supplies for remote surface exploration drilling activities on an as needed basis when truck or crawler mounted rigs would be unable to reach the drill site. Overall air traffic associated with the 2021 MMP would be intermittent, localized, and generate negligible changes in air traffic patterns.</p> <p>An underground mining alternative was considered and eliminated as discussed in Section 2.6.1.1.</p>

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			an alternative of an underground mine should be considered, as an underground mine would also reduce the visual impact to tourists accessing the Wilderness through planes.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	238	<p>g. Effects on solitude are not fully disclosed or addressed Outside of the river corridor, the FCRNRW provides remarkable opportunities for solitude. The Mule Hill Trail, Big Chief Trail and Indian Creek Trail all drop into the FCRNRW from the wilderness boundary; the same boundary along which the Burntlog Route would be co-located. Opportunities for solitude in these areas would be lost due to the Stibnite Gold Project and the Burntlog Route in particular: The Burntlog Route would change motorized access to several trailheads/trails leading into the FCRNRW. Indirectly, the Burntlog Route could increase the number of wilderness visitors and the duration of recreation in the FCRNRW. The potential for recreation use to increase is unknown; however, once constructed, the public could use Burntlog Route for approximately 20 years. Visitor encounters at trailheads/trails within the analysis area of the FCRNRW wilderness could increase due to the widening of Burnt Log Road (FR 447) and Meadow Creek Lookout Road (FR 51290) as part of the Burntlog Route. The number and size of vehicles transporting supplies to the SGP on the Johnson Creek Road and the Burntlog Route could deter some visitors from the FCRNRW. The number of vehicles and delays due to construction and maintenance activities could indirectly increase recreation use in recommended wilderness areas or other areas of the FCRNRW. During construction, operations, and closure and reclamation, wilderness visitors would need to travel farther into the FCRNRW or recommended wilderness areas to attain solitude, remoteness, and primitive recreation opportunities. SDEIS 4-633. This area has further characteristics that warrant added consideration that is missing in the SDEIS. The 2001 User guide lists the adjacent area as not only wilderness, but “trailless” as well. The Forest Service values this particular type of wilderness highly, as it offers solitude above the traditional wilderness values. The ability for someone to seek solitude would be marred for the duration of the project through a combination of road noise, blasting, clearing snow through avalanche mitigation measures, winter access by snowmobiles/helicopters, nighttime light intrusion, and dust. Even if these noises may attenuate to levels below background noise levels, they will still be noticeable as a foreign, different quality indicating nearby commercial activity in an area prized for its escape from society. The development of the Burntlog Route along the FCRNRW will also increase motorized transport adjacent to the Wilderness, resulting in increases in dust, noise and the risk of hazardous material spills in Big Chief drainage which eventually flows into the Middle Fork Salmon River, among other effects: During construction, operation, and closure and reclamation of the Burntlog Route, vegetation removal and excavation of soil and rock could increase sediment load into Big Chief Creek tributaries and affect fish and aquatic habitat. Erosion control measures, such as sediment fencing, ditch checks, and other measures, would reduce erosion from the road into the tributaries. There could be a long-term risk to fish and aquatic habitats from the accidental spill of material, such as fuel or mine processing chemicals, where Burntlog Route crosses a Big Chief drainage tributary. These effects will be exacerbated by allowing motorized public access:</p> <p>Limiting mine traffic to a 25-mile per hour speed limit (Section 2.4), could reduce the amount of dust generated. However, recreation traffic may not follow posted speed limits and speeds could be higher, which is associated with a higher amount of fugitive dust generated. The extent of dust and sediment deposition is unknown; however, the changes in vegetation would result in a long-term impact on the natural quality of wilderness character within the FCRNRW. These noise impacts will persist through the duration of the project and ensuing reclamation. These roads, which will be present for a minimum of 15 years, may lead to the direct degradation of the trailless area by increasing foot traffic and developing new paths in the Wilderness through overuse. Preservation of trailless areas against overuse is a difficult balance, as wild areas become less wild with recreational use. However, the Forest Service has issued guidance that attempts to preserve areas as trailless by guiding people not to follow unmarked paths. Increasing roadway access is likely to conflict with the mission of preserving trailless areas by increasing hiking traffic leading to user-created trails, further diminishing opportunities for solitude.</p>	SPE	Since the SDEIS was published, a mitigation measure to restrict public access on the new segments of the Burntlog Route has been added to the Final EIS. This measure would have several benefits such as it would limit vehicle traffic on the Burntlog Route reducing dust emissions and sedimentation, would reduce potential for unauthorized route creation leading to possible wilderness intrusions, and minimize impacts to solitude.
Bonnie Gestring (Northwest	17634	239	Furthermore, in the Salmon National Forest Plan (part of the FCRNRW adjacent to the Operations Area Boundary), management techniques are to “manage trails in dispersed areas not to exceed the	SPE	Since the SDEIS was published, a mitigation measure to restrict public access on the new segments of the Burntlog Route has been added to the Final EIS. This measure would limit

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Program Director, Earthworks) and seven others			established “Person At One Time Per Mile of Trail” guidelines.” In primitive areas such as the FCRNRW, on trails, persons present per mile ranges from 0.5 to 3 people per mile, and area-wide per acre ranges from 0.002 to 0.025. The Burntlog Route is likely to increase trail access in direct conflict with the Salmon Forest Plan for the FCRNRW. Visitation by mine workers is likely to exacerbate this: Some of the 500 mine workers could visit areas of the FCRNRW adjacent to the approximately 8,000-acre Operations Area Boundary shown on Figure 1.1.		vehicle traffic on the Burntlog Route reducing potential for unauthorized route creation leading to possible wilderness intrusions and would minimize impacts to solitude. Mine workers would be bused to the mine site for their work shifts. Visitation by mine workers would be by foot in their off-hours between shifts. They would be restricted from using the new segments of the Burntlog Route in personal vehicles, the same as the general public.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	242	<p>i. Effects on plants and animals in the Wilderness are not thoroughly examined The Forest Service notes that wildlife and plants may be affected, but then fails to provide a meaningful analysis of these impacts or ways to mitigate them:</p> <p>In the long-term, vehicles on Burntlog Route would likely change the distribution of species in the FCRNRW. and Depending upon the magnitude, there could be long-term local changes in ecological processes within the FCRNRW and recommended wilderness areas. The natural quality of wilderness character could be impacted where there are changes in ecological processes. SDEIS 4-632 to 4-633. However, The extent within the FCRNRW where wildlife could be disturbed or areas where wildlife would avoid is unknown. The Forest Service should look at how other species of wildlife around other mining projects have either been displaced or become habituated. Please see additional wildlife comments.</p>	WIL	There is no planned disturbance in the wilderness areas and therefore, no direct effects to vegetation and wildlife would occur. The potential for indirect effects on vegetation and wildlife resources are described in Sections 4.10 and 4.13, respectively.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	243	<p>2. Inventoried Roadless Areas</p> <p>The ability of the Forest Service to manage inventoried roadless areas in a manner that maintains roadless characteristics and the outstanding remarkable values associated with them is a critical consideration for the SGP project. As documented in the Special Designations Specialists Report, “The new mining facilities, access routes, and the transmission line would create substantially noticeable human development and structures (emphasis added) within IRAs and would create isolated parcels that may be difficult to manage during construction and operation of the SGP,” (p. 83). Further, the location of the Burntlog Route and the new transmission line segment and access roads would create isolated parcels within the Horse Heaven, Black Lake, Burnt Log, and Meadow Creek IRAs for the long term and could permanently alter wildlife corridors and habitats, as well as degrade the experience for hunters and outfitters in the area. These impacts would severely affect the quiet and solitude ORVs associated with IRAs and in essence would represent a form of breaking up the IRAs, rendering them obsolete. These actions could represent a failure to adhere to the Forest Plan and the Idaho Roadless Rule, opening the door for additional unauthorized trails, roads, or routes into the IRAs and the FCRNRW.</p> <p>According to the above referenced Specialists Report, the SGP OAB includes roughly 15% of the total acres found in the Sugar Mountain, Horse Heaven, and Meadow Creek IRAs. The SGP would reduce the area available within these IRAs for outstanding opportunities for solitude and primitive recreation. The diversion of Meadow Creek into a channel and the construction of the TSF embankment will result in, “reduced aquatic habitat complexity and connectivity within Horse Heaven and Meadow Creek IRAs,” (Special Designations Specialists Report, p. 79). The bull trout, westslope cutthroat, steelhead, and Chinook salmon habitat that currently exists in Meadow Creek will be permanently lost and the Forest Service must classify these losses as irreversible and irretrievable.</p>	SPE	<p>As noted in Section 4.12.5 of the SDEIS, the direct mortality of fish would be an irreversible impact that could occur under the Action Alternatives. Although fish exclusion barriers and trap and transfer activities would be incorporated to minimize fish mortality, incidental injury or mortality is expected to occur. These “takes” of fish in the mine site would be considered irreversible. Species subject to potential irreversible losses include Chinook salmon, steelhead trout, bull trout, and cutthroat trout.</p> <p>Portions of Meadow Creek upstream of the southern extent of the TSF would be irretrievable and unavailable to downstream fish within Meadow Creek during construction, operations, and post-closure. The presence of the TSF and TSF Buttress would essentially isolate any populations of bull trout and westslope cutthroat trout which are known to inhabit the upper reaches of Meadow Creek. After closure and reclamation, restoration of Meadow Creek over the TSF/TSF Buttress would restore habitat, but a fish barrier would remain in place and keep the upstream populations isolated.</p> <p>The loss of existing aquatic habitat in the Yellow Pine pit lake may constitute an irretrievable commitment of resources.</p> <p>Wildlife impacts to the FCRNRW were disclosed under the Untrammled and Natural wilderness character subsections for each alternative in Section 4.23. The Untrammled quality of wilderness character would be impacted when noise and lights change wildlife species distribution and behaviors. Noise from mine activities, vehicles on Burntlog Route, and changes to natural dark skies during proposed construction, operation, and closure and reclamation activities could result in a long-term change in wildlife species natural distribution. The duration could be short-term as some individuals of wildlife populations become habituated to noise, lights, and human activity.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	244	The SDEIS also fails to consider the impacts to the Contiguous Unroaded Lands between the southeast corner of the Black Lake IRA and the FCRNRW. The Forest Service’s analysis needs to recognize that roadless or unroaded areas contain “(1) High quality or undisturbed soil, water and air; (2) Sources of public drinking water; (3) Diversity of plant and animal communities; (4) Habitat for threatened, endangered, proposed, candidate, and sensitive species, and for those species dependent on large, undisturbed areas of land; (5) Primitive, semi-primitive non-motorized, and semi-primitive motorized classes of dispersed recreation; (6) Reference landscapes; (7) Natural appearing landscapes with high scenic quality; (8) Traditional cultural properties and sacred sites; and (9) Other locally	SPE	The analysis to IRAs in Section 3.23 includes land contiguous to unroaded areas. The requirements listed in Table 2.4-12 and the EDFs listed in Table 2.4-13 would be implemented to avoid, minimize, and mitigate impacts to IRAs and unroaded areas.

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			identified unique characteristics.” The Forest Service needs to take additional steps to avoid, minimize and mitigate impacts to IRAs and unroaded areas.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	245	<p>3. Research Natural Areas The Chilcoot Peak Research Natural Area was designated to provide unique opportunities for research and is listed under Management Prescription Category 2.2: The 1,306-acre Chilcoot Peak Research Natural Area contains an undisturbed small alpine lake and pond, as well as climax lodgepole pine with an understory of Idaho fescue.” Boise Forest Plan III-382. Chilcoot Peak RNA was established to preserve diverse subalpine forest habitats, including subalpine fir, Douglas-fir, and whitebark pine (<i>Pinus albicaulis</i>) habitat types. The glaciated basins below Chilcoot Peak support an unusually diverse assemblage of wetland and aquatic associations, including a high elevation lake, raised ponds with sphagnum, wet meadows, and gentle- to steep-gradient stream reaches. This RNA encompasses three subalpine, glaciated basins and intervening ridgeline habitats. The basins contain an unusually diverse assemblage of wetland and aquatic associations.</p> <p>Existing and proposed Research Natural Areas are managed to protect the unique values for which they were established. Under General Standard 2105, authorized activities must maintain the values for which the Research Natural area was established. Although the new road construction associated with the Burntlog Route is downstream of the RNA, the new road will still have impacts: As part of Burntlog Route, reconstruction of (i.e., widening, installing drainage features, etc.) approximately 3 miles of Burnt Log Road (FR 447) would remove vegetation and disturb soils located within 100 to 3,100 feet of the Chilcoot Peak RNA boundary...Non-native invasive plant species populations along Burnt Log Road, such as rush skeletonweed, spotted knapweed, and oxeye daisy, could become established in areas disturbed during Burntlog Route construction (Milan et al. 2016; Forest Service 2019b). As noted earlier, logging activities along the Burntlog Route could also spread pathogens to the greater density of whitebark pine along this corridor and to the Chilcoot Peak RNA, where whitebark pine are one of the distinguishing features:</p> <p>Timber harvested at the SGP could be transported on Burntlog Route. Timber from the SGP could have conifer pathogens such as pathogenic bark beetle species (e.g., mountain pine beetle [<i>Dendroctonus ponderosae</i>]), and white pine blister rust, which is caused by the introduced pathogen <i>Cronartium ribicola</i> (Hinke et al. 2016; Keane et al. 2017)...Conifer pathogens could be distributed during the transport of timber on the Burntlog Route...Whitebark pine/subalpine fir habitat type is one of the distinguishing features of the Chilcoot Peak RNA, and conifer pathogens could cause mortality of whitebark pine and other conifers. If this occurs, changes in the composition and structure of existing vegetation communities and ecological succession would result in a localized, minor to major, long-term loss of the Chilcoot Peak RNA research value and ecological condition.</p> <p>The Forest Service is also not accounting for impacts of increased recreational pressure on this currently remote RNA, particularly dispersed camping. The Burntlog Route is not compatible with preservation of the Chilcoot Peak RNA and should not be allowed.</p>	SPE	<p>The requirements listed in Table 2.4-12 and the EDFs listed in Table 2.4-13 would be implemented to avoid, minimize, and mitigate impacts to the RNA.</p> <p>In addition, since the SDEIS was published, a mitigation measure to restrict public access on the new segments of the Burntlog Route has been added to the Final EIS. This measure would limit vehicle traffic on the Burntlog Route reducing potential for unauthorized route creation and increased recreational pressure.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	247	<p>P. Wild and Scenic Rivers</p> <p>1. Impacts to eligible, suitable, and congressionally designated Wild & Scenic Rivers warrant additional analysis. The Wild and Scenic Rivers Act (WSRA) seeks to protect and enhance a river’s natural and cultural values and provide for public use consistent with its free flowing character, water quality, and preservation of its “outstandingly remarkable values” (ORVs). The WSRA is perhaps our most important tool to ensure that future generations experience the free-flowing and ecologically intact Idaho rivers that we cherish. Wild and Scenic River designations provide important benefits to aquatic habitat and species and provide protection for the incredible recreational benefits of outstanding rivers. Wild and Scenic Rivers positively impact local communities and provide psychological, social, ecological, and economic benefits.</p> <p>2. U.S. Forest Service management responsibilities related to the Wild and Scenic Rivers Act</p> <p>In accordance with Section 5(d)(1) of the Wild and Scenic Rivers Act (PL 90-542, 1968) and the USFS 2012 Planning Rule (36 CFR Part 219), the Forest Service is required to assess rivers under its</p>	SPE	Comment noted. See Section 1.10.3.4 of the EIS.

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			<p>management jurisdiction and determine whether these rivers are eligible for inclusion in the National Wild and Scenic Rivers System (NWSRS) by applying standardized criteria through a documented study and evaluation process. Rivers deemed “eligible” for inclusion must be “free-flowing” and possess at least one outstandingly remarkable value, which can be scenic, recreational, geological, fish, wildlife, historic, cultural, hydrological, paleontological, scientific, and other ORVs. Rivers and streams on federal lands that are found to be eligible for inclusion in the National Wild and Scenic Rivers Act System must be preserved in their free-flowing state as well as have their water quality and ORVs protected until such a time as a “suitability” evaluation and subsequent decision is made.</p> <p>From 1997-2003, the Forest Service inventoried all of the named streams on the Boise, Payette and Sawtooth National Forests and determined that three streams within the proposed SGP area are free-flowing and possess one or more outstanding remarkable values (ORVs) -- making them eligible for inclusion in the NWSRS and granting them protections to safeguard these characteristics. These three streams deemed to be eligible in this study process are Burntlog Creek (Boise National Forest), Johnson Creek (Boise National Forest), and the South Fork Salmon River (Boise and Payette National Forests). Subsequent to the aforementioned eligibility study process, the South Fork Salmon River was deemed to be suitable for inclusion in the NWSRS. The North Fork and Main Payette Rivers are also eligible for inclusion in the NWSRS, though these rivers were not considered within the scope of analysis in either the DEIS or SDEIS.</p> <p>Burntlog Creek, Johnson Creek, and the South Fork of the Salmon River must be managed as if they are designated under the Wild and Scenic Rivers Act until a decision is made about their future status. The Wild and Scenic Rivers Act states:</p> <p>82.5 – “Interim Management of 5(a) Study Rivers and 5(d)(1) Eligible or Suitable Study Rivers Rivers or river segments legislatively-mandated for study and other rivers determined by the Forest Service to be eligible or suitable for inclusion in the National System must have certain interim protection measures. These protection measures apply until a decision is made on the future use of the river and adjacent lands through an Act of Congress or a suitability decision. Along with the interim management direction provided here, additional statutory, regulatory, or policy requirements may also apply if the study river is located within a wilderness area or other designated area (FSM 2354.42e).”</p> <p>AND</p> <p>82.52 – “During interim management of eligible or suitable rivers, the following management guidelines are to be used when planning and implementing projects and activities on the NFS for each of the river classifications in this section. A responsible official may authorize site-specific projects and activities on NFS lands within eligible or suitable river corridors only where the project and activities are consistent with all of the following: 1. The free-flowing character of the identified river is not modified by the construction or development of stream impoundments, diversions, or other water resources projects. 2. Outstandingly remarkable values of the identified river area are protected. 3. For all Forest Service identified study rivers, classification must be maintained as inventoried unless a suitability study is completed that recommends management at a less restrictive classification (such as from wild to scenic or scenic to recreational)”</p> <p>Later sections in these comments will discuss the specific harmful impacts the project will have on these rivers’ ORVs and free-flowing conditions.</p> <p>Furthermore, Burntlog Creek, Johnson Creek, and the South Fork of the Salmon River are major tributaries for the congressionally designated Wild and Scenic Main Salmon River. As our comments pointed out previously in the DEIS, the SDEIS fails to acknowledge or adequately consider how impacts resulting from the SGP may significantly impact and impair congressionally designated Wild and Scenic Rivers outside of the immediate project area, including impacts to these rivers that may result from degradation of other rivers and streams in the immediate vicinity of the project area that are not deemed suitable or eligible for inclusion in the NWSRS. While the Forest Service has direct legal responsibilities to protect eligible and suitable rivers within the immediate vicinity of the project area, the agency must also adequately consider impacts to rivers and streams that are not suitable or eligible for inclusion in the NWSRS if the degradation of those waters may result in impairment to</p>		

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			<p>congressionally designated WSR outside of the project area.</p> <p>Below, we outline areas of potential impairments to the aforementioned rivers and streams which are afforded legal protections derived from the WSRA.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	248	<p>3. Overview of impacts and insufficient analysis related to WSRA protected rivers and streams.</p> <p>Both of the proposed action alternatives (Johnson Creek Alternative & the 2021 MMP Alternative) in the SDEIS will negatively impact rivers and streams deemed to be eligible or suitable for inclusion in the NWSRS in the immediate vicinity of the project area including Burntlog Creek, Johnson Creek, and the South Fork Salmon River. Action alternatives in the SDEIS may also result in negative impacts to eligible rivers outside of the immediate vicinity of the mine project area, including the North Fork Payette and the Main Payette River. Furthermore, the SGP may also harm congressionally designated Wild and Scenic Rivers including the Main Salmon and Middle Fork Salmon rivers which are also outside of the immediate project area.</p> <p>Unfortunately, the SDEIS fails to adequately consider impacts and mitigation measures for eligible and suitable streams directly within the vicinity of the SGP area and in many instances fails entirely to address impacts to other eligible streams and congressionally designated WSRs outside of the immediate project area. This failure to take a “hard look” at the potential impacts to these resources warrants additional analysis.</p>	SPE	As noted in Section 3.23.4.2 of the SDEIS, there are three WSR segments within the area of analysis: Burntlog Creek (eligible), Johnson Creek (eligible), and South Fork Salmon River (suitable). All of these segments have a classification of recreational. Under planned operating and closure conditions, water quality of surface flow departing from the Project site would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (Section 4.9), including South Fork Salmon River, Middle Fork Salmon River, Main Salmon River, North Fork Payette River, or Main Payette River. The area of analysis is appropriate as it encompasses potential impacts.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	249	<p>4. The SDEIS fails to adequately characterize the designated, eligible, and suitable Wild and Scenic Rivers that would be affected by the Stibnite Gold Project.</p> <p>a. The South Fork of the Salmon River</p> <p>The South Fork of the Salmon River is one of our nation’s premier multi-day whitewater rivers. Paddlers typically spend 2-5 days descending the river’s remote gorge. At low flows characteristic of early spring, late summer, and fall, the river provides a scenic and technical Class III (IV) paddling experience. Medium flows provide a delightful Class IV run. At high flows the South Fork offers some of the best big-water paddling on the continent, attracting paddlers from across the United States and beyond. No matter the flow, paddlers are treated to solitude, superb scenery, excellent fishing, backcountry camping, and an excellent whitewater paddling experience. The lack of a lottery-based permit system allows paddlers to opportunistically enjoy the South Fork with ease and predictability, while many other multi-day runs are off limits to paddlers because they were unsuccessful in lottery applications.</p> <p>The Payette National Forest has rightly found 63 miles of the South Fork suitable for Wild and Scenic designation. The Forest has found “The 63 miles of the South Fork Salmon River within the administrative boundary of the Payette NF are worthy of recognition within the National Wild and Scenic River System. This river segment represents a premier example of a river with outstandingly remarkable values (FEIS, Appendix J). As a major tributary to the already designated Salmon River, the South Fork supports whitewater recreation opportunities, supports populations of anadromous fish, contains some of the most remarkable cultural and historic properties in Idaho, and has outstanding geological and botanical features through the river corridor.”</p> <p>The Forest’s Wild and Scenic Eligibility findings further bolster the river’s unique values protected under the Forest Plan. “The SFSR has outstanding white-water boating and nationally recognized fishing opportunities during premier steelhead and Chinook salmon seasons. The river corridor also provides recreation opportunities that include hunting, hiking, camping, and snowmobiling. The many hot springs along the river corridor are beautiful and provide the visitor with a remote soaking experience.”</p> <p>Beside the incredible recreation experience that the SFSR provides, it is also one of the most critical habitats remaining in the Columbia River Basin for summer Chinook salmon. But, even here Chinook salmon numbers are dwindling, and one of the main causes is from habitat degradation. The biggest</p>	SPE	As noted in Section 3.23.4.2 of the SDEIS, there are three WSR segments within the area of analysis: Burntlog Creek (eligible), Johnson Creek (eligible), and South Fork Salmon River (suitable). Under planned operating and closure conditions, water quality of surface flow departing from the Project site would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (Section 4.9), including South Fork Salmon River, Middle Fork Salmon River, Main Salmon River, North Fork Payette River, or Main Payette River. The area of analysis is appropriate as it encompasses potential impacts.

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			<p>culprit for habitat deterioration is from increased sedimentation, which causes a drastic decline in the rate of Chinook egg and juvenile survival.</p> <p>Goal WSGO01 in the Payette National Forest Plan requires the Forest to “Manage river segments that are eligible or suitable for potential addition to the National Wild and Scenic Rivers System to meet the requirement of the Wild and Scenic River Act,” and Objective WSOB01 requires the Forest to “Emphasize the following in managing eligible and suitable Wild and Scenic Rivers: a) Maintaining or enhancing the outstandingly remarkable values; b) Maintaining the free-flowing character; c) Maintaining or enhancing values compatible with the assigned classification; and d) Accommodating public use and enjoyment consistent with retaining the river’s natural values.” These plan components stem from Sections 5, 7, and 10 of the Wild and Scenic Rivers Act.</p> <p>The SDEIS admits at 3.23.4.2 that “detailed baseline data for existing water quality where the SGP components intersect the SFSR at Warm Lake Road have not been compiled.” But, the SDEIS makes a premature conclusion that the water quality in the South Fork of the Salmon River would “likely be too small to measure” (p. 4-638). In order to provide an accurate assessment of water quality, baseline conditions need to be obtained.</p> <p>The East Fork South Fork of the Salmon River (EFSFSR) is a major tributary of the SFSR. In both action alternatives, the EFSFSR would be negatively impacted by the proposed Plan of Operations. The SDEIS does not fully analyze how sedimentation, pollution, and increased water temperatures in the EFSFSR would impact the SFSR. The SDEIS states especially how the Proposed Action would have “direct permanent impacts on water quality, as it would contribute new sources of mine waste material to the East Fork SFSR drainage” (p. ES-16). The scope of analysis on the SFSR is too narrow and should include the effects of its tributaries on the main waterway.</p> <p>All action alternatives in the SDEIS would impact and risk the Wild and Scenic values of the South Fork Salmon River that the Forest Service is required to protect based in large part on the Forest Plan. The proposed mine threatens to severely impact the recreational²⁹⁵ and fisheries outstanding remarkable values of the river, in direct contravention of WSOB01.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	250	<p>b. Middle Fork Salmon River</p> <p>The Middle Fork Salmon River is world renowned for its wilderness character, scenery, wildlife, fisheries, whitewater, and more. Congressionally designated in 1968 under the Wild and Scenic Rivers Act as a Wild River, it runs 103 miles from the confluence of Marsh Creek and Bear Valley Creek to the Main Salmon River, almost entirely within the Frank Church River of No Return Wilderness. ORVs include Scenery, Recreation, Geology, Fish, Water Quality, Wildlife, Vegetation/Botany, Prehistory, History, and Traditional Use/Cultural.</p> <p>The immense scale of the Stibnite Gold Project, including access roads, will likely cause far-reaching impacts to Wild and Scenic values beyond the area of analysis provided in the SDEIS. The Preferred Alternative will rely on the newly developed Burntlog Road for access to the mine site, with significant portions of the road on the high divide that separates the South Fork Salmon and Middle Fork Salmon River watersheds. The Middle Fork of the Salmon River, one of the original eight designated Wild and Scenic Rivers, will potentially be affected by activities conducted by the Stibnite Gold Project. Light, visual, water, and dust pollution are direct effects that could harm ORVs on the Middle Fork Salmon. Portions of the Burntlog Route lie within the watershed of the Middle Fork Salmon River, so any potential spill of hazardous materials could potentially enter a tributary stream. This potential project related impact to a tributary of the Middle Fork Salmon River calls for a Section 7 Study under the Wild and Scenic Rivers Act. In addition, wildlife is an ORV that could be affected by the mine project’s activities along Burntlog Route, as many of the animals that characterize this ORV are migratory and populations are likely to travel near or across Burntlog Road. Even considering that the project activities will occur outside of the quarter mile protected buffer along the Middle Fork Salmon, the SDEIS must acknowledge and analyze the potential impacts to ORV’s and describe mitigation plans.</p>	SPE	<p>The Middle Fork Salmon River is more than 20 miles east of the SGP, is separated by mountainous topography, and is within a different hydrologic basin; it would not be affected by light, visual, water, or dust impacts. The Burntlog Route would be in proximity to the eligible segment of Burntlog Creek. Design features, best management practices, and mitigation measures required for the Project would minimize the potential for hazardous materials spills to waterways. Potential impacts to wildlife along the Burntlog Route would not extend to the quarter mile protected buffer along the Middle Fork Salmon River.</p> <p>The Final EIS has been revised to mention the potential effects of the segment of the Burntlog Route located along the divide between the Headwaters of the East Fork SFSR and the Upper Indian Creek watershed that drains to the Middle Fork Salmon River.</p>

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	251	<p>c. Main Salmon River</p> <p>In July of 1980, the Main Salmon River was designated by congress as a component of the Wild and Scenic Rivers System. The 46 mile segment from North Fork to Corn Creek is designated as recreational, while the 79 mile stretch from Corn Creek to Long Tom Bar is designated as a wild river. The Main Salmon River has numerous outstandingly remarkable values including Scenery, Recreation, Geology, Fish, Water Quality, Wildlife, Vegetation/Botany, Prehistory, History, and Traditional Use/Cultural. Recreation opportunities on the Wild segment of the river are so highly sought after that the summer rafting season has a permit lottery system. There are 32 commercially permitted outfitters who take thousands of guests down this stretch of river each year. The Main Salmon River is a major economic driver for the region, and visitors to the Main Salmon alone spend \$13.5 million annually in the local area, supporting 95 jobs and \$2.4 million in annual labor income.</p> <p>The South Fork of the Salmon, a major tributary, joins the Wild and Scenic Main Salmon River near Mackay Bar, and contributes to the hydrologic regime for the remaining 20 miles the boundary of the designated segment of wild river. There are several migratory fish species that utilize both the Main Salmon and South Fork Salmon Rivers as migration corridors and habitat, including Pacific lamprey, white sturgeon, Chinook salmon, steelhead, and bull trout. These rivers are ecologically connected. To protect and enhance the Fish ORV on the Main Salmon River, considering the migratory nature of these species, headwaters streams such as the South Fork Salmon River watershed must be considered.</p> <p>The Stibnite Gold Project will directly affect multiple tributaries to the South Fork Salmon River, which feeds into the WSR Main Salmon. The DEIS had previously stated at 3.23-14 that a WSRA Section 7 study is required to analyze impacts to the designated WSR Salmon River. Still, the DEIS & SDEIS failed to recognize the Wild and Scenic Main Salmon as a potentially affected resource by the Stibnite Gold Project. The Johnson Creek Route and the mine site occur on the East Fork South Fork Salmon River, which feeds into the South Fork Salmon and into the Main Salmon River at the confluence at Mackay Bar. Any spill of contaminants and other impacts to water quality have the potential to adversely affect Wild and Scenic values of the Main Salmon River. In addition, the Main Salmon has an ORV for fish because of the four ESA-listed species that rely on the Main for habitat and migration. The SDEIS recognizes in the Fisheries Specialist Report that ESA-listed Chinook salmon, steelhead, and bull trout will be adversely affected by the project. These are migratory fish species that utilize the Main Salmon river corridor as a migration route, and contribute to this identified ORV. Any negative impacts to water quality, habitat, and fish passage has the potential to negatively impact the fish ORV for the WSR Salmon River. As pointed out in previous comments on the DEIS, the SDEIS should have analyzed the impacts that the Stibnite Gold Project's alternatives will have upon Wild and Scenic values on the Main Salmon River, specifically from the confluence with the South Fork Salmon and downstream to Long Tom Bar.</p> <p>In comparison to other rivers in the region, the water quality of the Salmon River is exceptional. The river provides exceptionally high water quality for a variety of beneficial uses including resident and anadromous fish habitat and exceptional recreation opportunities for thousands of people who come to float the Salmon River every year to enjoy its clean, clear water. Water quality is an outstandingly remarkable value.</p>	SPE	Under planned operating and closure conditions, water quality of surface flow departing from the Project site would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (Section 4.9), including South Fork Salmon River or the Main Salmon River. The Project is not expected to affect fish and fish habitat in the Main Salmon River. Project effects are contained within the analysis area as described in SDEIS Section 4.12.2.2. The area of analysis is appropriate as it encompasses potential impacts.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	252	<p>d. Burntlog Creek</p> <p>Burntlog Creek was deemed to be eligible for inclusion in the NWSRS for having an outstandingly remarkable value for fish: "This is a Pacfish/Infish priority watershed that supports spawning and rearing habitat for wild native Chinook salmon and steelhead, cutthroat, redband, and bull trout." (Appendix D, WSR Eligibility Report). The river segment from headwaters to junction with FR447 (Sec 27 T 16N R8E) is an eligible Recreational segment. The river segment from the junction with FR447 (Sec 27 T16N R8E) to the confluence with Johnson Creek is an eligible Wild segment.</p> <p>As readily acknowledged in the SDEIS, road construction and project developments associated with the SGP may negatively impact water quality and consequently harm Burntlog Creek's ORV for fish. Burntlog Creek would be crossed by all project-related traffic that travels the Burntlog Route in the</p>	SPE	Through application of design features and Forest Service requirements, the Project is not predicted to affect water quality conditions in Burntlog Creek. The existence of minor structures, such as bridges, does not bar a streams consideration for inclusion as a WSR. The replacement of existing bridges along Burnt Log Road would not constitute construction of a new structure impeding its free-flowing condition.

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			<p>Preferred Alternative. The SDEIS states that the Preferred Alternative may impact water quality and adversely affect ORVs. Yet the SDEIS does not adequately quantify impacts or explain how these impacts will be mitigated so that Burntlog Creek’s eligibility for inclusion in the NWSRS is not impaired.</p> <p>Construction and bridge replacement activities on Burntlog Route are said to result in “short-term, negligible, and localized impacts to the free-flowing condition” under the Preferred Alternative. In addition, the SDEIS plans to place a borrow pit within the WSR corridor of Burntlog Creek (p. 4-640). As stated before, Goal WSGO01, sections 82.5 and 82.52 of the WSRA requires the Forest Service to manage eligible and suitable to meet the requirements of the Wild and Scenic Rivers Act. Therefore, any construction in the WSR corridor and impacts to the free-flowing for any amount of time would violate the management requirements for eligible rivers under the Wild and Scenic Rivers Act and the Boise National Forest Management Plan. These actions could destroy the opportunity for this river segment to be found suitable for designation.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	253	<p>Additionally, the SDEIS notes that “detailed baseline information on existing water quality in Burntlog Creek has not been compiled for the SGP” (p.3-488). Absent water quality baselines being established, it will not be possible for the Forest Service to know whether potential impacts from project development may violate the Forest Service’s responsibility to protect Burntlog Creek’s eligibility status.</p>	SPE	Through application of design features and Forest Service requirements, the Project is not predicted to affect water quality conditions in Burntlog Creek.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	256	<p>With Johnson Creek being eligible for designation as a Wild and Scenic River, the Forest Service is required to manage its ORVs and free-flowing state for preservation. In the SDEIS, it admits that “construction activities could result in short-term impacts to the free-flowing condition of Johnson Creek as a result of culvert replacement on Johnson Creek Road” (p.4-657). The definition of “free-flowing” under the Wild and Scenic Rivers act is as follows:</p> <p>‘Free-flowing,’ as applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic rivers system shall not automatically bar its consideration for such inclusion: Provided, That this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national wild and scenic rivers System.</p> <p>Temporary barriers to free-flowing rivers and modification to flow should be prohibited from the eligible and suitable rivers. Therefore, any construction activities that impede the free-flowing state of any eligible or suitable river violate the protections under the Wild and Scenic River Act.</p>	SPE	Culvert replacement along Johnson Creek would not occur under the 2021 MMP, which is the Preferred Alternative. However, culverts would be replaced under the Johnson Creek Route Alternative. As noted in the comment, the existence of minor structures, such as culverts, does not bar its consideration for inclusion. The replacement of existing culverts would not constitute construction of a new structure impeding its free-flowing condition.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	257	<p>i. Forest Plan inconsistencies</p> <p>Similar to the Forest Plan issues identified with Burnt Log Creek, either action alternative will result in similar inconsistencies in regards to general standards and objectives outlined in the Boise Forest Plan for Management Area 21 - Lower Johnson Creek.</p> <p>General Standard 2101: Manage the Johnson Creek eligible river corridor to its assigned Recreational classification standards, and preserve its ORVs and freeflowing status until the river undergoes a suitability study and the study finds it suitable for designation by Congress, or releases it from further consideration as a Wild and Scenic River.</p> <p>Objective 2123: Improve water quality by reducing road-related accelerated sediment delivery to lower Johnson Creek and its tributaries.</p> <p>Objective 2124: Assist in de-listing South Fork of Salmon River drainage, including lower Johnson Creek, from the State of Idaho's impaired water bodies list, by applying appropriate and active watershed restoration to reduce sediment, which is the identified pollutant source.</p>	SPE	Appendix A provides the applicable Forest Plan Consistency Review and Amendments.

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			<p>Objective 2125: Improve streambank stability by reducing sediment delivery to Johnson Creek, and by revegetating banks with native plant species as needed.</p> <p>Objective 2126: Restore aquatic and riparian habitats in Johnson Creek and its tributaries by reducing streambank instability and accelerated sediment resulting from existing roads and other disturbances.</p> <p>Objective 2127: Evaluate Riordan and Trapper Creek drainages to determine management actions needed to move toward desired conditions, with emphasis on improving riparian areas.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	258	<p>5. The SDEIS does not include a sufficient scope of analysis for access routes in connection with operations, and the relationship to WSR values along access routes.</p> <p>a. North Fork Payette River and Main Payette River</p> <p>The North Fork Payette River and Main Payette River were found eligible for Wild and Scenic designation. These roadside river segments essentially parallel SH-55, the Payette National Wild and Scenic Byway, providing easy access and high quality on-river recreation experiences close to both Valley County and the Treasure Valley. Both river segments have a preliminary classification as Recreational rivers, and are managed to protect recreation ORVs. The Boise National Forest Plan describes the North Fork Payette's ORV classification.</p> <p>The Boise Forest Plan calls for maintaining or enhancing river-related recreational experiences when possible. This direction is particularly relevant in this eligible Wild and Scenic River corridor: Manage the North Fork Payette River and Payette eligible corridors to their assigned Recreational classification standards, and preserve their ORVs and free-flowing status until the rivers undergo a suitability study and the study finds them suitable for designation by Congress, or releases them from further consideration as Wild and Scenic Rivers. General Standard 0901.</p> <p>The North Fork Payette, along the segment managed as an eligible Wild and Scenic River, has annually hosted the North Fork Championship since 2012, an elite level whitewater kayaking competition that attracts professional athletes from throughout the world.</p> <p>The eligible segments of the North Fork of the Payette and Main Payette Rivers flow adjacent to a planned travel corridor for the Stibnite Gold Project, and thus must be included in the scope of analysis in the SDEIS. According to the SDEIS on page 2-22, two-thirds of mine related traffic will travel to Warm Lake Road via SH-55 from south to north, adjacent to the Main and North Fork Payette Rivers, both eligible Wild and Scenic Rivers. Therefore, impacts to WSR values to these rivers must be included and analyzed in the SDEIS. SH-55 (a National Scenic Byway) lies within the management area to protect the NF Payette's Wild and Scenic values. The North Fork Payette River is in the Boise National Forest. The North Fork of the Payette is listed both in the Nationwide Rivers Inventory and the Boise National Forest Plan as an eligible Wild and Scenic River. Boise National Forest manages the Main and North Fork Payette Rivers to protect water quality, Wild and Scenic recreational river classification, and ORVs. Additional analysis must be completed to assess the impacts of mining related traffic adjacent to the North Fork Payette River. For example, how will this additional heavy vehicle traffic affect the recreational experience? How might the risk of hazardous material spills on transportation routes along this river segment impact ORVs? Payette National Forest Management Direction • General Standard 0901 Manage the North Fork Payette River and Payette eligible corridors to their assigned Recreational classification standards, and preserve their ORVs (outstandingly remarkable values) and free-flowing status until the rivers undergo a suitability study and the study finds them suitable for designation by Congress, or releases them from further consideration as Wild and Scenic Rivers. • Emphasize the following in managing eligible and suitable Wild and Scenic Rivers: a) Maintaining or enhancing the outstandingly remarkable values, b) Maintaining the free-flowing character, c) Maintaining or enhancing values compatible with the assigned classification, d) Accommodating public use and enjoyment consistent with retaining the river's natural values. Objective WSOB01.</p>	SPE	<p>See Section 1.10.3.4.</p> <p>In addition, under planned operating and closure conditions, water quality of surface flow departing from the Project site would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (SDEIS Section 4.9), including North Fork Payette River and Main Payette River. Design features, best management practices, and mitigation measures required for the Project would minimize the potential for hazardous materials spills to waterways. The area of analysis is appropriate as it encompasses potential impacts.</p>

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	259	<p>6. The SDEIS must include Wild and Scenic Suitability Studies of Johnson Creek and Burntlog Creek as reasonably foreseeable future actions in the discussion of cumulative impacts in the Special Designations Specialist Report. Both action alternatives would impact WSR values of Johnson Creek, and the Proposed Action would impact WSR values of Burntlog Creek. These action alternatives cannot be approved without causing harm to WSR values. The DEIS had stated that this would trigger a suitability study of these rivers, and Appendix D included the a suitability study of Johnson Creek as a planned mitigation measure. However, suitability studies for either Johnson Creek or Burntlog Creek have not been noted as a planned mitigation measure in the SDEIS. Therefore, in order to address these issues, the Forest Service must complete a separate NEPA analysis to fully consider the suitability of Burntlog Creek and Johnson Creek, both Forest Service identified eligible Wild and Scenic Rivers, or include such an analysis in a revised Supplemental DEIS for the Stibnite Gold Project. This must occur prior to the FEIS and ROD to allow for public scoping and a comment opportunity, and sufficient analysis under NEPA.</p> <ul style="list-style-type: none"> ● 40 CFR § 1508.7 Cumulative impact. ○ “Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” ● 36 CFR § 220.4 - General requirements. ○ “The final analysis documents an agency assessment of the cumulative effects of the actions considered (including past, present, and reasonable foreseeable future actions) on the affected environment.” 	SPE	<p>Both the Payette and Boise National Forests conducted suitability studies as part of the Land and Resource Management Plan process (Forest Service 2003 [Appendix D] and 2010 [Appendix D]). As noted in Section 3.23.4.2 of the SDEIS, the analysis area for Wild and Scenic Rivers includes three of the streams identified as eligible during the studies including the South Fork Salmon River, Burntlog Creek, and Johnson Creek.</p> <p>A Section 7 analysis is only completed for a designated WSR; none of the streams or rivers in the analysis area are designated WSRs. Further, a Section 7 analysis is conducted for federal projects related to water resources (i.e., within the bed and bank of a river); therefore, it is not applicable to the Project.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	263	<p>10. Suitability studies of affected potential Wild and Scenic Rivers needed to be conducted and included in a supplemental DEIS or another NEPA analysis. The study must be conducted prior to the completion of the Final EIS and Record of Decision for the Stibnite Gold Project to allow for public scoping and comments, following NEPA requirements and Forest Service directives for a suitability report.</p> <p>This comment was previously brought up during the comment period for the DEIS, but was ignored with the production of the SDEIS. Due to the adverse impacts of the SGP upon WSR ORVs, the DEIS proposed that the Forest Service would conduct a WSR suitability study for affected streams and make suitability determinations prior to SGP implementation. This is simply not feasible, and it contradicts interagency guidelines for Wild and Scenic study processes. Furthermore, suitability studies must be conducted through a NEPA process prior to analyzing a proposed project that would affect WSR values, not the other way around. WSR Suitability Studies require a separate NEPA process, and the SGP project is expected to have a ROD by 2023. It is a standard for the Payette and Boise National Forest management plans (WSST01) to conduct a suitability study for any affected eligible WSR rivers prior to initiating action. If any action alternative in the SDEIS is approved, this would violate the Wild and Scenic Rivers Act, Forest Service Directives, and established interagency guidelines.</p> <p>In the 1999 technical report “The Wild and Scenic River Study Process” by the Interagency Wild and Scenic Coordinating Council, it concludes that the suitability study must be conducted as part of the NEPA process for the proposed project, or in a separate study prior to the NEPA analysis for the proposed project.</p> <p>For agencies where WSR evaluation was not completed in the land use plan, or through separate analysis, individual river(s) must be evaluated in site-specific (project-level) planning if the project might jeopardize the river’s eligibility for WSR designation. The river is assessed as a part of the NEPA analysis for the site-specific project, or through a separate study conducted as a precursor to analysis of the proposed activity.</p> <p>This same report also states that “the time frame for completion of a river study conducted in a site-specific plan is also typically two to three years.” Both the Interagency Wild and Scenic Coordinating Council, and Forest Service directives, describe that a suitability study, conducted under Section 5(d) of the WRSA, requires a separate NEPA analysis. This analysis will require a scoping period,</p>	SPE	<p>A Section 7 analysis is only completed for a designated WSR; none of the streams or rivers in the analysis area are designated WSRs. Further, a Section 7 analysis is conducted for federal projects related to water resources (i.e., within the bed and bank of a river); therefore, it is not applicable to the Project.</p>

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
			<p>regardless of the analysis document. The Interagency Wild and Scenic Coordinating Council also notes that this suitability study “is typically accompanied by an environmental document, normally an environmental impact statement (EIS), which describes the ORVs and identifies significant issues, public concerns, tentative boundaries and classifications, alternatives and impacts, and appropriate protective management prescriptions and mitigation measures.”</p> <p>In order to address these issues, the Forest Service must complete a separate NEPA analysis to fully consider the suitability of Burntlog Creek and Johnson Creek, both Forest Service identified eligible Wild and Scenic Rivers, or include such an analysis in a Supplemental DEIS for the Stibnite Gold Project. This must occur prior to the FEIS and ROD to allow for public scoping and a comment opportunity, and sufficient analysis under NEPA.</p>		
Samuel Penney (Chairman)	19396	149	<p>3.23 Special Designations</p> <p>The Stibnite Gold project area is surrounded by special designation areas, including the Frank Church River of No Return Wilderness area, Recommended Wilderness Area, 13 Inventoried Roadless Areas (Bernard, Black Lake, Burnt Log, Caton Lake, Horse Heaven, Meadow Creek, Needles, Peace Rock, Reeves Creek, Secesh, Stony Meadows, Sugar Mountain, Whiskey) with different management themes, Research Natural Areas (Belvidere Creek and Chilcoot Peak - in Burntlog proposed route), Wild and Scenic Rivers that are eligible and suitable for inclusion in the national System include: Burntlog Creek (eligible), Johnson Creek (eligible), and SFSR (suitable). These special areas were designated for a particular reason that needs unique consideration with respect to consequential effects.</p>	SPE	Each of these special designations was considered and impacts analyzed in Section 4.23 of the EIS as well as in the Special Designations Specialist Report.
Samuel Penney (Chairman)	19396	389	<p>4.23 Special Designations</p> <p>The SDEIS appears to dismiss altogether any impacts to the WSR water rights as the Shoup quantification gage is upstream of the confluence with the SFSR. The Forest Service fails to disclose that the monthly minimum flows described in the WSR water rights #75-13316 and #77- 11974 are used throughout the designated Salmon Wild and Scenic River from the mouth of the North Fork of the Salmon River to Long Tom Bar. While it is unknown whether monthly WSR flows are met at Long Tom Bar, Perpetua proposed mitigation in their water right application for permit because flows at the Shoup quantification gage do not always meet minimum flows.597</p>	SPE	The description of water rights in Section 4.8.2.2 is consistent with the relevant water rights Orders. The EIS analysis does not draw any conclusions regarding Perpetua's water rights applications or the IDWR review and decision on those applications. The EIS analysis acknowledges the potential for mitigation measures associated with the IDWR review and decision on Perpetua's applications but does not draw any conclusions regarding their details which are pending a decision by IDWR and are not included in the SGP description reviewed by the Forest Service for this EIS.
Samuel Penney (Chairman)	19396	390	<p>Furthermore, the SDEIS notes that “[v]ariable precipitation, decreased streamflow, and more precipitation falling as rain instead of snow could impact the characteristics and quality of special designation areas.”598 The SDEIS fails to detail how variable water supply conditions may impact the characteristics and quality of WSRs. The Tribe asks that the Forest Service reanalyze the impacts to WSRs and, in particular, include emphasis on the WSR sections downstream of the Project area.</p>	SPE	Variability in precipitation and its effects are not expected to be associated with Project activities. The potential for decreased streamflow is described in SDEIS Section 4.8.2.2 and is not anticipated to affect the WSR sections identified in Section 4.23 of the EIS.
Samuel Penney (Chairman)	19396	419	<p>5.23 Special Designations</p> <p>On page ES-30, the SDEIS states there will be “no impacts to [‘Wild and Scenic Rivers’] freeflowing conditions are anticipated under either action alternative.” The Tribe finds this statement severely lacking in factual background as Perpetua proposed mitigation in their water right application for permit. The Forest Service should consider downstream impacts to Wild and Scenic Rivers (“WSR”), not just those areas that “intersect with the SGP area”. Furthermore, please explain why Section 7(a) of the WSR does not apply to rivers and tributaries within the Project area as they are all tributaries to a designated WSR river segment on the mainstem Salmon River. Finally, as the State of Idaho does not have specific state regulations that “...address eligible, suitable, or designated WSRs,” the Tribe believes that places even more responsibility on the Forest Service to conduct a thorough analysis of how the SGP will impact WSRs.</p>	SPE	<p>The description of water rights in Section 4.8.2.2 is consistent with the relevant water rights Orders. The EIS analysis does not draw any conclusions regarding Perpetua's water rights applications or the IDWR review and decision on those applications. The EIS analysis acknowledges the potential for mitigation measures associated with the IDWR review and decision on Perpetua's applications but does not draw any conclusions regarding their details which are pending a decision by IDWR and are not included in the SGP description reviewed by the Forest Service for this EIS.</p> <p>A Section 7 analysis is only completed for a designated WSR; none of the streams or rivers in the analysis area are designated WSRs. Further, a Section 7 analysis is conducted for federal projects related to water resources (i.e., within the bed and bank of a river); therefore, it is not applicable to the Project.</p>

Tribal Rights and Interests

Author	Comment Letter	Comment Number	Comment	Comment Category	Draft Comment Response
Elizabeth Barnes	6652	9	The treatise outlined in pages 3-500 to 501 effective in years 1855, 1863 and 1868 are precedent to the General Mining Law of 1872. The Nez Perce Tribe Treaty grants "exclusive right of taking fish at all usual and accustomed places in common with citizens of the territory." The right of Perpetua to take fish via habitat loss is illegal by these terms. Furthermore, the General Mining Law of 1872 does not pertain to Perpetua Resources, as they are not an American Citizen, a requirement clearly stated in the Law.	TRI	Comment noted.
Amelia Weber	18155	9	Finally, the SGP will negatively impact the treaty-reserved rights of the Nez Perce and other indigenous peoples of Idaho. The SDEIS clearly states that "Adverse impacts to tribal rights and interests under either alternative, including preventing access to traditional lands, harming traditional fishing and hunting rights, impacting endangered salmon and concerns that it would harm the tribe's salmon restoration efforts".	TRI	Impacts to tribal resources are based on impacts to the resources themselves and impacts of concern as expressed by the Tribes in government-to-government consultation. As noted in Section 6.2.3 of the SDEIS, government-to-government consultation serves as the primary means for federal agencies to carry out their trust obligations.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18871	2	<p>Generally, the Tribes recognize the importance of wise management of public resources and the myriad laws that govern the extraction of resources from public lands often place user groups at odds; in the current Project, this is readily apparent. It should be noted, clearly, that Native American tribes are not 'stakeholders' or 'interest groups' but are unique governments with wide ranging interests in each aspect of the Project and the Forest Service has an obligation to consult with tribes on the issues presented in this SEIS. In order for the consultation process to be meaningful, the Tribes expect the issues raised during government to government consultation to be addressed as well as these written comments.</p> <p>As an opening statement, the South Fork Salmon River and its tributaries are significant resources for the Tribes' membership as they contain subsistence resources, cultural connections, and spiritual gathering places from time immemorial. The continued exploitation of the watershed for minerals represents a direct threat to our use of the watershed for many generations to come; in particular, the East Fork of the South Fork is still experiencing impacts from legacy mining during the previous century. The Tribes do not support continued exploitation of mineral resources as proposed by the Project, particularly in light of off-mine impacts, new road development, and uncertain mitigation measures associated with mining actions. As noted in previous consultation meetings on this project, the Tribes remain committed to participating in the process of reviewing the proposed action but cannot support the mining proposal as presented in the SEIS.</p>	TRI	Comment noted. Position statement.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18871	3	<p>The various bands of the Shoshone and Bannock people traditionally roamed extensively throughout the Great Basin, Columbia River Plateau and Intermountain region; with numerous bands often described by the food resources in their territory. Prior to non-Indian settler's entry into the region, Shoshone and Bannock peoples utilized these rich natural resources, and enjoyed the cultural traditions and lifestyles unique to our people. The Tribes called their aboriginal territory, "bia sogope" the Shoshoni term referring to "our big lands". The removal of our people to reservations remains a dark moment in our history, with generations carrying on stories of our homelands. The Fort Hall Reservation is now home to over a dozen bands of Shoshone and Bannock peoples from across our homelands, permanently residing in Fort Hall but never giving up their ancestral and reserved rights to return to those homelands across the region.</p> <p>In June 1867, an Executive Order established the Fort Hall Indian Reservation, as a collective place to consolidate the various bands of Shoshones and Bannocks, from their aboriginal lands, clearing the way for European-American settlements, such as ranchers and miners who desired rich resources present on aboriginal lands. The United States then signed a treaty, the Treaty with the Eastern Shoshone and Bannock Indians in 1868 (commonly referred to as the "Fort Bridger Treaty"), to protect our subsistence rights to harvest foods, medicine, and materials from our homelands. This document established a political entity we now refer to as the Shoshone Bannock Tribes (Tribes) who are the stewards of the unique culture, homelands, and practices of our people from time immemorial. The 1868 Fort Bridger Treaty (15 Stat 673) affirmed the reservation reserved by Executive Order in 1867 and reserved certain off-reservation use rights for the Tribes. Article IV states:</p>	TRI	We appreciate the comment. The SDEIS analyzes the environmental impacts of a proposed major federal action but it is not the appropriate vehicle in which to adjudicate or opine on the parameters of tribal treaty rights. However, the SDEIS does identify and analyze potential impacts on tribal treaty rights.

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			<p>The Indians herein named agree, when the agency-house and other buildings shall be constructed on their reservations named, they will make said reservations their permanent home, and they will make no permanent settlement elsewhere; but they shall have the right to hunt on the unoccupied land of the United States so long as game may be found thereon, and so long as peace subsists among the whites and Indians on the borders of the hunting districts.</p> <p>The protection of expressly reserved and inherent rights continues to be a critical component of our management perspective. The Project has not documented how it will be protective of these reserved rights, and in many respects, fails to acknowledge the generational impacts from Project actions will have on our Tribal membership.</p>		
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18871	4	<p>The Tribes have always stressed the importance of initiating efforts to restore the Snake River system and affected unoccupied lands to a natural condition; it is a watershed level view of resource management. The Shoshone-Bannock Tribes Policy for Management of the Snake River Basin Resources states:</p> <p>The Shoshone Bannock Tribes (Tribes) will pursue, promote, and where necessary, initiate efforts to restore the Snake River systems and affected unoccupied lands to a natural condition. This includes the restoration of component resources to conditions which most closely represents the ecological features associated with a natural riverine ecosystem. In addition, the Tribes will work to ensure the protection, preservation, and where appropriate-the enhancement of Rights reserved by the Tribes under the Fort Bridger Treaty of 1868 (Treaty) and any inherent aboriginal rights.</p> <p>The proposed Project has the potential to impact a large landscape within the Snake River basin that is currently home to a myriad of native assemblages of species. While our policy does recognize that anthropogenic modifications are the current paradigm, large-scale projects should not impact future generations of Tribal members' opportunities to enjoy the natural view shed, gather resources and continue traditional cultural practices. In our view, when the Project is objectively evaluated and those noted impacts are weighed against the proposed mitigation measures, a decision to permit the mine would tip the balance in favor of short-term mineral exploitation at the expense of functional watersheds for future generations; this is not a decision that the Tribe would support.</p>	TRI	Comment noted. Position statement.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18871	42	Date of Fort Bridger Treaty is 1868, not 1863 (July 3,, 15 Stat. 673). 1.10.1.3 Please correct.	TRI	Typo has been corrected.
Brooke Dunnagan	18894	4	In regards to the impact of the land of the New Perce, Shoshone-Bannock and Shoshone- Paiute tribes, the SDEIS states (P. ES -32), "Adverse impacts to tribal rights and interests under either alternative, including preventing access to traditional lands, harming traditional fishing and hunting rights, impacting endangered salmon and concerns that it would harm the tribe's salmon restoration efforts". This is very concerning as it is impacting groups of Native Americans who have lived on the land and have been wrongfully displaced throughout settling history. The impact of this mine continues to deny these people of their right to access of the land and to healthy rivers and ecosystems.	TRI	Impacts to tribal resources are based on impacts to the resources themselves and impacts of concern as expressed by the Tribes in government-to-government consultation. As noted in Section 6.2.3 of the SDEIS, government-to-government consultation serves as the primary means for federal agencies to carry out their trust obligations.
Joseph Pietri	19062	3	<p>Please Honor Nez Perce Rights of the 1855 Treaty.</p> <p>Hopefully with USFS cooperation usual and accustomed grounds for fishing, hunting gathering on ancestral lands can be restored without adding additional devastation and so doing preservation of Indigenous Cultural Heritage for the Tribes. Where would we be without the NiMiiPuu today?</p> <p>Please do not allow excavation, decimation and extraction of Gold or any other mineral deface their lands. It is not worth what will be given up and never can be brought back regardless of lofty claims by Perpetua, a corporation really just mining for the profit and not for the Green benefits that will come or the Defense of our country as claimed. That is a narrative just used for the purpose of justifying the</p>	TRI	No further response required. General in nature or position statement.

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			<p>heinous acts and Violence Against Nature, who has no voice of her own and is defenseless against Man, Machine and Greed.</p> <p>Years ago a neighbor of mine that grew up on the Zena Creek Ranch told me a story of being able to take a pack string, fill his panniers up with fish and do enough trade in McCall to come back home fully stocked with provisions. I'm just guessing that it was the early 1930's. Story told by Carmel Parks, around 1986 he was approximately 77 years and was one good old boy!</p> <p>The goal of Perpetua is not to restore, but to get gold, creating a need for more restoration.</p>		
Joseph Pietri	19062	20	This Is Nez Perce Cultural Land we are talking about. They (NIMIIPUU) should dictate the ultimate decision.	TRI	The SGP would be on lands administered by the Payette and Boise National Forests. Government-to-Government consultation between the Forest Service and the Tribes is ongoing.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19130	1	However, the SDEIS overstates impacts regarding various resources of concern to tribes and contains related inaccuracies in characterizing treaty rights, environmental justice, and heritage resources effects while minimizing the future environmental (and treaty interest) benefits from the MMP as proposed. Although there are SGP impacts on resources and uses of concern to tribes, the record does not support assertions that the Project's operations or impacts will materially violate any treaty rights, or that tribal interests cannot be adequately accommodated (or, in the particular instances of fish passage and habitat restoration, advanced) through appropriate continued engagement and mitigation. These comments are intended to assist in informing appropriate corrections, clarifications, and other improvement in the SGP Final EIS ("FEIS"), without discounting or disrespecting tribal rights, interests, or concerns, or the efforts by the United States Forest Service to address them.	TRI	Impacts to tribal resources are based on impacts to the resources themselves and impacts of concern as expressed by the Tribes in government-to-government consultation. As noted in Section 6.2.3 of the SDEIS, government-to-government consultation serves as the primary means for federal agencies to carry out their trust obligations.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19130	2	<p>To be more precise, the SDEIS in various places tends to overstate impacts to tribal interests while inadequately noting beneficial mitigation features, such that minor impacts are inaccurately identified as "major" or "long-term," in some sections going so far as to portray any resource modification as "inherently incompatible" with tribal interests:</p> <p>The Tribes have multiple and inter-related interests and associations with the local area resources (e.g., religious, sacred site, traditional, and subsistence uses). Many of these interests also are inherently incompatible with any resource changes, including increased presence or alternate use of the local area by nontribal individuals or entities. Perpetua Resources strongly disagrees with this characterization. The general, unqualified assertion that an activity is "inherently incompatible" with tribal interests as a result of any potential resource change or effect on tribal use is excessive and inaccurate. While Perpetua Resources is sensitive to tribal treaty rights and interests, such a statement contributes to an inaccurate consideration of the legal bounds of tribal rights and interests, which are not unlimited. This approach erroneously ignores the beneficial mitigation features and their significant reduction of impacts, but also overlooks the many Project improvements resulting from the restoration of this legacy mine site, including the removal of fish barriers and other improvements to fish habitat and water quality.</p> <p>These inaccuracies are likely to contribute to an unnecessary, and overbroad exaggeration of the tribal interest and environmental justice impacts related to access, watersheds, air and water quality, heritage resources, and other concerns relative to tribal interests and environmental justice. Accordingly, Perpetua Resources respectfully requests that the following be considered and reflected in the FEIS.</p>	TRI	The Project actions are analyzed as proposed. The SDEIS identifies opportunities for mitigations and project design features where they are available. The SDEIS identifies and analyzes the SGP's impacts on tribal treaty and reserved rights. Mitigation for impacts will continue to be consulted on with consulting parties and implemented as approved.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19130	3	<p>The FEIS should reflect the appropriate legal and geographic limits to the Tribes' off reservation treaty rights. Any implication that all or most of the area within the SGP operations area or various resource effects analysis boundaries must be available for treaty rights use is not accurate. Based on a legal review, such a broad assertion is simply not supported by the language of the applicable treaties nor case law interpreting the same. The applicable treaties limit off-reservation treaty rights to those places where tribes demonstrate traditional hunting and fishing use at the time the treaties were executed. As such, statements such as the following in the SDEIS are a cause for concern:</p> <p>Much of the SGP is on NFS land administered by the PNF and BNF and is mostly unoccupied federal lands; therefore, most lands are available for treaty rights use as stated in the various treaties and</p>	TRI	The SDEIS identifies relevant laws and regulations including language from treaties, executive orders, and case law that identifies tribal treaty rights on federal lands. The SDEIS is not the appropriate vehicle in which to adjudicate or opine on the parameters of tribal treaty rights.

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			<p>executive orders. [U]sual and accustomed fishing places are also available. ... Currently, there are no tribal access restrictions on the Forest Service lands in the SFSR watershed. Tribes access their usual and accustomed fishing places, hunting areas, and plant gathering areas consistent with their reserved rights.</p> <p>Federal public lands comprise a huge area of unoccupied National Forest lands in the vicinity of the SGP site (and far beyond it) and have been and will remain available for off-reservation treaty use in common with public and other authorized National Forest uses. However, statements like the above in the SDEIS inaccurately suggest that tribal rights extend to all such National Forest lands. This assertion does not account for whether the Tribes have sufficiently shown traditional use within or near the SGP site, particularly in the specific areas where access is alleged to be limited by the Project. Throughout the permitting process for the Project, Perpetua Resources has never disregarded the stated off-reservation cultural connection by Idaho's tribes to this part of the Gem State. Project operations do not preclude access by tribal members. Perpetua Resources remains committed to accommodating tribal members exercising treaty-based off reservation access and use to the maximum extent practicable and allowable, consistent with reasonable health and safety protocols. However, and consistent with the exercise of appropriate off-reservation treaty-based hunting and fishing rights, as a matter of health and safety during Project operations site access for Idaho's tribes has already been and may continue to be reasonably restricted at locations occupied by mining facilities and operations. Temporary access restrictions during a proscribed time, place, and manner for the health and safety of Idaho tribal members is a wholly separate legal consideration than considerations for access by the general public. Stated simply, tribal treaty-based access and general public access to the Stibnite Gold Project are distinct.</p> <p>The Fort Bridger Treaty, the governing treaty with the United States and the Shoshone- Bannock Tribes, provides tribal members with the right to hunt on "the unoccupied lands of the United States." Similarly, the Stevens Treaties, provisions applicable to the Nez Perce Tribe, provide that its members may fish in all "usual and accustomed" places "in common with citizens of the Territory," but may hunt, gather, and graze on "open and unclaimed lands." Both treaties and their variations of phrase, "usual and accustomed," "open and unclaimed," and "unoccupied lands" have each been historically limited by courts to include only those places where the Tribes traditionally fished and hunted when the treaties were executed.</p> <p>The fishing clauses of the Stevens Treaties have received the most judicial attention. Though there is no precise method for determining what constitutes a "usual and accustomed place," the scope of such places and the accompanying treaty rights are not without limitation or condition, and such rights are subject to reasonable restrictions. As part of the requirements set forth above, a tribe whose rights are defined by the fishing clauses of the Stevens Treaties must show that any asserted use was not occasional or incidental:</p> <p>Excluded from a tribe's [usual and accustomed places] are "unfamiliar locations and those used infrequently or at long intervals and extraordinary occasions." In other words, the term "usual and accustomed" was "probably used in [its] restrictive sense, not intending to include areas where use was occasional or incidental." Here, the SDEIS does not address or reflect the required evidence of use. If such evidence may be established by the Tribes' ethnographic studies, it should be disclosed in the FEIS. More specifically, and for purposes of a transparent administrative record, the FEIS should discuss whether each tribe has sufficiently demonstrated traditional, treaty-time use in the specific areas that will be restricted by the SGP, based on any supporting documentation.</p>		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19130	4	<p>The SDEIS' overly broad characterizations of the Tribes' interests set out above are likely to create faulty inferences that off-reservation treaty rights are at risk and overstate SGP impacts which are not supported by the record. These impacts should more appropriately be characterized in the FEIS to reflect the updated legal analysis and guiding case law regarding tribal interests outlined above. In any case, in the FEIS and otherwise, broader tribal interests and concerns regarding the SGP site and surrounding areas cannot be equated with offending offreservation treaty rights.</p> <p>To the extent that tribal member access and use may be affected in the SGP area by any action alternative, this should not be equated with abrogation of treaty rights or major impacts to tribal interests</p>	TRI	The SDEIS analysis reflects the SGP's potential impacts to tribal treaty and reserved rights and takes into consideration relevant laws and regulations, treaties, executive orders, and case law as they apply to federal lands. The SDEIS analyzes the proposed actions as they relate to the SGP and accounts for cumulative effects. The SDEIS does not analyze for past mining actions or disturbances, but the current proposed undertaking. The SDEIS is not the appropriate vehicle in which to adjudicate or opine on the parameters of tribal treaty rights.

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			<p>and concerns. This consideration is especially important in the historical and geographical context that is reflected in the SDEIS and supporting record.</p> <p>Tribal access, use, and available resources have remained resilient at the SGP site (which has been “highly disturbed by past mining activities”) and surrounding area during and after a long history of mining. The SGP is not proposed for construction and operation within the current exterior reservation boundaries of any Idaho Federally-recognized tribe; the site is many miles away from the tribal reservation communities expressing interest, “located more than 100 miles from the analysis area”. The SGP site is at, or near, the edge of the boundaries of offreservation areas asserted by tribes as historical territories. SGP ground disturbance and operations will have limited, localized impacts, within a huge surrounding area remaining available for tribal member use: “offsite presence of tribal resources means the impact to overall access to a specific resource would be negligible to minor.” As already noted and to clearly reiterate, Perpetua Resources is committed to accommodating tribal members exercising treatybased off-reservation access and use to the maximum extent practicable and allowable, consistent with reasonable health and safety protocols. And, as discussed more specifically below related to access, the courts have held that off-reservation treaty rights are capable of being acclimated with other uses of public lands, here, mining featuring a restorative goal addressing contaminated National Forest lands, without being breached.</p> <p>And, again, a fair NEPA analysis should calibrate the long term environmental and social benefits of the Project moving forward. The SGP will promptly improve fish habitat early in its mine life and permanently enhance other features at the SGP site upon conclusion of its restoration strategy. Importantly, the SGP could produce the United States’ only primary source of antimony, a mineral critical to our economic, environment and national security. SGP antimony production will serve clean energy grid storage battery and other efforts to mitigate climate change effects, benefiting tribes as well as other United States citizens and communities. Though all impacts related to tribal interests should be updated in light of the foregoing, the following updates to tribal impacts associated with access, environmental justice, and heritage resources should fairly be reflected in the FEIS.</p>		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19130	5	<p>The FEIS should clearly portray that, as directed by the courts, not all impacts to access or other tribal interests amount to a violation of treaty. The SDEIS characterizes access restrictions as “a localized, long-term, and moderate to major impact to tribal treaty rights” despite conceding that there is no identifiable material loss of resource availability for tribal use:</p> <p>Access, or the continued availability of the traditional natural resources, would be affected by the SGP. ... There are no known types of natural resources available for exercising treaty rights in the SGP area that are not available on the surrounding NFS lands. It is difficult to quantify or otherwise determine the impact of a temporary loss of a right. The characterization that temporary, localized restrictions, impacts, or limitations amount to the “loss of a right” is not supported by law. Numerous courts have recognized that the rights of tribal members, specifically where exercised in “usual and accustomed” places, are not exclusive but in common with the public. Some courts, including the Ninth Circuit, have held “in common” to entitle tribes to “a fair and equitable share” of that sought to be harvested, linking the right to a volume of resources sufficient for sustenance: The right secured by the treaties ... exists in part to provide a volume of fish which is sufficient to the fair needs of the tribes. The right is to be exercised in common with non-Indians, who may take a share which is fair by comparison with the share taken by the tribes. In analyzing the right “of taking fish ... in common with all citizens of the Territory,” the Ninth Circuit additionally held “[T]he central principle here must be that Indian treaty rights to a natural resource ... secures so much as, but no more than is necessary to provide the Indians with a livelihood—that is to say, a moderate living.” In that case, the Court of Appeals additionally ruled that the Treaties were ultimately understood by tribes to be “a means of supporting [tribes] once the Treaties took effect.” This interpretation, which links the analysis of whether a treaty violation occurred directly to the impact to the resources sought, is inapposite to the SDEIS statement above, that “major” impacts are likely to result from localized access restrictions which do not result in any identifiable impact to the availability of those resources. Accordingly, the FEIS should reflect that a localized, temporary access restriction, which does not result in the loss of any identifiable resource, is not the legal equivalent of the loss (or</p>	TRI	The SDEIS analysis reflects a range of potential impacts to tribal treaty and reserved rights if the SGP were to be implemented as proposed. That analysis is informed by relevant laws and regulations, treaties, executive orders, and case law as they relate to the tribal nations that the Payette and Boise National Forests consult with. The SDEIS is not the appropriate vehicle in which to adjudicate or opine on the parameters of tribal treaty rights.

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			<p>degradation) of an off-reservation treaty right. Perpetua Resources has, and will, continue to work with the Tribes to provide treaty-based hunting and fishing access where safe and otherwise practicable to do so. Perpetua Resources' intent is to provide continued access to tribal members, restricting only those particular locations which would compromise operations or the safety of employees or other authorized persons on site.</p> <p>Tribal access to and use within the Stibnite Mining District area has been enduring and robust throughout a long history of large-scale mining activity that has left behind legacy conditions proposed to be addressed by the SGP. The FEIS should reflect that the SGP is not "inherently incompatible" with tribal interests, especially given the pronounced restorative nature of the Project and its targeted improvements to resources and features at the site, as described in the MMP and various SDEIS sections. These site improvements, which, but for the Project otherwise would not occur, include the removal of fish passage barriers and other improvements to water quality and species habitat. The SDEIS does recognize many of these benefits:</p> <ul style="list-style-type: none"> · It is important to note that under baseline conditions, Chinook salmon do not volitionally occur upstream from the Yellow Pine pit lake cascade barrier... Overall, there would be a localized, permanent, major beneficial effect on access to Critical Habitat for Chinook salmon. · Changes to water chemistry would primarily have minor effects but would have unknown level of beneficial effects through the reduction of arsenic and antimony. · Based on modeled results, the effects of the 2021 MMP on steelhead caused by changes to temperature-based suitable habitat are expected to be moderate, permanent, and localized, with beneficial effects resulting from increased access to habitats not previously accessible. · "The restoration activities, particularly providing volitional passage in the East Fork SFSR, would result in a major, permanent, regional, and beneficial effect on Chinook salmon, steelhead, bull trout, and westslope cutthroat trout within the vicinity of the mine." · Overall, the SGP is expected to result in minor, permanent, and localized benefits to occupancy probability and the available habitat for occupancy potential for bull trout. Improvements such as removing fish passage barriers have been recognized as remedial measures that benefit traditional and customary access and use under the Stevens Treaties. These and other SGP benefits should be appropriately considered throughout the FEIS, but specifically in relation to tribal interests, as well as environmental justice and heritage resources discussions, further covered below. 		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19130	6	<p>The SDEIS overstates implications related to tribal environmental justice communities by not accounting for existing mitigation mechanisms:</p> <p>Under the 2021 MMP, impacts to subsistence resource availability on tribal communities with environmental justice concerns could potentially be adverse and would be localized, long-term to permanent, and moderate. ... There are no substitute resources or replacement opportunities for location-specific tribal interests and use of the local area. As a result, tribal members are more likely to be impacted by local area resource changes than the general public. However, specific information from the Tribes regarding the exact nature, duration, and location of impacts on tribal populations resulting from the excluded areas for the SGP and/or resource impacts is not available in the public domain. Based on the restricted ethnographic information provided to the Forest Service by the Tribes, it is expected that the SGP-related impacts would be of a type and/or magnitude to represent an adverse environmental justice impact to the tribal environmental justice communities.</p> <p>This passage infers there will be an impact to subsistence resource availability stemming from access restrictions or resource changes. This directly contradicts the record, including the SDEIS' own determination which specifically finds: "There are no known types of natural resources available for exercising treaty rights in the SGP area that are not available on the surrounding NFS lands." In this and the broader historical and geographic context summarized further above, any adverse impacts to environmental justice communities should be characterized as localized, limited, and minor at most.</p>	TRI	Comment noted.

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			<p>For any such impacts, the FEIS should appropriately reflect existing mitigation features. The SDEIS states: “At this time, no mitigation measures have been identified for Tribal Rights and Interests.” It is understood, or at least must be assumed, that the USFS is using the term “mitigation measures” narrowly here—i.e., no mitigation measures in addition to those already incorporated in the MMP, best management practices, and regulatory requirements to meet Clean Water Act, Clean Air Act, Endangered Species Act, and other standards and to otherwise reasonably minimize impacts on National Forest surface resources to the extent feasible. The FEIS should clarify this, as well as reflecting additional measures developed in response to comments on the SDEIS and through ongoing engagement with interested tribes. In any case, as has already been indicated, Perpetua Resources will continue to engage with the relevant agencies and interested communities to refine and finalize SGP mitigation plans and measures to further reduce impacts to the extent feasible.</p>		
<p>Karen Balch (North Fork Veterinary Service)</p>	<p>19228</p>	<p>15</p>	<p>Commercial gold mining at Stibnite violates the 1855 treaty rights of the Nez Perce Tribe which is legally recognized as a sovereign nation within the United States. In the early eighteen-hundreds, the Nez Perce Tribe occupied over 13 million acres of western America now identified as parts of western Montana, southeastern Washington, northeast Oregon, and, most relevant to this discussion, north-central Idaho. The 1855 treaty explicitly reserves a permanent homeland as well as “the right to fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land.”</p> <p>Stibnite Gold Project footprint is entirely within the Tribe’s aboriginal territory as well as within the area determined by the Indian Claims Commission to have been exclusively used and occupied by the Tribe. The Project is also located on the Krassel Ranger District of the Payette National Forest. The lands comprising the Payette National Forest are open and unclaimed and subject to the Tribe’s treaty-reserved rights. In my view, the 1855 Treaty with the Nez Perce Tribe supersedes the 1872 Mining Act both in time, legal priority, and importance regarding current mining at Stibnite.</p> <p>In my opinion, honoring the 1855 Treaty with the Nez Perce Tribe is paramount priority at this time over the 1872 Mining Act, an antiquated act that has permanently destroyed many areas. Consistent with the Nez Perce Tribe’s notion of hereditary stewardship of the land, the Tribe’s Department of Fisheries Resources Management currently spends \$2.5 million dollars annually on hatchery supplementation, fishery research, and watershed restoration near, and downstream from Perpetua’s proposed mine. The Tribe’s work to restore Chinook salmon runs in the South Fork Salmon River watershed sustainably contributes to the area’s economy and quality of life.</p> <p>I adamantly support the following words of the Chairman of the Nez Perce Tribe, Shannon Wheeler: “Allowing Midas (stet) Gold to move forward with their proposed mine will undo the hard work of so many. We have yet to see a mine that does more good than harm and it is our responsibility to look out for our future generations. This mine, if approved, will surely be to the detriment of those future generations.”</p>	<p>TRI</p>	<p>Comment noted.</p>
<p>Karen Balch (North Fork Veterinary Service)</p>	<p>19228</p>	<p>16</p>	<p>The Forest Service has the authority to approve or deny permitting over these magnificent lands as stewards for the American public that own them and for the Native American indigenous peoples who have lived in the area since time immemorial. The Nez Perce Tribe inhabited these lands for millenniums, and their cultural fabric is richly populated with fish, bighorn sheep, deer, bear and elk as well as botanicals for edible foods, medicines and for spiritual beliefs. Admittedly, I feel badly at the horrific history the Tribes endured as Western Europeans moved West taking whatever they wanted. While I can’t rectify the “Sins of the Fathers” I can emphatically say that “enough is enough.” I refuse to elevate a “gold mine” over the Tribes subsistence rights to healthy animals that are their food, basis for spiritual beliefs, and the center of the cultures that we stole from them. I can say I support the Tribe and these animals need to be healthy. The millions the Tribe has spent attempting to restore salmon runs has benefitted us all.</p>	<p>TRI</p>	<p>Comment noted. No further response required. General in nature or position statement.</p>

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Olin Balch (North Fork Veterinary Service)	19234	7	<p>Commercial gold mining at Stibnite violates the 1855 Treaty rights of the Nez Perce Tribe which is legally recognized as a sovereign nation within the United States. In the early eighteen-hundreds, the Nez Perce Tribe occupied over 13 million acres of western America now identified as parts of western Montana, southeastern Washington, northeast Oregon, and, most relevant to this discussion, north-central Idaho. The 1855 Treaty explicitly reserves a permanent homeland as well as “the right to fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land.”</p> <p>Perpetua (Midas Gold then) Idaho’s footprint is entirely within the Tribe’s aboriginal territory as well as within the area determined by the Indian Claims Commission to have been exclusively used and occupied by the Tribe. The project is also located on the Krassel Ranger District of the Payette National Forest. The lands comprising the Payette National Forest are open and unclaimed and subject to the Tribe’s treaty-reserved rights. The most current Stibnite Gold Project Supplemental DEIS states “Either action alternative would cause disturbances that may impact tribal resources and would adversely affect tribal rights and interests.” (USDA Stibnite Gold Project Supplemental DEIS, ES-32.) Perpetua should be required to monitor downstream and upstream fish for toxins, to clean up the Stibnite Gold area and surrounding streams in perpetuity, or until fish have non-detectible levels of toxins for at least 100 years.</p> <p>The 1855 treaty with the Nez Perce Tribe trumps the 1872 Act which federal land managers argue, in the eyes of the Mining law, that mining is the highest and best use of public lands. I believe the 1872 law has been purposefully misinterpreted and manipulated to support rampant mining on public lands inconsistent with the intent when the 1872 Act was originally written 151 years ago (“Guest Opinion: Forest Service should not assume Perpetua Resources has rights under the 1872 law.” Fred Coriell, Idaho Press, Dec 6, 2022). Whether Perpetua even has the right to use and occupy mining claims associated with Stibnite Gold Project requires a new Surface Use Determination. <i>Ctr. For Biological Diversity v. United States Fish & Wildlife Serv.</i>, 33 F.4th 1202, 121 (9th Cir. 2022).</p> <p>Whether for mining, grazing, or timber harvest, private, destructive use of public lands is morally inconsistent with responsible stewardship of what is the joint heritage of all present and future Americans. Respecting the rights of descendants of Native Americans whose ancestors lived in what would become the United States before 14th Century European colonization is paramount. In my opinion, it is vitally important that this 151-year-old law be rewritten to properly recognize indigenous Native American treaty rights and properly prioritize long-term stewardship and conservation of all public lands as its highest priority.</p> <p>Consistent with the Nez Perce Tribe’s notion of hereditary stewardship of the land, the Tribe’s Department of Fisheries Resources Management currently spends \$2.5 million dollars annually on hatchery supplementation, fishery research, and watershed restoration near, and downstream of Perpetua’s proposed mine. The Tribe’s work to restore Chinook salmon runs in the South Fork Salmon River watershed sustainably contributes to the area’s economy and quality of life.</p>	TRI	<p>The application of the General Mining Act of 1872 to the proposed Project is consistent with Forest Service policy and procedure. It is out of the purview of the Forest Service to rewrite the General Mining Act of 1872.</p> <p>Impacts to tribal resources are based on impacts to the resources themselves and impacts of concern as expressed by the Tribes in government-to-government consultation. As noted in Section 6.2.3 of the SDEIS, government-to-government consultation serves as the primary means for federal agencies to carry out their trust obligations.</p>
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	114	<p><i>Issue</i> : <i>The SGP would impact tribal resources, restrict tribal access, and reduce viability and/or availability of culturally significant fish, wildlife, and plants.</i> " Please update issue to reflect Chapter 4 "The SGP would affect tribal rights and interests through physical, audible, and visual disturbances to tribal resources, through restricting access of tribal members from usual and accustomed fishing places; hunting, pasturing and plant gathering areas; and through changes to the viability and availability of culturally significant fish, wildlife, and plant species." Also, indicators are similar but not the same.</p>	TRI	Table updated to match Chapter 4.
Alan Haslam (Vice President, Permitting, Perpetua)	19325	693	<p><i>"For this reason, it is recognized that in addition to the SGP, other mining project developments expected to occur in the analysis area, Valley County, and possibly elsewhere in the region also may contribute to adversely affecting traditional tribal cultural practices and places that have significance to tribal cultural identities.</i> " Please replace "may contribute to adversely affecting traditional" with "may affect traditional".</p>	TRI	Revised sentence to state: "...may adversely affect traditional..."

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	694	This paragraph is contradictory. It starts with: " <i>Projects that are currently undergoing reclamation or will in the future would likely cause further damage to any tribal treaty rights, tribal resources, historic properties, sacred sites or places, TCPs, and CLs in the area.</i> " It ends with: " <i>These actions have the potential to restore landscapes that can eventually restore traditional tribal resources by removing potentially hazardous wastes, mining tailings, and capping historic waste rock dumps.</i> " Please clarify.	TRI	These activities have the potential for both adverse and beneficial impacts to resources important to the Tribes. Narrative slightly revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	695	" <i>This activity would be a potential impact to any tribal resources present in those areas.</i> " What are the specific impacts? Please clarify.	TRI	Clarification made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	577	" <i>The analysis area for tribal rights and interests is the geographic area within which the SGP may directly or indirectly impact tribal real property interests or cause alterations in the character of tribal resources and in a tribe's ability to exercise their rights for off- reservation tribal hunting, gathering, and pasturing activities, fishing in usual and accustomed places, access streams and fountains, and their ability to practice spiritual and religious activities that also are protected under federal laws (Figure 3.24-1).</i> " The analysis area does not include the reservations. Since reservations are discussed in the EJ section, it would be helpful to explain the locations of the reservations in relation to the analysis area.	TRI	Added sentence.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	578	" <i>The Fort Bridger Treaty of 1868 (also known as the Shoshone Bannock Treaty) was the last reservation established through treaty council (Wikipedia 2022).</i> " Please replace " Wikipedia 2022 " with the tribe's website - http://www.sbtribes.com/fort-bridger-treaty/	TRI	Revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	579	" <i>After 1868, reservations were established through presidential executive order (Wikipedia 2022).</i> " Please replace " Wikipedia 2022 " with the tribe's website - https://www.shopaitribes.org/spculture/	TRI	Revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	580	" <i>The SGP is outside of the boundaries of the reservations recognized in either the Treaty of 1855 or the Treaty of 1863 reservations but is within the Nez Perce Tribe's traditional use area and ceded lands.</i> " Please include information about how far the boundaries of reservations are outside of SGP since the reservations are discussed in EJ.	TRI	This was added in Section 3.24.2 of the Final EIS and Section 5.1 of the Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	581	Indicators: Chapter 1 includes more indicators which are not addressed here. Those indicators need to be addressed here also.	TRI	Added indicators from Chapter 1 of the SDEIS that were not already in Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	582	" <i>Currently, there are ongoing releases of hazardous substances, pollutants, and contaminants to surface water and groundwater at the mine site including elevated concentrations of antimony, arsenic, copper, lead, mercury, and cyanide.</i> " This is not correct. There is currently no elevated copper or lead	TRI	Deleted copper and lead from Section 4.24.2.1 of the Final EIS and Section 7.2.1 of the Specialist Report.

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Resources Idaho, Inc.)			concentrations in the project area and cyanide is questionable. This statement should reflect the facts as water sampling shows. Please revise this statement with respect to Ch3.8 & 4.8.		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	583	"There is one known pre-contact archaeological site identified as the Stibnite Lithics Site, within the Operations Area Boundary that would be avoided through protective measures (i.e., fencing) ; " This statement is inconsistent with Ch4.17, which describes avoidance not fencing. Please remove "fencing".	TRI	Fencing could be used as part of avoidance; however, deleted this in Section 4.24.2.2 of the Final EIS and Section 7.2.2.1 of the Tribal Rights and Interests Specialist Report as specifics will be described in the Programmatic Agreement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	584	"Currently, there are no known sacred sites within the Operations Area Boundary, however tribal consultation and the preparation of the confidential tribal ethnographies have identified a TCP District within the analysis area. " Please define TCP District.	TRI	A definition was already provided in Section 3.17.1.1 of the SDEIS. However, additional clarification has been added to both Section 3.24.4.4 of the Final EIS and Section 6.1.4.2 of the Tribal Rights and Interests Specialist Report to include "an area that possesses a concentration, linkage, or continuity of culturally significant elements".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	585	"The Stibnite and Thunder Mountain roads through the SGP would be closed during the mine operations, potentially restricting access to important tribal resources and sites. " This is not correct. The MMP would replace through site access and provide non-winter access that is comparable to current conditions. Please revise.	TRI	Revised in Section 4.24.2.2 of the Final EIS and Section 7.2.2.2 of Tribal Rights and Interests Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	586	"Public and tribal member use would generally not be allowed in the mine site footprint, areas adjacent to the mine site (i.e., the Operations Area Boundary), the upgraded transmission line ROW, and the new transmission line ROW from Johnson Creek Substation to the mine site. Approximately 13,441 acres of public lands within the Operations Area Boundary (14,221 acres) would become inaccessible to the Tribes once construction begins and would continue through closure and reclamation. " This statement is not accurate. The Operations Boundary is the only applicable restricted area. Please revise.	TRI	Revised in Section 4.24.2.2 of the Final EIS and Section 7.2.2.3 of Tribal Rights and Interests Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	587	"However, until conclusion of reclamation and restoration efforts, mining effects would continue to alter the nature and potential use of the usual and accustomed fishing locations and springs. " A clarification is needed that while there may have been UAA fishing areas historically, these areas have been substantially impacted by legacy mining.	TRI	It states that in the beginning of the paragraph. Added "substantially" to the sentence.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	588	"The impact would be localized, long term, and minor to major. " Please provide a basis for this being a major impact per Table 4.1-1.	TRI	Definitions for impacts to tribal treaty rights and interests are provided in Table 4.24-1 of the SDEIS. A major impact is described as: "A large, easily discernable change in condition (e.g., physical, visible, or audible impacts; a change in integrity of the setting or condition of the resource) to areas of concern to Tribes would occur as a result of construction, operation, or reclamation of the Proposed Action or Alternatives. Changes to existing access would occur. Archaeological or ethnohistoric cultural resources, areas of elevated spiritual importance, TCPs, and/or sacred sites would be substantially altered." Construction of the Burntlog Route would constitute a large, easily discernable change in setting and access. Further, the Tribes have stated that the Burntlog Route is a traditional tribal travel corridor.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	589	"Existing public access roads would remain open under the 2021 MMP. There would be a public access road route through the mine site during the SGP construction, operations, and closure and reclamation phases. Public (including tribal) motorized access to active mine areas, including haul/access roads, would be restricted during the life of the SGP. Non-motorized access (i.e., walking, hiking, horse) would be restricted in the Operations Area Boundary as well. The impact would be localized, long-term, and moderate. " Please include this statement in the introduction to this section to help the reader understand	TRI	This was added under Traditional Use Sites subheadings in Section 4.24 of the Final EIS and 7.2.2.3 of the Tribal Rights and Interests Specialist Report.

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Resources Idaho, Inc.)			what is actually restricted (noting that it conflicts with other statements in this document, which are incorrect).		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	590	"However, reclamation could modify the fish, wildlife, and vegetation composition of the area compared to existing conditions. Therefore, traditional land uses could be altered by reclamation. The impact to Tribal access after reclamation would be localized, long term to permanent, and negligible to major." This should state the reclamation modification will be improvements on existing conditions.	TRI	Revised narrative to include statement of improvement to existing conditions and potential beneficial impacts in Section 4.24.2.2 (Land Status and Access) of the Final EIS and Section 7.2.2.4 of the Tribal Rights and Interests Specialist Report.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	591	"Changes in stream water temperatures for the East Fork SFSR would be negligible to major, localized, and long term." Please clarify how slightly higher stream temperatures affect TR&I.	TRI	Added clarification that changes in stream temperature results in a potential impact to fisheries.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	592	"Overall effects of impacts to water resources on tribal treaty rights and resources, in particular fisheries, but also plant and wildlife populations, would be localized to regional, long term to permanent ," Impact to water resources will not be permanent. The SGP will improve overall water quality from baseline conditions. Please delete " permanent ".	TRI	Deleted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	593	"The impact to wetlands would be localized, temporary to permanent, and major which could result in localized, temporary to permanent , and major impacts to usual and accustomed fishing places along Sugar Creek and portions of the East Fork SFSR, as well as tribal treaty rights and resources including those associated with potential historic properties, sacred sites or places, TCPs, and CLs depending on the wetland and the type of tribal use." This statement does not account for the net 63% increase of wetland acres proposed in the MMP and therefore can't be called permanent loss impacts. Please remove " to permanent ".	TRI	Revised to long term.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	594	"As part of the Clean Water Act, Section 404 permit, a compensatory mitigation plan would be required to compensate for lost wetland areas and their associated functions. It would also address the temporal loss of aquatic functions and values. There would be a temporal loss of wetland functions in the Salmon River drainage for approximately 20 years (Section 4.11)." Please integrate this statement with the paragraph above because it affects the conclusions of the section overall. Right now, impacts are treated as being completely separate from the mitigation and that is incorrect, especially when some of the mitigation starts early.	TRI	Moved to be before impact statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	595	"During construction and operations, fish bearing streams would be diverted into ditched channels and some new barriers would be created " Only some fish bearing channels would be affected this way. Please revise this statement to reflect this.	TRI	Added "some".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	596	" Entrainment by in-stream activities or human-made features, flow reductions, temperature changes, changes in habitat structure, water quality changes, and reduced access to suitable habitat may affect the distribution and relative abundance of fish populations in affected streams in the SGP area thereby affecting availability and harvestability by the Tribes." Fish mitigation measures in the Fish and Aquatic Habitat Mitigation Plan includes salvage and relocation of fish. Please revise.	TRI	Deleted statement about entrainment and added that fish salvage and relocation would take place.

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Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	597	"Impacts to fisheries would be a localized, long-term to permanent, major impact to tribal treaty rights and resources including those associated with potential historic properties, sacred sites or places, TCPs, and CLs. " This section is about fisheries. Please revise to reflect impacts to fisheries.	TRI	Revised to "usual and accustomed fishing places."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	598	"Noise would likely displace larger wildlife and change recreational or traditional use experiences including viewsheds and sense of solitude in areas proximate to construction activities. " Noise does not affect viewsheds. Please delete " viewsheds ".	TRI	Deleted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	599	"Mine and associated infrastructure development and associated noise during the construction phase would be limited to daytime hours (between 7:00 a.m. and 10:00 p.m.). " Please provide a source for this information.	TRI	Sentence has been deleted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	600	"There are six previously identified Native American archaeological sites within the physical APE along Johnson Creek Route that could be potentially affected by the SGP. However, physical impacts to these sites would be avoided through design or protective measures. " The Johnson Creek Route already exists. No physical impacts will occur. Please revise.	TRI	As noted in the paragraphs, under the Johnson Creek Route Alternative, Johnson Creek road would be improved including widening. These disturbances could potentially impact these sites.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	601	"Other tributaries to the East Fork SFSR in the Operations Area Boundary were not identified as usual and accustomed fishing places (e.g., Meadow Creek, Blowout Creek, Rabbit Creek, Garnet Creek, Fiddle Creek, Midnight Creek, Hennessy Creek, West End Creek). " This is a contradictory statement, as on Page 22 it says "The Tribe's ethnography identifies No Man's Creek, Meadow Creek, and Sugar Creek as traditional fishing areas within the Operations Area Boundary." Please reconcile by deleting " Meadow Creek " from list.	TRI	Deleted bullet from both Section 3.24.4.4 of the Final EIS and Section 6.1.4.5 of the Tribal Rights and Interests Specialist Report.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	270	Regarding restricted or altered access to the mine site during construction and operations, these closures would affect tribal access to important sites, including those potentially identified as TCPs and CLs (Specialists Report, p. 45). Restricted or denied access would violate agreements between the Nez Perce Tribe and potentially other tribes with cultural associations to the project area. We reference cultural comments provided by the Nez Perce Tribe and we stand by the assertions made in those comments.	TRI	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	1	The Project is located entirely within the homeland of the Nez Perce people, the Nimiipuu, and within the Tribe's area of exclusive use and occupancy, as adjudicated by the Indian Claims Commission.1 On June 11, 1855, the Tribe entered into a treaty with the United States ("1855 Treaty").2 In the 1855 Treaty, the Tribe reserved and the United States secured to the Tribe sovereign rights that the Nimiipuu have exercised since time immemorial, including the right to take fish at all usual and accustomed places, and the rights to hunt, gather, pasture, and travel. These rights do not simply impose responsibilities on the United States. For the Nimiipuu, these rights were and are inextricably linked to, and a guarantee of, our ability to preserve our culture and identity.	TRI	Comment noted.
Samuel Penney (Chairman)	19396	2	The Tribe's legally reserved rights flow from its status as the original inhabitants and stewards of this land and facilitate the Tribe's extensive and widely-recognized contemporary work as a comanager and partner restoring salmon, steelhead, lamprey, wolves, and bighorn sheep. This work includes the Tribe's active implementation of fish habitat restoration and hatchery actions 'in the Snake and Salmon river basins. Honoring our relationship to the fish and all animals and plants inhabiting the Tribe's cherished lands and waters of our homeland is fundamental to our identity and survival as Nimiipuu-and will	TRI	Comment noted.

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			always remain our sacred and privileged duty. The Tribe's reserved rights are also the "supreme Law of the Land." As an agency of the United States, the Forest Service has a legal duty, enshrined in the Supremacy Clause of the U.S. Constitution and supported by numerous U.S. Supreme Court decisions, to ensure that its actions, including the Project, do not result in harm to the rights the Tribe reserved, and the United States secured, over 160 years ago.		
Samuel Penney (Chairman)	19396	7	Flouting President Biden's directives and the Tribe's repeated emphasis on the protection of treaty rights throughout the Project review, the Forest chose Perpetua's Modified Mine Plan as its Preferred Alternative. During government-to-government consultation on October 25, 2022, the Forest assured the Tribe that the SDEIS is only a draft and its Preferred Alternative is not a final decision. If memorialized as a final decision, however, the Forest's Preferred Alternative will substantially and irreparably harm the Tribe's treaty-reserved resources and the exercise of its treaty-reserved rights in the Project area for over a generation to come.	TRI	Comment noted.
Samuel Penney (Chairman)	19396	8	As documented by the Forest in the SDEIS, and the Tribe's comments, the Project will prevent Tribal member access to usual and accustomed fishing places, hunting and gathering areas, and culturally significant places for twenty years or longer. It will also irreparably harm salmon, other treaty-reserved aquatic species, and essential fish and wildlife habitat as well as impact the Tribe's fish management restoration efforts in the East Fork South Fork Salmon River.	TRI	Comment noted. Potential impacts to tribal treaty rights and interests have been disclosed in the SDEIS.
Samuel Penney (Chairman)	19396	9	The Tribe requests government-to-government consultation with the Forest to review the foundational changes the Forest must make to the Project or deny its authorization. Please contact Marsan Lawyer, Executive Assistant to the Nez Perce Tribal Executive Committee, at (208) 843-2253 to schedule a consultation.	TRI	Consultation between the Forest Service and the Tribe is ongoing.
Samuel Penney (Chairman)	19396	10	The Stibnite Gold Project ("Project") is located on federal, state, and private land subject to the Tribe's treaty-reserved rights. The Project is also within the area determined by the Indian Claims Commission to have been exclusively used and occupied by the Tribe. The Tribe's treaty-reserved rights to fish, hunt, and gather presumes access to, and the continued existence of, those resources. Thus, the 1855 Treaty secures to the Tribe the continued existence of those biological conditions necessary for the resources that are the subject matter of the treaty. Harm to habitat for treaty-reserved resources directly harms the Nez Perce people. The Tribe is concerned that the Project will further degrade habitat and treaty-reserved resources in the Forest. Additionally, the Tribe is concerned that the Project will undo some of the Tribe's work to protect, manage, and restore its resources.	TRI	Comment noted.
Samuel Penney (Chairman)	19396	150	3.24 Tribal Rights and Interests Revisions are needed in the analysis sections in this chapter to include the Tribe's 1855 Treaty under the "Relevant Laws, Regulations, Policies, and Plans." The Tribe's rights are well established. The "usual and accustomed" treaty fishing right held by the Tribe, under the 1855 Treaty, has been upheld and defined in numerous court cases including the United States Supreme Court decisions in U.S. v. Winans and Seufert Bros. Co. v. U.S. Under United States law, an "usual and accustomed" fishing right is not defeasible: it is permanent and includes the right to cross private property as necessary to exercise the right when surrounding land ownership changes and is not limited to the Tribe's ceded area. And, as affirmed in Washington v. United States, these treaty-reserved fishing rights include meaningful protections against interference, including culverts that hinder fish passage and thereby diminish the number of fish available for harvest.	TRI	The Nez Perce Tribe Treaties of 1855 and 1863 are included in Section 3.24.3 of the SDEIS on page 3-501. The 1855 Treaty passage (Article 3) regarding usual and accustomed fishing places is quoted in this section.
Samuel Penney (Chairman)	19396	151	Section 3.24.1 Introduction The assertion that the report "considers the rights and interests of federally-recognized American Indian Tribes (the Nez Perce Tribe, Shoshone-Bannock Tribes, and Shoshone Paiute Tribes) whose treaty fishing and hunting rights and traditional subsistence range... includes the [Project] area" is erroneous and without support to the extent it seeks to attach to the Project area any historical or legal right, title, or interest of the Shoshone-Bannock Tribes or Shoshone-Paiute Tribes.	TRI	Comment noted.

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			The Tribe's rights are well-established in the Project area and SFSR watershed. The Project is located entirely within the Nez Perce's area of exclusive use and occupancy as adjudicated by the Indian Claims Commission in its 1967 decision. The U.S. Congress established the Indian Claims Commission in 1946 to adjudicate Indian tribes' claims against the United States for, among other issues, compensation for the taking of aboriginal lands by the United States without fair payment. The Indian Claims Commission required that compensable aboriginal land title be based on "actual exclusive and continuous use and occupancy 'for a long time' prior to the cession, transfer, or loss of the property." In this decision, the Indian Claims Commission made comprehensive findings regarding the Nez Perce's claim for unconscionable compensation for land ceded to the United States in the 1855 Treaty. The Indian Claims Commission's comprehensive findings in its decision were based on detailed anthropological evidence from both the United States and the Nez Perce of the area of "exclusive use and occupancy" and "aboriginal ownership" as against any other Indian tribes. Among other areas, the Indian Claims Commission's decision included the entire area encompassing the Project and affected SFSR watershed. Given this decision, other Indian tribes' asserted rights or interests within the Project area are without legal or other evidentiary support. No federal court has ever altered the Indian Claims Commission's findings of fact and conclusions of law nor is there any legal or evidentiary support that would justify doing so.		
Samuel Penney (Chairman)	19396	152	3.24.2 Tribal Rights and Interests Resource Area of Analysis The Tribe acknowledges and supports the Forest's determination that the analysis area should not be limited to the Project area and must include the South Fork Salmon River ("SFSR") watershed which "encompasses (is larger than or equal in size to) the other analysis areas used in this EIS for tribal resources of concerns including fish and fish habitat, wildlife and wildlife habitat, vegetation and botanical resources, and cultural resources that may be directly or indirectly impacted by the [Project]." However, the analysis area should also include access and haul routes to the extent those routes, and the direct and indirect effects of Project-related activities on those access and haul routes, extend beyond the SFSR watershed, including Indian Creek and the Middle Fork Salmon River below Indian Creek confluence, Pearsol Creek, Beaver Creek, Upper Big Creek subwatersheds in the North Fork Payette River watershed.	TRI	As noted in Section 3.24.2 of the SDEIS, the analysis area includes the Cascade Reservoir, Johnson Creek, Gold Fork River, Lower East Fork South Fork Salmon River (East Fork SFSR), Upper East Fork SFSR, and Upper South Fork Salmon River HUC10 watersheds would be the areas where the majority of SGP activity would take place. The Burntlog Route access road would be contained within the Johnson Creek and Upper East Fork SFSR watersheds. Because of the route's proximity to the FCRNRW, the Upper Indian Creek subwatershed (which is part of the Upper Middle Fork Salmon watershed) plus the Upper Little Pistol Creek and Upper Pistol Creek watersheds are also included in the analysis area. This area was identified because potential impacts from the SGP are not expected to extend beyond this area.
Samuel Penney (Chairman)	19396	153	3.24.3 Relevant Laws, Regulations, Policies, and Plans The statement, "federal trust requires federal agencies to manage lands under their stewardship with full consideration of tribal rights and interests, particularly reserved rights, where they have been exercised since time immemorial" is a distortion of the law and does not suffice. Treaty reserved rights are not mere factors for federal agencies to consider when making land management decisions. The Tribe's treaty rights give rise to enforceable, non-discretionary legal obligations on the part of the federal government that extend beyond "consideration." Meaningful and accountable action, not mere consideration, is necessary to comply with tribal treaties.	TRI	Comment noted.
Samuel Penney (Chairman)	19396	154	Nez Perce Tribe Treaties (1855 and 1863) Following the 1855 Treaty language, the next statement is inaccurate and should be deleted. It reads, "The Nez Perce Tribe Treaty of 1863 does not specifically list any off-reservation rights." In addition to expressly not altering any rights reserved by the 1855 Treaty, Article VIII of the Treaty of 1863 expressly provides: The United States also agree to reserve all springs or fountains not adjacent to, or directly connected with, the streams or rivers within the lands hereby relinquished, and to keep back from settlement or entry so much of the surrounding land as may be necessary to prevent the said springs or fountains being enclosed; and, further, to preserve a perpetual right of way to and from the same, as watering places, for the use in common of both whites and Indians.	TRI	Revised the sentence to read: "The Nez Perce Tribe Treaty of 1863, Article 8 secures the same rights as the 1855 Treaty and expressly states:"
Samuel Penney (Chairman)	19396	155	Shoshone-Bannock Tribes Treaty (1868)	TRI	Comment noted.

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			<p>The Forest references Article 4 of the Fort Bridger Treaty, “the right to hunt on the unoccupied lands of the United States so long as game may be found thereon” in support of the Agency’s statement that the Shoshone-Bannock Tribes “reserved rights outside of established reservations, including hunting rights. Again, it is important to emphasize that the Project is located entirely within the homeland of the Nez Perce people, the Nimípuu, and within the Tribe’s area of exclusive use and occupancy, as adjudicated between the Tribe and United States by the Indian Claims Commission. Additionally, the Forest’s interpretation of the Shoshone-Bannock Tribe’s treaty rights to encompass off reservation rights other than hunting is not supported by any federal court determination. While the Shoshone-Bannock Tribes often cite State v. Tinno, that decision is not binding precedent (the court recognized that it lacked jurisdiction and issued an advisory opinion) and at most found that the treaty word “hunt” would have been understood to include fishing, and that some evidence had been provided of Shoshone-Bannock Tribes fishing at the Yankee Fork of the Salmon River.</p> <p>The United States Supreme Court’s more recent decision in Herrera v. Wyoming also lends no support to the Forest’s interpretation. In Herrera, the Court overturned a Wyoming state court decision upholding a citation issued to a Crow Tribal member for harvesting elk in the Bighorn National Forest pursuant to the terms of an 1868 treaty between the Crow Tribe and the United States. And while the treaty hunting language at issue in Herrera is identical to the language in the Shoshone-Bannock Tribe’s 1868 treaty, nothing in the Court’s decision addresses the precise legal questions of whether Shoshone-Bannock Tribe’s off-reservation treaty right to “hunt” includes fishing or other activities; or whether those hunting rights apply to lands within the Project area or SFSR watershed as delineated in the SDEIS.</p>		
Samuel Penney (Chairman)	19396	156	<p>Shoshone-Paiute Tribes Executive Order (1877)</p> <p>The Forest offers vague and indecipherable references to “[p]revious treaties with ancestral Shoshone-Paiute bands” that, with the exception of the Ruby Valley Treaty of 1863, are identified as “unratified” and which the Forest asserts “establish various rights (or do not extinguish rights), which has led to complex unresolved claims and rights.” These references and accompanying characterization lack accompanying or verifiable evidence. The Tribe disputes the Forest’s rationale for including this information under “relevant laws, regulations, policies, and plans” to support the Forest’s assertion that the “traditional subsistence range (or “traditional use area” meaning, geographic areas commonly used for the provision of food, clothing, shelter, spiritual, and other purposes)” of the Shoshone-Paiute Tribes encompasses the Project area and SFSR watershed.</p>	TRI	This sentence was deleted from the Final EIS.
Samuel Penney (Chairman)	19396	157	<p>Nez Perce Tribe</p> <p>The statement, “Article 3 of the Nez Perce Tribe Treaty of 1855 affords the Tribe off-reservation rights for fishing, hunting, gathering, and grazing livestock in ‘all usual and accustomed places’ on open and unclaimed lands outside the reservation”² requires revision. Revise to reflect the Treaty language, as follows: “Article 3 of the Nez Perce Tribe Treaty of 1855 reserves to the Tribe the right to fish at all usual and accustomed fishing places, and hunt, gather, and pasture horses and cattle on open and unclaimed land.”</p> <p>The next sentence should be revised as follows to reflect the Indian Claims Commission’s determination: “[t]he analysis area is located within the area claimed to have been exclusively used and occupied by the Nez Perce Tribe, as adjudicated by the Indian Claims Commission.” The statement, “Some of the usual and accustomed fishing rights identified by the United States were within the Operational Area Boundary (Greiser 1998)” should be expanded to read: “The United States documented Nez Perce sites used during and before 1855 including village sites, fishing locations, named usual and accustomed fishing places from Nez Perce oral tradition based on depositions and affidavits of Nez Perce elders given in 1997 and 1998, and archaeological sites that predate most historical records that contain riverine/aquatic resources or evidence of use of such resources. These sites are all evidence of Nez Perce usual and accustomed fishing places, and include usual and accustomed fishing places within the Operational Area Boundary” (Greiser 1998).</p>	TRI	Revised as requested.

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Samuel Penney (Chairman)	19396	158	<p>Land Status and Access</p> <p>The opening paragraph is problematic and requires revision for clarity and accuracy. The statement “Much of the [Project] is on National Forest System land...and is mostly unoccupied federal lands; therefore, most lands are available for treaty rights as stated in the various treaties and executive orders. usual and accustomed fishing places are also available” [sic] does not make grammatical sense and uses inaccurate or inappropriate terms out of context. The term “open and unclaimed land” is employed in the 1855 Treaty and has been interpreted by courts to include National Forest System lands. Why, therefore, has the Forest Service characterized the National Forest System lands on the Payette and Boise National Forests in the SDEIS as “mostly unoccupied”? What factors or criteria is the Forest applying to deem some federal lands “unoccupied”? The term “unoccupied lands” suggests language from the 1868 Fort Bridger Treaty to which the Nez Perce Tribe was not a party. “Unoccupied” is, therefore, inapt to describe National Forest System lands subject to Nez Perce treaty-reserved rights. The term “usual and accustomed fishing places” is also specific to the Nez Perce Tribe’s 1855 Treaty and not does not appear anywhere in the 1868 Fort Bridger Treaty or other ratified or unratified treaty for which the Shoshone Bannock Tribes or Shoshone Paiute Tribe claims an interest related to the Project. As explained above, the Tribe’s “usual and accustomed” fishing right is not defeasible: it is permanent, includes the right to cross private property as necessary to exercise the right when surrounding land ownership changes, and is not limited to the Tribe’s ceded area.</p>	TRI	Comment noted. The term unoccupied land is defined as land that is undeveloped, unused, or upon which no structures or improvements have been built. The 1868 Fort Bridger Treaty uses the term "unoccupied federal land" making it applicable to the Shoshone-Bannock Tribes.
Samuel Penney (Chairman)	19396	159	<p>Water Resources</p> <p>The Tribe, and United States as the Tribe’s trustee, submitted substantial evidence in the Snake River Basin Adjudication regarding the Tribe’s occupation and use of the Salmon River drainage. That evidence, supported by numerous expert reports and depositions of Nez Perce elders, documents Nez Perce fishing, hunting, and gathering in the area. Evidence submitted by the United States as trustee for the Tribe included an affidavit from T. Weber Greiser, an archaeologist, who researched anthropological and historical resources and conducted interviews with Nez Perce Tribal members to document fishing, hunting, and gathering by members of the Tribe, including the identification of the “usual and accustomed fishing places” of the Tribe. The Greiser Affidavit confirms that stream reaches within the SFSR watershed area, including stream reaches within the Project area, contain Nez Perce usual and accustomed fishing places. The Forest includes references to the Greiser Affidavit in this section to identify streams with usual and accustomed fishing places in the vicinity of the Operations Area Boundary. The Forest’s interpretation of this information, however, requires revision. First, in addition to the streams the Forest listed, the Greiser Affidavit documents the following usual and accustomed fishing places as identified by Nez Perce elders in their appended affidavits: East Fork South Fork Salmon River to the headwaters, No Man’s Creek, Tamarack Creek, Stibnite Creek, Salt Creek, Pepper Creek, and Sugar Cane Creek.</p>	TRI	Section 3.24.4.1 of the Final EIS has been revised to include the additional streams identified in Greiser 1998, as well as note that likely all streams in the area were likely usual and accustomed fishing places.
Samuel Penney (Chairman)	19396	160	<p>Second, the Greiser Affidavit emphasizes that specific sites and locations identified as usual and accustomed fishing places “are considered to be bases for activities upstream or downstream along stretches of rivers or streams and nearby tributaries.” He explains: “Nez Perce elders talk about use of a stream, a tributary or a general area, as in the recent depositions, they may not identify a specific site since the actual locations of fish or other subsistence resources changes from year-to-year.” Mr. Greiser notes: The archaeological, historical, and ethnographic records of Nez Perce usual and accustomed fishing places should not be considered complete. As can be seen by reviewing HRA’s database of usual and accustomed fishing places, some of the reported sites are not relocatable due to passage of time or destruction by natural or human-caused events. There is likely an unquantifiable number of sites that will never be known for the same reasons. In addition, only limited parts of the Nez Perce aboriginal area have been subjected to intensive investigation above or below the ground surface. For the past three decades or so, survey or inventory for archaeological sites has been conducted only in advance of some ground-disturbing project where federal regulations regarding protection of archaeological or historical resources apply. It should also be noted that while many historical documents and maps are helpful, others contain indecipherable site locational information. Finally, many Nez Perce elders with knowledge helpful for locating usual and accustomed fishing places are no longer with us and often their</p>	TRI	The Final EIS (Section 3.24.4.4) and Tribal Rights and Interests Specialist Report (Section 6.1.4.5) were updated to clarify that use of streams for usual and accustomed fishing places likely included all streams in the area.

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			<p>knowledge was not passed down to younger generations or collected by interested non-tribal members. Given Greiser’s explication, the Tribe is concerned that the Forest’s interpretation of the information contained in his Affidavit concerning the location and scope of Nez Perce usual and accustomed fishing places within and adjacent to the Operations Area Boundary is unduly narrow. The Forest asserts, for example, that “intermittent reaches to the EFSFSR above the Above Operations Area were identified as usual and accustomed fishing places based on identification by elders.” Not only is this statement factually inaccurate (elders identified the EFSFSR to the headwaters as a usual and accustomed fishing place), but also the Forest is pinpointing stretches of a stream as a usual and accustomed fishing place while categorically dismissing geographically adjacent stream stretches or tributaries simply because they were not specifically identified as a usual and accustomed fishing places in the Affidavit. This interpretation is evident with the Forest Service’s statement, “Other tributaries to the EFSFSR in the Operations Area Boundary were not identified as usual and accustomed fishing places (e.g. Meadow Creek, Blowout Creek, Rabbit Creek”) etc.” These stream stretches, although not specifically identified as usual and accustomed fishing places in the Greiser Affidavit or accompanying Nez Perce Tribal member affidavits, are very close geographically. As the Greiser Affidavit suggests, to conclude that the Nez Perce fished one tributary and not the adjacent tributaries solely because they have not been expressly identified as usual and accustomed fishing places in the Affidavit, is unreasonable. Greiser specifically states that usual and accustomed fishing places “likely extend both upstream and downstream from any of the specified locations.” This view is supported by the affidavits of Elmer Paul Crow, Jr., Silas Caleb Whitman, and Rudolph “Rudy” Carter, all enrolled members of the Nez Perce Tribe, which are appended to the Greiser affidavit. The Crow affidavit states: “I consider a ‘usual and accustomed place,’ as it says in the 1855 Treaty, to be anywhere the Nez Perces were camped. I consider these places to be areas, not specific sites.” (The Greiser Affidavit provides a map titled “Distribution of Known Archaeological Sites,” which shows a cluster of archeological sites in the Project area, suggesting that Nez Perce heavily used and likely camped in the Project area.) The Whitman Affidavit states: “My understanding of the phrase ‘usual and accustomed fishing places’ from the 1855 Treaty is that we reserved the right to go to every river and stream within our aboriginal territory to take fish. And we were not limited to just specific sites along those stream and river systems.” The Carter Affidavit states: “We fish the whole stream, not just specific sites. The entire stream we call a fishing place.” In light of this information, the Forest should instead view the usual and accustomed places identified within and adjacent to the Operations Area Boundary as dispositive of historical fishing in all streams in the area.</p>		
Samuel Penney (Chairman)	19396	161	<p>Third, the Forest Service erroneously states: The SGP mine area...has been affected by historical mining that has altered the nature and potential use of usual and accustomed fishing locations and springs. Hence, there is no archeological, ethnographic, or historical evidence of recent or present use according to the affidavit (Greiser 1998), which is consistent with use of the area for mining. This passage represents a gross misreading of the Greiser affidavit. The United States contracted with Mr. Greiser to document Nez Perce usual and accustomed fishing places, not to present evidence of recent or present use of such places. Nevertheless, the Greiser affidavit does in fact document usual and accustomed area use contemporary with its 1998 writing, including within the Project area. Specifically, the appended Crow Affidavit states in important part: “Attachment A to this affidavit is a list of 466 creeks, streams and rivers I have personally fished at in my time. My family and I are still using all these places on a regular basis.” The Crow Affidavit includes in the list the “East Fork of South Fork Salmon River,” “Tamarack Creek,” “Stibnite Creek,” “Pepper Creek,” “Salt Creek,” and “Sugar Cane Creek.” In the 25 years since the Greiser affidavit was published, the Nez Perce Tribe and its members have continued to exercise the Tribe’s reserved rights within the Project area. The Tribe would be happy to share this information with the Forest Service upon request through government-to-government communications.</p>	TRI	<p>Clarifications were made. The Final EIS (Section 3.24.4.4) and Tribal Rights and Interests Specialist Report (Section 6.1.4.5) were updated to clarify that use of streams for usual and accustomed fishing places likely included all streams in the area. Government-to-government consultation between the Forest Service and the Tribes is ongoing.</p>
Samuel Penney (Chairman)	19396	269	<p>Impacts to Chinook Salmon Chinook salmon (Nacòx) are intimately interwoven into the Tribe’s culture and religion and continue to be a critical fishery for subsistence harvest. It cannot be understated how important Chinook salmon are</p>	TRI	<p>In Section 4.24.2.2 of the SDEIS under fisheries, it states that impacts to fisheries would be a localized, long-term to permanent, major impact to tribal treaty rights and resources.</p>

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			to the Tribe. Historic mining activities at the Stibnite site extirpated Chinook salmon from the headwaters of the EFSFSR in the 1940's due to sediment and pollutants. The Tribe has been actively recovering Chinook salmon in the EFSFSR watershed since the mid-1990s and utilizing this watershed since time immemorial. Impacts to Chinook salmon from the Project are a direct impact to Treaty Resources that fall under the 'trust responsibility' of the Forest Service to protect.		
Samuel Penney (Chairman)	19396	370	Impacts to wildlife and wildlife habitat are assessed in terms of acres of habitat disturbed, changes in noise, changes in recreation, miles of road, movement barriers, changes in traffic and human activity, miles of roads plowed, construction and use of roads, structures, and utilities, exposure to metals and emissions, and risk of direct injury or mortality. Under each alternative, the intensity, duration, and context of impacts are presented for each wildlife species and wildlife habitat type and discussed relative to the mining components—mine site, access roads, utilities, and off-site facilities. The SDEIS discloses impacts and changes to species viability and availability. The Forest concludes that both action alternatives will not contribute to the loss of viability of wildlife species within the planning area (i.e., Payette and Boise administered lands), however, the Tribe is deeply concerned that the activities will reduce viability and availability of plant and wildlife species for Tribal harvest and use within the Project area, which is just as important as the entire planning area.	TRI	Comment noted.
Samuel Penney (Chairman)	19396	391	4.24 Tribal Rights and Interests This section requires substantial rewriting. The narrative uses the vague, catch-all term “tribal rights and interests” to ostensibly include the rights and interests claimed by the Tribe, Shoshone-Bannock Tribes, and the Shoshone Paiute Tribe. As discussed in detail in Section 3 of these comments, the other tribes’ claims to rights and interests in the Project area lack factual and legal support. Even if the Forest disagrees with the Tribe’s longstanding position on this issue, this section needs to identify, evaluate, and disclose the effects of the Project and alternatives on the Tribe as a unique government, and not just include this information with “tribal rights and interests” from other tribes. Aggregating the Tribe’s rights and interests with other purported tribal rights and interests in the area is fatally flawed as a matter of fact and law and is offensive to the fundamental notion of tribes as individual sovereigns with different cultures, practices, and rights. These revisions must align with, and be clearly traceable to, the Tribe’s treaty-reserved rights and other interests as distinguished from other asserted tribal rights and interests. This required review must include all of the impacts to the Tribe’s treaty rights, including the direct, indirect, and cumulative impacts.	TRI	The SDEIS described the government-to-government tribal consultation process in Section 1.8 and further detailed it in Section 6.2.3, specifically noting that intergovernmental consultation serves as the primary means for federal agencies to carry out their trust obligations. Further, tribal treaties and executive orders, the associated tribal rights, and affected environment were presented and described in Section 3.24 of the SDEIS. Analysis (direct and indirect effects) of tribal rights and resources was presented in Section 4.24. Cumulative impacts were presented in Section 5.24. Impacts to specific resources important to the Tribes, such as air, water, wildlife, and fisheries, were further analyzed in their respective sections of SDEIS Chapter 4. As Section 4.24 of the SDEIS summarizes the effects of tribal rights and resources to all potentially affected Tribes based on the government-to-government consultation conducted, the section was not organized by Tribe to avoid duplication.
Samuel Penney (Chairman)	19396	392	Table 4.24-1 Impact Definitions for Tribal Rights and Resources The Tribe is concerned that the table the Forest has developed to describe the “impact definitions for Tribal rights and resources” in terms of “intensity, duration, and context” fails to account for or accurately or comprehensively capture the potential effects or harm to the Tribe’s treaty reserved rights and other rights and interests. For example, under “intensity” the term “minor” provides the change is not “to a measurable degree.” How does the Forest define or determine “measurable degree” in the context of archaeological or ethnohistoric cultural resources, areas of elevated spiritual importance, TCPs or sacred sites”? Similarly, for “major” impacts, how does the Forest define or determine “large” changes in conditions or “substantially altered” rather than just “to a measurable degree”?	TRI	As presented in Table 4.24-1 of the SDEIS, the term minor in the context of impacts to archaeological or ethnographic cultural resources etc. is defined as "would not be affected to a measurable degree" which means, for example, there could be a change to the setting (i.e., visual such as a power pole in the distance) but not such that it affects the integrity of resource. A major impact could be a physical impact to the resource or a change in the setting that renders a place unrecognizable or unusable.
Samuel Penney (Chairman)	19396	393	4.24.2.2.2 2021 MMP The Tribe vehemently disagrees with the statement, “[l]ong-term, minor impacts would be associated with the disturbance or displacement of plant and wildlife species that are used for traditional purposes and subsistence.” This statement contradicts the comments the Tribe has submitted on the Project to date as well as the Forest’s own analysis in the SDEIS.	TRI	Comment noted; position statement.
Samuel Penney (Chairman)	19396	394	Tribal Historical/Archaeological Sites The Forest’s assertion that any effects to the Burntlog Route or Thunder Mountain Road “would be avoided through design alterations or protective measures” is vague, inadequate, and fails to meet the Agency’s obligations to identify, evaluate, and disclose effects.	TRI	Two separate statements for different resources have been combined in this comment which is inaccurate. There was no such statement that impacts to the tribal travel routes would be avoided through design or protective measures, rather that was in relation to the five pre-contact archaeological sites potentially within the transmission line improvement area. These five distinct sites could be avoided by design such as moving pole placement and changing

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					access, or protective measures such as barriers and construction monitoring. Avoidance, minimization, or mitigation measures would be developed through the PA process so that sites are avoided.
Samuel Penney (Chairman)	19396	395	The following assertion is also inadequate for similar reasons: “consultation with the Tribes would be ongoing; therefore, if additional potential impacts are identified such as discoveries of cultural significant sites or resources during or post construction, formal, government-to-government consultation would occur.” The Forest’s commitment to consult with the Tribe post-Project authorization if additional impacts are identified does nothing to identify, fully evaluate, and disclose effects pre-Project approval. Moreover, consultation alone does not compel the Forest to take any action whatsoever to address impacts to cultural resources. The Forest’s determination that impacts to tribal historical and archaeological sites would be localized, temporary to permanent, and negligible to minor” is vague, unsupported and fails to meet the stringent requirements under NEPA.	TRI	Per Section 106 of the National Historic Preservation Act, the Forest Service is required to consult with Native American Tribes to determine whether there are properties of traditional religious and cultural importance to Indian tribes that may be eligible to the NRHP. Consultation is an ongoing process. The PA process allows phased identification of sites. The PA, and associated HPMP and HPTP, require continued consultation with Tribes throughout the life of the Project to determine avoidance and mitigation for sites as they are identified. The Final EIS was revised to state that impacts to tribal historic and archaeological sites would be localized, temporary to permanent, and negligible to major. Under Section 106 mitigation for impacts to any NRHP-eligible resources (i.e., historic properties) would be required.
Samuel Penney (Chairman)	19396	396	Land Status and Access The Tribe agrees that due to the Project, “[t]here would be a long-term loss of access to land for exercising treaty rights, usual and accustomed fishing places, access to streams and fountains, and access to potential sacred sites or places, TCPs, CLs, and historic properties within the Operations Area Boundary while the lands are occupied for mining.” The Tribe vehemently disagrees with the Forest’s assertion that [t]herefore, a mitigation measure for access impacts would be incorporated into any decision on the [Project].” The Forest’s assertion suggesting that mitigation “for access impacts” is adequate to allow the Project to proceed is unsupported as a matter of fact and law. The Forest lacks authority to authorize any undertaking, including the Project, that will violate the Tribe’s treaty rights. Given the scope, duration, and severity of the impacts to the Tribe’s treaty rights, there is no “measure for access impacts” adequate to mitigate for these treaty violations.	TRI	As stated in the Final EIS, the Forest Service would require a Tribal Access Agreement including a plan and procedures to allow tribal access. The Tribal Access Agreement would designate locations for Tribal members to enter the Operations Area Boundary, parking areas, accessible trails and roads, and describe pre-notification and communication procedures while Tribal members are actively within the area.
Samuel Penney (Chairman)	19396	397	The Tribe opposes the Forest’s assertion that access to federal lands available for treaty rights would be “localized, long-term and moderate.” There would be a long-term loss of 13,441 acres of National Forest system lands within the Area Operations Boundary and containing known usual and accustomed fishing places. The Tribe also takes issue with the Forest’s assertion that “[w]hile offsite presence of tribal resources means the impact to overall access to a specific resource would be negligible to minor, this would still constitute a localized, long-term, and moderate to major impact to tribal treaty rights specific to those resources in their specific locations...” Asserting an “offsite presence of tribal resources” to support the Forest’s claim that “overall access to a specific resource would be negligible to minor” is a misleading and irrelevant observation as applied to a principled inquiry of the Project’s effects on the Tribe’s treaty-reserved rights. In the 1855 Treaty, The Tribe reserved to itself, and the United States secured, the right to take fish at all usual and accustomed fishing places. Moreover, a very small percentage of the Payette and Boise National Forests contain habitat occupied by treaty-reserved anadromous species or resident species such as bull trout. While the Operations Boundary may only represent 0.3% of the Payette and Boise National Forests, that percentage fails to reflect the substantially smaller percentage of those federal lands containing anadromous and bull trout habitat. Protecting and restoring this remnant intact habitat on National Forest System lands to protect these Tribe’s treaty rights and resources is therefore of paramount importance.	TRI	The first portion of the sentence was deleted, and the sentence revised to state: “The 2021 MMP constitutes a localized, long-term, and moderate to major impact to tribal treaty rights specific to those resources in their specific locations, at those locations that are usual and accustomed places, including those associated with potential historic properties, sacred sites or places, TCPs, and CLs.”
Samuel Penney (Chairman)	19396	398	The Forest’s assertion characterizing the effects of the Project on Tribal access as “localized, long term and moderate” is wrong. By the Forest’s own analysis, motorized access to active mine areas and non-motorized access in the Project area would be restricted. The effects on Tribal access are substantial and therefore must be labeled as major.	TRI	The SGP would be an active industrial site where hazardous activities would occur, such as explosives handling, blasting, drilling, and heavy equipment operation. To mitigate hazards from these activities, most areas of the mine would require strict safety protocols and controlled access. Perpetua established an Operations Area Boundary to identify the area where public access would be excluded. Public access inside the Operations Area Boundary would be restricted for the life of the mine. However, the Forest Service would require a Tribal Access Agreement including a plan and procedures to allow tribal access. The Tribal Access Agreement would designate locations for Tribal members to enter the Operations Area Boundary, parking areas, accessible trails and roads, and describe pre-notification and

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					communication procedures while Tribal members are actively within the area. The Final EIS and Specialist Report have been revised to reflect this.
Samuel Penney (Chairman)	19396	401	The Forest maintains that under Clean Water Act Section 404, “a compensatory mitigation plan would be required to compensate for lost wetland areas and their associated function including temporal loss of aquatic functions and values of approximately 20 years in the Salmon River drainage”. The Tribe disagrees with the Forest’s assertion that major impacts to the Tribe’s treaty-reserved rights and resources, caused by permanent destruction and alteration of on-site wetlands, may be addressed through compensatory mitigation under Section 404 of the Clean Water Act. As described elsewhere in the Tribe’s comments, federal agencies lack authority to take action that will result in a violation of the Tribe’s treaty-reserved rights. The Project will block and restrict the Tribe’s access to, and use of, known usual and accustomed fishing places. This is a violation of the Tribe’s treaty rights. The Corps accordingly cannot authorize a Section 404 permit that will result in violation of the Tribe’s treaty rights, regardless of the agency’s authority to consider a compensatory mitigation plan off-site for lost wetland areas and their associated function.	TRI	The Forest Service would require a plan and procedures to allow for Tribal access. The Final EIS and Specialist Report have been revised to reflect this.
Samuel Penney (Chairman)	19396	404	According to the SDEIS: At this time, no mitigation measures have been identified for Tribal Rights and Interests. Mitigation measures may be added, revised, or refined based on public comment, agency comment, or continued discussions with Perpetua regarding this analysis. The adopted mitigation measures will be finalized in the final EIS. This vague and cursory discussion fails to meet the requirements of NEPA. The Forest has not explored with the Tribe any potential measures to revise the Project to avoid violating treaty reserved rights and resources and other interests and cannot defer this discussion to Perpetua or until after the Forest issues a final EIS and decision on the Project.	TRI	The Forest Service would require a Tribal Access Agreement including a plan and procedures to allow tribal access. The Tribal Access Agreement would designate locations for Tribal members to enter the Operations Area Boundary, parking areas, accessible trails and roads, and describe pre-notification and communication procedures while Tribal members are actively within the area. The Final EIS and Tribal Rights and Interests Specialist Report have been revised to reflect this.
Samuel Penney (Chairman)	19396	420	5.24 Tribal Rights and Interests The Tribe’s treaty-reserved rights to fish, hunt, and gather are influenced by changes to resource and habitat conditions across resource areas. Thus, the reasonably foreseeable future projects across resource areas in this chapter should also be identified in this section.	TRI	As presented in Table 5.1-1 of the EIS, the analysis area for tribal rights and resources encompasses the lands administered by the PNF and BNF, as well as other federal, state, and private lands within and adjacent to these National Forests. This encompasses all of the cumulative effects areas for other resources potentially impacted by the SGP. Narrative was added to Section 5.24 of the EIS to clarify.
Samuel Penney (Chairman)	19396	421	Mineral exploration and mining activities: Revise “may” in the following statement to read, “will likely” and revise “disturb” to “impact” to read: “During exploratory drilling, development, and operations, the increased ground disturbance will likely impact tribal treaty rights, access to usual and accustomed fishing places and springs, tribal resources historic properties, sacred sites or places, TCPs, and CLs.”	TRI	Use of "will" is pre-decisional in a NEPA document and therefore not used. No revision made.
Samuel Penney (Chairman)	19396	422	Under the Closure and Reclamation Projects/CERCA Actions, the following statement requires revision: “Perpetua is currently conducting such activities under a current ASAOC with EPA and Forest Service. These actions Phase One of the ASAOC is aimed at improving site conditions by removing some hazard waste and mine tailings and capping historic waste rock dumps. restore landscapes that can eventually restore traditional tribal resources by removing hazardous wastes, mining tailings, and capping historic waste rock dumps.”	TRI	Revision made.
Samuel Penney (Chairman)	19396	423	Recreation and tourism: Change the first sentence to read: “Recreational activities (i.e., camping, hiking, hunting, trapping, trail riding, firewood harvest, fishing etc.), are likely to continue to impact tribal treaty rights and resources. Increased road and trail networks open new areas to additional human disturbance, which lead to potential vandalism, introduction of noxious or invasive weeds, displacement or destruction of treaty resources, and destruction of historic properties, sacred sites or places, TCPs, and CLs.”	TRI	Revision made.

Cumulative Effects

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	20	The Forest Service also fails to fully disclose or fully consider in the SDEIS that Perpetua is exploring for additional mining opportunities at the site. For example, it proposes to approve underground exploration of the Scout Prospect, with extremely limited data and analysis. Further, while the SDEIS does acknowledge that Perpetua’s Golden Meadows exploration project was previously approved and suggests that it might still be underway, the Forest Service fails to explain how Perpetua is using this exploration to identify additional mining opportunities beyond the scope of the Stibnite Gold Project as proposed and discussed in the SDEIS, or what the potential cumulative effect are. Perpetua’s mining claims along the proposed Burntlog Route suggest that additional mineral exploration activities may be reasonably foreseeable. If Perpetua does not plan to conduct any exploration or development on these sites, it is unclear if these claims are valid. The idea that additional mineral exploration and development will be occurring in one or more of these locations brings into question the overall timeline for mine closure and restoration.	CUM	The past, present, and reasonably foreseeable future exploration projects have been identified as part of the cumulative impacts analysis. Future mining operations beyond those discussed are speculative and do not meet the definition of a reasonably foreseeable future action.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	76	<p>C. The SDEIS fails to adequately analyze and disclose the direct, indirect and cumulative impacts of the project.</p> <p>One of NEPA’s fundamental goals is to “promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” 42 U.S.C. § 4321. Accordingly, the scope of NEPA review is quite broad, and agencies are required to evaluate “any adverse environmental effects which cannot be avoided should the proposal be implemented.” Id. at 4332(C)(ii). Agencies must disclose and consider direct, indirect, and cumulative effects on “ecological . . . aesthetic, historic, cultural, economic, social, or health” interests. 40 C.F.R. § 1508.1(g)(1) (1978). NEPA requires that an agency use state of the art science to make sound scientific decisions. The chosen methodology must be accurate and defensible.</p> <p>As discussed for many issues throughout the remainder of these comments, the analyses of the direct, indirect, and cumulative impacts contain a number of unreasonable deficiencies, omissions, and errors that our experts have identified as being critical for an adequate analysis and disclosure of potential environmental impacts for several resources. For a complex project in a sensitive environment, such a SDEIS is completely unacceptable. The Forest Service must correct these errors, must take a hard look at all reasonably foreseeable direct, indirect, and cumulative effects, and must then issue a revised or supplemental SDEIS for public comment.</p>	CUM	The direct and indirect impacts have been disclosed in Chapter 4. Chapter 5 has identified the past, present, and reasonably foreseeable future projects and the cumulative impacts from these projects and the Proposed Action by resource.
Zimmerman, Drew (CEO, Stallion Gold Corp.)	17847	2	<p>In addition to offering general support for Stibnite project, Stallion is providing detailed comments on the combined effects analysis sections of the SDEIS document, in which Stallion’s Horse Heaven project is deemed a Reasonably Foreseeable Future Action (RFFA), as in Table 5.1-2, p. 5-8. Stallion first submitted a plan of operations to the Boise National Forest in Sept, 2021, which is currently in the review phase.</p> <p>First and foremost, the Horse Heaven exploration project is inconsistently described in the EIS document. While most of the document correctly presents that Horse Heaven is an exploration project, Section 5.21.2 describes the project as the “Stallion Gold Horse Heaven mining project.” Stallion Gold is an exploration focused company, not a mine development company and no mine plans have been submitted, nor have ore-resources or reserves been sufficiently established to support future plans for economic development.</p> <p>The distinction between mining and exploration is generally poorly understood by both the public and by many state and federal regulators. Exploration programs have more in common with installation of domestic water wells or geotechnical assessment for road construction than any sort of mining operations. The fact that mineral exploration is a precursor to mining does not warrant portrayal of exploration drilling as mining. This would be akin to confounding land surveying work with construction of a housing development – they are simply not the same. The Forest should properly distinguish between mining and exploration projects in the document.</p>	CUM	Revisions have been made throughout the EIS to ensure this RFFA is described as an exploration project.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Zimmerman, Drew (CEO, Stallion Gold Corp.)	17847	3	<p>Stallion also disagrees with the impact assessments included in the RFFA discussion. The limited surface exploration activities proposed by Stallion at the Golden Gate area of its property would entail limited use of existing roads and limited exploration drilling. Stallion has worked closely with the Boise National Forest in designing an exploration program which will reduce and eliminate environmental and traffic related disturbances including drill siting from existing roadways, containment of drilling fluids, robust hole abandonment procedures, public traffic management measures, wildlife protection measures and hazardous materials safety and spill prevention procedures.</p> <p>The projected effects stated in the Supplemental DEIS vastly overstate the potential impacts of the company's current proposals. The Horse Heaven Exploration project as a RFFA, is projected to further deplete ore reserves (Section 5.2.2), increase traffic on the Stibnite Road (5.2.2), effect cumulative GHG emissions (5.4.1), increase disturbance to soil resources (5.5.2 and 5.23.3.1), effect surface and groundwater systems within its watershed (5.8), cumulatively contribute to water quality impacts within the CEA (5.9), impact vegetation resources resulting in loss of habitat (5.10), impact fisheries and aquatic habitat (5.12), cause cumulative surface water impacts through accidental spills (5.12), impact land use and management (5.15), effect historic properties through construction or drilling (5.17.1), impact scenic resources through modification of backcountry landscapes (5.20.2), effect wilderness character and inventoried roadless areas (5.23), increase spread of non-native plant species (5.23.3.1), and finally, impact solitude through generation of noise (5.23.3.1).</p> <p>This effects analysis would be applicable to a large-scale mining operation similar to the Stibnite Gold Project, but is not reasonably supported or justified for a small-scale exploration drilling program with no new surface disturbance utilizing existing roadways and incorporating water quality, noxious weed and wildlife protection measures. The Supplemental DEIS would be improved if only those impacts potentially applicable to the exploration project, notably effects on transportation and access deemed "negligible" in the document (5.16.1), or likely economic benefits (5.21.2) were retained. Unjustified assertions that the exploration project will have the same effects as a mining operation; especially soil disturbance, modification of backcountry landscapes or effects to roadless areas are simply not appropriate for our current PoO which does not entail new surface disturbances.</p>	CUM	The cumulative impacts from this project have been updated to be consistent with an exploration-level project.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	608	"Past actions include activities that may have been initiated in the past but may have lingering effects in impacting the environment or may influence trends in the physical, biological, or social environment ." The descriptions below of the PPAs do not describe the "lingering effects" that are occurring nor their spatial overlap with the SGP and therefore the impacts of these actions that may have cumulative effects with the SGP are not made clear.	CUM	The text in Chapter 5 has been updated to make sure the potential lingering impacts from past projects is clear.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	609	"Past and present actions that have an interactive, synergistic, and/or additive effect (per 40 CFR 1508.7) " "interactive, synergistic, and/or additive" no longer appear in the CEQ regulations. Please delete reference.	CUM	Revision completed.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	610	" Other past and/or present mining projects considered in the cumulative effects analysis include " There is no spatial overlap of these with Stibnite. Please clarify which are in the same basin (EFSF) such that WQ/sediment/fisheries effects would accumulate within the CEAs outlined in the table above. Also, the reader is unlikely to understand the location of at least several of these projects without a figure.	CUM	Table has been updated to be clear what actions are within the CEAs and more specific location information. A figure has been added to make the location of the other action clear.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	611	" Exploration drilling was conducted in 26 drill areas within NFS land. " This bullet is titled "Monitoring Well" but mentions exploration drilling. Please revise to read "Monitoring Wells and Exploratory Drilling for the Golden Meadows Project (2013)"	CUM	Revision completed.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	612	"Approximately 141,000 gallons of fuel (diesel, gasoline, and jet fuel) per calendar year was transported on existing Valley County roads to the fuel storage facility (located on private land) (Forest Service 2015)." Please clarify whether there were spills in past fuel hauls that contribute to cumulative impacts.	CUM	The text in Chapter 5 has been updated to make sure the potential long-term impacts from past projects is accurate and clear.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	613	"Perpetua is investigating 24 locations by drilling or excavating 40 borings/test pits along the proposed Burntlog Route (Midas Gold 2019e)." This has not been conducted yet as presented in table 5.1-2 and will be conducted in 2023.	CUM	This project bullet has been deleted under the past and present section since it is already included in the reasonably foreseeable future projects in Table 5.1-2. In addition, the operation date in Table 5.1-2 has been updated from on hold to 2023.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	615	"In fall of 2021, the Krassel Ranger District conducted prescribed burns to areas east of Yellow Pine (Bald Hill project area) and along the SFSR (Four Mile project areas)." This section is about wildland fire. Prescribed burns would not fall under wildland fire . Please revise the section description to include prescribed burns or move this sentence to Forest Management.	CUM	This information has been moved to forest management.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	616	"Since 2008, Chinook salmon spawners were released into Meadow Creek most years ." Recently this has occurred once every 3 years or so. Please replace " most " with " a majority of "	CUM	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	617	" Reasonably Foreseeable Future Actions " Please provide the definition and criteria for "reasonably foreseeable" and include it in the glossary.	CUM	The definition as defined in the 2005 regulations (36 CFR 220.3) that are applicable to this project has been added to the text and glossary and the introduction of Section 5.1.3.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	618	"Scoping for the East Fork RAMP estimated to start late 2021 ." This date is over a year in the past, please update with current information.	CUM	The timeline associated with the East Fork South Fork RAMP has been updated to indicate public comment on the EA is expected in 2023 and the expected implementation is November 2023.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	619	"Burntlog Route Geophysical Investigation: This project is currently on hold ." This investigation is planned for 2023. Please revise as appropriate for the FEIS.	CUM	Perpetua withdrew the application for this project in July 2024; therefore, this proposed project has been removed from the Final EIS.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	620	"Nez Perce Tribe Research Equipment: Scoping initiation: 11/2021; Expected Decision: 05/2022; Expected Implementation: 06/2022 " Dates are all in past as of SDEIS pub date. Please update with current information.	CUM	Revised with most recent dates.

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Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	621	The Stallion Gold Horse Heaven Project is not on the current SOPA and the table provides no estimated dates of implementation. Suggest removing this Project here and any additional mentions in this document unless the project progresses to submittal of a proposed action.	CUM	Reasonably foreseeable projects have been reviewed to confirm they are reasonably foreseeable. The Horse Heaven Exploration Project is included in the BNF SOPA, first appearing in the July 1, 2022 version.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	623	This chapter uses the word significant, yet does not establish the definition of significance, establish significance levels, or other objective criteria. Please include the basis for this judgement.	CUM	Use of significant was reviewed and revisions were made where appropriate.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	624	"...as well as combine with any future mine operations in the region, such as the Horse Heaven Project, which would further deplete ore reserves. " Please remove this statement (see Comment 19) or provide rationale for its inclusion. This project has not yet submitted a proposed action for exploration drilling, much less mining; and the comment that it would further deplete resources is therefore also speculative and should be removed. Please provide in this section a definition of "reasonably foreseeable", and unless this project can be demonstrated to meet the criteria of RFFA defined below, it should not be considered in this document. 36 CFR 220.3 defines Reasonably foreseeable future actions as: Those Federal or non-Federal activities not yet undertaken, for which there are existing decisions, funding, or identified proposals. To our knowledge, the Stallion Gold Horse Heaven Project meets none of these criteria.	CUM	Deleted the reference to Horse Heaven Exploration Project in this sentence. Reasonably foreseeable definition (36 CFR 220.3) was added to the introduction of Section 5.1.3 and in Section 7.3. The Horse Heaven Exploration Project currently appears in the BNF SOPA and therefore is reasonably foreseeable.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	614	"Road Maintenance of State Roads " Please include Warm Lake Highway in this bullet	CUM	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	622	"CE = Categorical Exemption " Please replace " Exemption " with " Exclusion " for accuracy.	CUM	Revision complete.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	23	Comments on Chapter 5 are included in Attachment A and include technical clarifications and recommended edits to wording for clarity. Also, Chapter 5 draws on many other topics included in the SDEIS, and thus numerous terms, abbreviations, and acronyms are included that may be unfamiliar to the reader. Several comments recommend clarification and definition of these phrases to better inform the reader who may not have read other applicable sections of the SDEIS. Several comments address the term Reasonably Foreseeable Future Action (RFFA), and request clarity and definition in this section on what represents an RFFA. Related to this, several references to the Stallion Gold Horse Heaven Project are included in Chapter 5, and it is identified as an RFFA both for potential exploration and mining. This is wholly inaccurate, and all references to the Stallion Gold Horse Heaven Project as an RFFA should be removed from the SDEIS. The Stallion Gold Horse Heaven Project is not on the current PNF's Schedule of Proposed Actions (SOPA), and the tables in which it is	CUM	The Horse Heaven Exploration Project appears in the BNF SOPA. It lists it as the "Horse Heaven Exploration Project: The purpose of this Federal action is to respond to the operator's PoO for mineral exploration as necessary to meet Forest Service regulations within the context of federal laws." Chapter 5 has been updated to reflect the project description.

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			mentioned provide no estimated dates of implementation. Therefore, the SDEIS should include no mention in this document unless the project progresses to submittal of a proposed action.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	373	<p>1. Geographic Scope of Cumulative Effects</p> <p>The SDEIS identifies the geographic scope, or cumulative effects areas (CEAs), in Table 5.1-1. SDEIS at 5-1-5-2. The SDEIS states: "Due to the nature of the SGP that requires many miles of transmission line and roads, the direct and indirect effects areas are expansive. However, the effects themselves are not expansive. Therefore, the analysis of cumulative effects does not result in a broader analysis area for most resources." SDEIS at 5-1. In reality, many project effects are expansive, including air quality impacts (which can extend far in any direction), water quality impacts (which can extend far downstream beyond project activities), and fish and wildlife impacts (which for species with large home ranges, migrations, and such, can extend for great distances). The Forest Service must reconsider the geographic scope of its cumulative effects analysis to ensure the CEAs are large enough to address these and any other expansive effects.</p>	CUM	Each resource has been reviewed and justification for each CEA has been added to Table 5.1-1. Resources where it was determined changes to CEAs were necessary were updated.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	374	<p>2. Past & Present Actions</p> <p>The SDEIS lists and briefly describes a number of past and present actions. SDEIS at 5-3-5-8. The cumulative effects of Mine Closure and Reclamation (SDEIS, p. 5-6) should discuss the reclamation projects from 2004-2009 identified on p. 1-6.</p>	CUM	Mine Closure and Reclamation Activities conducted from 2004-2009 as discussed in Section 1.6 have been added to the past and present mine closure and reclamation discussion.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	375	<p>3. Future Actions</p> <p>The SDEIS lists and briefly describes reasonably foreseeable future actions (RFFAs) in Table 5.1-2. SDEIS at 5-8-5-9. Absent from this is any discussion about mine expansion or additional mining by Perpetua at or near the SGP site. The SDEIS fails to consider future mining based on the Golden Meadows exploration project, mining claims Perpetua purports to have along the Burnt Log Road and elsewhere, all which indicate that additional future mining is foreseeable and must be analyzed in the SDEIS.</p> <p>The SDEIS also fails to consider future actions necessary to address the inevitable long-term impacts associated with liner failures beneath the TSF and stream channels, potential long-term management of water releases from the West End pit lake and the need for reclamation maintenance.</p>	CUM	A plan of operations has not been submitted based on the Golden Meadows exploration project; therefore, it is considered speculative per the definition of reasonably foreseeable future actions as defined in Section 5.1.3 of the Final EIS. The long-term failure of facilities is not the expected scenario therefore not considered a reasonably foreseeable future action.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	376	<p>4. Cumulative Impacts by Resource</p> <p>The SDEIS discusses cumulative impacts to a number of affected environmental values and resources. SDEIS 5-9-5-50. However, each of these discussions is brief, uninformative, and includes very little actual information. Each of these discussions fails to include sufficient detail as to be useful to the decision maker in deciding whether, or how, to alter the SGP to lessen cumulative impacts as required by NEPA. Instead, each section does little beyond noting that specified past, present, and/or future actions would add to some of the adverse effects of the action alternatives, without useful detail, information, or analysis to meaningfully consider the degree of the likely adverse cumulative impacts. The Forest Service should provide quantified and other detailed information on cumulative impacts to each resource.</p> <p>The sections of these comments discussing different environmental values and resources include additional comments on the inadequacies of the cumulative effects analysis for each value and resource.</p>	CUM	Chapter 5 has been updated to make sure the location of other actions in relationship to the Project have been updated. In addition, each resource has been reviewed and quantified where possible.

Mitigation Measures

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	122	<p>19. Fisheries Mitigation for the proposed Stibnite Gold Project</p> <p>A multitude of well-intentioned fisheries mitigation measures are included in the SDEIS Action Alternatives. These measures were designed to avoid and minimize potential impacts to aquatic organisms, federally listed fish species, and USFS designated sensitive species during SGP operations and closure. Despite inclusion of these mitigation measures into the proposed actions, the SDEIS clearly confirms that irreversible and irretrievable impacts will occur. These include but are not limited to: direct mortality, incidental injury, temporal (more than 100 years in certain stream reaches) and permanent (upper Meadow Creek) loss of critical habitat, decreased suitable and Critical habitat, blockage of fish passage, decrease in thermally suitable habitat, permanent displacement of individuals, and net decrease in productivity. Many of these detrimental impacts cannot be mitigated and represent substantial, and long-term to permanent degradation and fish population declines in project area streams and downstream. These impacts are unacceptable.</p> <p>Gregory (2022) states that: 1-proposed mitigations in the SDEIS are not sufficient to reliably reverse impacts, much less improve existing, impaired habitat during or after additional mining occurs; 2- “even modern fish passage design simply cannot account for spatial and temporal variability of historic baseline conditions, current conditions, and future conditions that will result from mining and associated development activity in addition to climate change;” and 3- “already threatened salmonid populations will not be restored by (and may not survive) newly proposed mining activity and the mitigation methods proposed in the SDEIS”.</p> <p>Perpetua and the U.S. Forest Service provided mitigation measures that are thorough, expensive, engineered, and optimistic, perhaps pushing the limits of what is feasible given their mining goals. The SDEIS and fisheries experts have responded that those measures will not be effective in mitigating serious impacts to already-imperiled Chinook salmon, steelhead, bull trout, and westslope cutthroat trout. The impacts to ESA-listed salmon, steelhead, bull trout and other native fishes, even with well-intended, although inadequate mitigation, are unacceptable.</p> <p>The following mitigations should be incorporated:</p> <ul style="list-style-type: none"> ● Obliterate and hydrologically restore all unneeded roads in the South Fork Salmon River watershed, ● Gravel road surfaces and develop maintenance agreements for all roads in the South Fork Salmon River watershed, ● Implement Aquatic Organism Passage at all stream crossings in the South Fork Salmon River watershed that are not AOP. 	MIT	Chapter 2 and Section 4.12.2.2 describe the design features that would be implemented for the protection of fish. These summarize a plan for an operational period fish passage (including contingency measures for tunnel usage) and a closure period stream restoration. These restoration efforts involve current technologies and practices for protecting and restoring fish habitat.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	48	The Shoshone-Bannock Tribes request to be involved in the environmental monitoring process to determine monitoring requirements; schedule, locations and analysis. As discussed with USFS personnel during meetings in January, 2023, the Tribes request monitoring to determine performance of environmental requirements of any and all permits be done so on a quarterly basis, at a minimum. Changes to processing and resulting discharges are expected and will require a robust monitoring sequence to begin with. Any changes to process that may potentially change emissions to any media must be communicated to USFS and others and monitored. The Tribes may choose to conduct their own independent monitoring of certain media.	MIT	The Forest Service would appreciate tribal input and involvement in site monitoring. The Final EIS includes mitigation measures regarding tribal involvement in monitoring and the frequency of water quality monitoring.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	49	The Shoshone-Bannock Tribes request to be involved in the reclamation monitoring process to determine reclamation monitoring requirements and to conduct both monitoring oversight and collection of split samples.	MIT	The Forest Service would appreciate tribal input and involvement in site monitoring. The Final EIS includes mitigation measures regarding tribal involvement in monitoring.

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Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	26	A much more thorough discussion is warranted regarding mitigation. While mitigation and monitoring is referenced throughout the SDEIS, details seem to be lacking.	MIT	The Final EIS includes additional details regarding mitigation measures and their development and effectiveness based on feedback received from comments on the SDEIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	150	<p>5. Section 230.10(d): Compensatory Mitigation</p> <p>Section 7.0 of the Wetland and Riparian Resources Specialist Report briefly addresses compensatory mitigation. Again, this discussion is reduced primarily to acreage numbers. Admittedly, until a thorough and complete alternatives analysis is performed and documented, no determination can be made regarding unavoidable adverse impacts that then could be used to properly address potential compensatory mitigation.</p> <p>Purchasing credits in a mitigation bank is allowed under current federal regulation. However, purchasing bank credits does not adequately compensate for the full range, scope, and severity of adverse impacts to wetlands, rivers and streams described above, particularly when no determination has been made on unavoidable impacts to wetlands and streams. The bank described in the SDEIS is roughly 25 to 30 miles downstream from the mine site. How this approach would adequately compensate for the extent and diversity of adverse impacts at the project area is difficult to comprehend. For example, the adverse impacts to water quality in particular to the wetlands and waters cannot be adequately compensated by this approach.</p> <p>Impacts of this type must be avoided or reduced to the greatest extent practicable to be able to comply with Section 230.10(b) of the Guidelines. Also, purchasing wetland bank credits does not in any manner compensate for adverse impacts to creeks, streams and rivers. Though the bank is located within the same watershed, purchasing credits also will not likely address cumulative adverse impacts. Perpetua must come up with other potential ways to provide suitable compensation.</p>	MIT	<p>Comment noted. Statement of position.</p> <p>The proposed compensation methods are subject to USACE approval of the 404 permit application and its associated Compensatory Mitigation Plan.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	184	The Forest Service should minimize negative impacts of transmission line construction and maintenance by avoiding areas of important habitat for species of concern, establishing siting criteria to minimize soil disturbance and erosion on steep slopes, utilizing visual resource management guidelines, avoiding significant historic properties, and minimizing conflicts with other uses of the public lands. See our comments on Sacajawea's bitterroot and transmission line impacts in Botanical Resources. Additional comments are summarized in our Executive Summary and included as appendices to this document (Maest 2022, Newberry 2022, Gregory 2022, Schlinger 2022, Egnew and Mack 2022, Lubetkin 2022, Chamber 2022, and Semmens 2022).	MIT	The siting criteria for the transmission line construction are included in its Plan of Development that accounts for the minimization of associated impacts.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	189	The Meadow Creek Lookout already has an unresolved adverse effect due to the placement of a small utility building and supporting solar structure which obstructs the viewshed from the lookout. As partial mitigation for other structures, Perpetua should work with the Forest Service and SHPO on relocating these structures to reduce effects to visual resources.	MIT	The PA includes a measure to locate and camouflage facilities to minimize their effects on the view from the Meadow Creek Lookout.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	236	Mitigating features for the visual impacts such as the plume could include developing an underground mining alternative, curtailing activities that generate large amounts of dust (such as blasting) at sunrise and sunset or applying additional dust control measures at these times.	MIT	The Final EIS contains a mitigation measure to minimize the extent of dust generating activities during sunrise and sunset.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	262	<p>9. The SDEIS lacks mitigation measures to address potential impacts to water quality, ORVs, and classification of eligible, suitable, and designated Wild and Scenic Rivers</p> <p>The Specialist Report for Special Designation does not target specific courses of action for mitigation measures. The Mitigation and Monitoring Section of the report is too vague and does not properly discuss the steps the SGP would make to mitigate harm to eligible, suitable, and designated Wild and Scenic Rivers. No opportunities are listed for the negative impacts to be avoided or lessened to these protected waterways. The Forest Service needs to address mitigation measures that are available to protect water quality, ORVs, and classification of eligible, suitable, and designated Wild and Scenic Rivers.</p>	MIT	Section 4.23.2.2 describes how effects on eligible or suitable Wild & Scenic Rivers would be negligible to minor upon implementation of Project design features and Forest Service requirements.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	266	<p>The DEIS identified four measures to mitigate adverse impacts to cultural resources in the Stibnite Gold Project analysis area. DEIS Appx. D at D-2 (Table D-1; FS-2,3,3 and 5). Of the four measures, only FS-1 offered any true mitigation value, providing for work stoppage if any previously undiscovered cultural resources are identified during project operations. The SDEIS provides a revised version of the Design Features, now referring to “environmental design features...proposed and committed to by Perpetua,” (Specialists Report, p. 11). Sadly, these “design features” developed by Perpetua are hardly representative of true avoidance and mitigation protocols (Specialists Report, Table 2-3, p. 12). While we concur that Perpetua employees and contractors gain knowledge regarding relevant regulations, and that this knowledge could contribute to lessening potential impacts to cultural resources, neither of the two identified measures detail how known resources will be avoided, how the Forest Service and Perpetua Resources will reduce or avoid indirect impacts such as increased visitation and exposure to nearby or newly accessible cultural resources, or how impacts to culturally significant plants will be mitigated. The first offers a partial answer to our question, but the second, which refers to the yet undeveloped Historic Property Management Plan (HPMP) is simply a restatement of actions required by law. The presented measures simply offer plans that, “will be completed,” or “will be developed.” The purpose of presenting mitigation measures is to demonstrate a readiness to avoid and minimize potential impacts, which was lacking in the previous DEIS and are now absent in the SDEIS. This indicates that neither Perpetua nor the Forest Service are adequately prepared to address potential impacts to cultural resources through the proposed actions related to the SGP. The “design features” are wholly inadequate and we believe it is not Perpetua’s role to propose or adopt these mitigation and avoidance strategies. Rather, this is the role of the Payette National Forest and we recommend that the Forest Service develop true design features that provide clear “if, then” scenarios with identified “trigger” points that would initiate design feature implementation.</p> <p>A second example of this rather weak language is found in the Mitigation and Monitoring section (7-3) of the Heritage Resources Specialists Report (p. 54). When discussing the HPMP in the second paragraph, there are three instances of passive language used to describe the HPMP that is aspirational rather than actively required by law. The HPMP, “would also address,” in the second sentence, “This HPMP attempts to protect resources...” in the next to last sentence. The HPMP should or will address the process used to evaluate inventoried areas, and the yet-to-be-developed document should or will protect resources rather than attempt to protect said properties. There is no room for “attempting” with historic properties, as once impacts are incurred and integrity lost there is no going back to reconstruct context or data once associated with the resource.</p>	MIT	<p>A PA is in preparation for the management of Heritage Resources and mitigation of Project effects. Components of the PA that would address design features protective of historical resources involve a Historic Properties Management Plan covering training and avoidance and a Historic Properties Treatment Plan that would mitigate effects to heritage resources when avoidance is not achievable.</p> <p>These agreements and plans would be a requirement of any Project decision.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	274	<p>We are wholly disappointed that the three documents that form the basis for the protection and mitigation of cultural resources within the SGP are yet to be completed and shared with the public for review, consideration, and understanding. The absence of a Programmatic Agreement (PA), a Historic Properties Management Plan (HPMP), and Historic Properties Treatment Plans (HPTP) precludes the public from fully assessing the potential impacts and adverse effects of the proposed actions on historic properties within the physical and VAV APEs. These documents must be in place, approved by all respective parties, and shared with the public for consideration prior to the signing of a ROD or issuance of a final or additional supplemental EIS.</p>	MIT	The PA, Historic Properties Management Plan and Historic Properties Treatment Plan will be requirements of the Project decision and will be described in the Draft ROD for public review prior to signing of a ROD.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	281	The transmission line is being presented as a component of the mine facility, but there are no proposals to mitigate the effects: Objective MIOB08 During fine-scale analyses in areas where mine facilities are identified as a potential concern or problem contributing to degradation of water quality, aquatic species or occupied sensitive or Watch plant habitat, evaluate and document where the contributing mine facilities are and prioritize opportunities to mitigate effects.	MIT	The siting criteria for the transmission line construction are included in its Plan of Development that accounts for the minimization of associated impacts.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	289	We recommend that the Forest Service integrate additional design features to minimize disruption of the hydrology of wetlands along the Burntlog Route if it is constructed. This may include using additional and/or larger culverts and adjusting the location of the route.	MIT	The Burntlog Route design balances multiple factors including effects on wetlands, geological hazards, transportation risk, and others. Impacts to wetlands are accounted for in the Compensatory Mitigation Plan required for 404 Permitting through the USACE.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	292	g. Additional Mitigation measures In addition to the mitigation measures suggested above, the Forest Service should require multiple weed surveys and appropriate treatments for each year in areas along all transportation routes, beginning before construction starts. Treating existing noxious weed occurrences along the transportation route will help prevent traffic from transporting seeds to other locations.	MIT	Noxious weed control would be a requirement of the Project approval. Noxious weed control would include inspections followed by treatments.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	293	The Forest Service could also collect seed from these subpopulations or nearby subpopulations before they are impacted by nearby mining activities. This seed stock should be properly labeled and stored in a way that maintains viability and used for future reseeding at the subpopulation site as conditions allow.	MIT	The Final EIS includes a mitigation measure for collection of seed and seedlings from the Project area prior to disturbance.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	304	j. Mitigation measures are inadequate. Despite the significant adverse effects to whitebark pine associated with mine and transportation route construction and the proposed upgrades to transmission lines, Perpetua proposes few reclamation options and puts forth no mitigation efforts or proposals. The sole mention of whitebark pine mitigation/reclamation we have found is in Chapter 2 of the 2020 DEIS (Section 2.8.10, p. 146), which calls for collecting whitebark pine cones along transmission line upgrades and extensions, and planting two-year-old seedlings during mine and infrastructure reclamation. The paucity of reclamation proposals and the complete absence of an integrated mitigation strategy for whitebark pine is wholly unacceptable considering the anticipated mine life and the shifting habitat requirements that may be affected by climate change. In addition, the Boise Forest Plan specifically calls for whitebark pine restoration: Objective 2021 - Restore whitebark pine in PVG11 (High Elevation Subalpine Fir) vegetation group as described in Appendix A in all watersheds in the management area. We recommend the Forest Service and Perpetua reexamine reclamation opportunities, and implement a proactive mitigation strategy throughout the life of the project. First, the mature, cone-producing trees proposed to be removed should be assessed to see if they are “plus” trees that demonstrate resistance to white pine blister rust and could be of special importance to research and reproductive efforts in nurseries. If so, efforts should be made to collect seeds from cones. While surveys found few trees with cones, between 25-50% of the trees in Polygon 112 in Map 1 had female cones with an average of 26-50 cones per tree. Fewer than 5% of the trees in this stand showed evidence of white pine blister rust or mountain pine beetles. Over 90% of this stand would be consumed by the development of the West End pit. Other efforts should include cone collection from whitebark pine in and around the project area, planting seedlings in nearby suitable areas, supporting other efforts to improve whitebark pine habitat restoration projects on the Boise and Payette National Forests and funding white pine blister rust research. Several recent publications highlight the best opportunities for promoting whitebark pine recovery, and we recommend the Forest Service and Perpetua use the findings of this research to reexamine the project	MIT	Forest Service requirements for whitebark pine have been added to the Final EIS.

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			proposal and identify proactive, concurrent mitigation strategies. For example, the Whitebark Ecosystem Foundation, American Forests, Forest Service, and other partners will be releasing a National Whitebark Pine Restoration Plan in 2023.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	322	The SDEIS fails to provide any Environmental Design Features (EDFs) and/or mitigation measures that would reduce the impacts to suitable Canada lynx habitat, particularly the potential adverse effects associated with increased winter recreation and access and increased fragmentation associated with access roads and recreation opportunities. We suggest EDFs and mitigation measures for wolverine that would also benefit lynx (see #11 below). Due to the potential adverse impacts to the ESA-listed lynx, we expect that the Biological Assessment (unavailable to date), and the subsequent results of consultation with the USFWS, will result in additional mitigation measures or modifications to the project alternatives.	MIT	The Project includes measures to minimize impacts to the Canada lynx and wolverine. Additional requirements developed from Section 7 consultation would also apply to the Project.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	348	<p>2. Ambient Air Monitoring</p> <p>In order to ensure the SGP does not violate the NAAQS for PM and PM10, the Forest Service should require Perpetua to install an arsenic and PM/PM10 monitoring system at the SGP's ambient air boundary to ensure that the arsenic AACC and the PM/PM10 NAAQS are not violated. This kind of monitoring is not a condition of the current PTC issued by IDEQ for the SGP, and therefore is unlikely to happen unless the Forest Service requires it.</p> <p>This practical step is warranted considering the uncertainty surrounding dust control efficiency and emissions factors associated with this project and highlighted in the below comments. However, in summary, the SGP is anticipated to release tens of thousands of tons of harmful air pollutants into the ambient atmosphere. Both IDEQ and the Forest Service contend these pollutants will be released at quantities and concentrations that are below thresholds that are protective of public health and the environment. Yet, to reach this conclusion, a laundry list of critical technical assumptions have been made, including everything from the estimated amount of ore to be mined by Perpetua to the nature of the meteorological mechanisms. Regulation of air quality impacts, as compared to water quality impacts, can be particularly abstract given the nature of air over water, the number and nature of air pollution sources, and the ability to effectively and routinely quantify pollution concentrations.</p> <p>As such, air quality permitting requires careful risk analysis weighing the potential impact of air emissions versus the likelihood they will occur at a given level. Incorporated into this risk analysis is the qualification of sources of uncertainty and error, all driven by the previously noted plethora of assumptions required to estimate the quantity of air emissions. While IDEQ contends Perpetua has demonstrated the SGP will comply with all applicable regulations to the "satisfaction of the department" (IDAPA 58.01.01.203), an opinion disputed by the previously mentioned IDEQ PTC administrative appeal, there is a straightforward solution to ensuring this is the case: establishment of an ambient air boundary monitoring network.</p> <p>While often prohibitive for facilities of smaller means and resources, to our knowledge, it is neither technologically or financially infeasible for Perpetua to implement this type of monitoring. A simple web search will show there is an entire sub-industry devoted to ambient air monitoring at mines. In addition, at least several surface mines in the western United States include ambient air boundary monitoring as conditions of state air quality permits including the Kennecott Bingham Canyon Mine (Utah), the Cripple Creek and Victor Mine (Colorado), and the Colowyo Mine (Colorado). The Forest Service should require Perpetua to submit an ambient air boundary monitoring plan ("AABMP"), including an opportunity for public comment on the AABMP, and to review and revise the AABMP. At a minimum, the AABMP should provide a strategy for monitoring the ambient air concentrations of PMtotal, PM10, PM2.5 and arsenic at the SGP's ambient air boundary. The AABMP should be developed according to best industry and regulatory practices, consulting contemporary sources (e.g., IDEQ or EPA guidance, similarly established plans for other state permits, etc.).</p> <p>The Forest Service should:</p>	MIT	The Final EIS includes a monitoring measure for dust emissions.

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			<ul style="list-style-type: none"> ● Include requirements within the FEIS requiring Perpetua to install a comprehensive continuous arsenic and PM/PM10 monitoring system on site. ● Include requirements within the FEIS requiring Perpetua to submit a robust AABMP (subject to public review) to insure the proper installation, monitoring, maintenance, and reporting of any ambient air monitoring network. 		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	358	<p>b. Mitigation Fund</p> <p>In addition to incorporating industry best practices for minimizing light pollution (shielding, motion-activation, etc), we also recommend that Perpetua Resources and the Forest Service create a monetary mitigation fund to further address light and noise pollution impacts to wildlife and recreationists. The Forest Service has the authority to establish this type of mitigation fund in a project Record of Decision, assuming that the project proponent (in this case, Perpetua Resources) is supportive of the effort. Relevant examples of this authority include the 2012 Peak 6 Project ROD at Breckenridge Ski Resort on the White River National Forest and the 2019 Village at Wolf Creek Access Project ROD at Wolf Creek Ski Resort on the Rio Grande National Forest⁴⁰⁴. This fund could be made possible by a monetary contribution by Perpetua Resources with funds administered by an organization such as the National Forest Foundation. We suggest that this fund be used for specific projects beyond the scope of the EIS mitigation measures that result in habitat improvements for wildlife and recreationists that might be affected and/or displaced by light and noise pollution from the mine site.</p>	MIT	The Final EIS includes a mitigation measure to minimize noise effects. The Project includes measures to minimize light effects as described in SDEIS Table 2.4-12.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	372	<p>Y. Mitigation and Monitoring Measures</p> <p>NEPA requires the Forest Service to fully analyze mitigation measures, their effectiveness, and any impacts that might result from their implementation. An EIS must: (1) “include appropriate mitigation measures not already included in the proposed action or alternatives,” 40 C.F.R. §1502.14(f); and (2) “include discussions of: . . . Means to mitigate adverse environmental impacts (if not already covered under 1502.14(f)),” 40 C.F.R. §1502.16(h). NEPA thus requires that the Forest Service review mitigation measures as part of the NEPA process — not in some future decision shielded from public review.</p> <p>To comply with NEPA, the Forest Service must take a hard look at cumulative impacts/effects. Cumulative impact is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.” “[W]here several actions have a cumulative . . . environmental effect, this consequence must be considered in an EIS.”</p> <p>[A]n EIS must catalogue adequately the relevant past projects in the area. It must also include a useful analysis of the cumulative impacts of past, present and future projects. This requires discussion of how future projects together with the proposed project will affect the environment. The EIS must analyze the combined effects of the actions in sufficient detail as to be useful to the decisionmaker in deciding whether, or how, to alter the program to lessen cumulative impacts. Detail is therefore required in describing the cumulative effects of a proposed action with other proposed actions.”</p> <p>The Ninth Circuit has, time and again, rejected NEPA analyses that unreasonably limit the geographic scope of a cumulative impacts analysis.</p>	MIT	<p>Effects of past activities are described in Chapter 3 of the EIS with proposed Project effects described in Chapter 4 and reasonably foreseeable affects in Chapter 5. Effectiveness analyses are included in the description of each mitigation measure required by the Forest Service as presented in Chapter 4.</p> <p>The area of analyses for each resource are described in Chapter 3 and the cumulative effects analyses are described in Chapter 5. These analyses cover the predicted affected areas for the Project and the associated cumulative affected areas with other past, current, and reasonably foreseeable activities.</p>
Samuel Penney (Chairman)	19396	51	<p>Table 2.4-13 Proponent Proposed Design Features lists the environmental design features (EDFs) beyond regulatory requirements that have been proposed and committed to by Perpetua. A “commitment” is not a mitigation requirement unless it’s included as an actual, specific mitigation in the EIS and as an actual, specific permit requirement. For example, the first item in Table 2.4-13 is, “Following crushing, the crushed ore would report via conveyor to a dome-shaped, covered stockpile.” Perpetua withdrew covered stockpiles from its application for the PTC, and covered stockpiles are not included in the PTC, so Perpetua is not required to have covered ore stockpiles as a condition of the PTC. Another EDF is, “Proper dust control would be employed along transportation corridors and active mining areas using aquatic safe dust suppression chemicals and methods.”¹⁰⁰ The Forest Service does</p>	MIT	Forest Service approval of a mine plan includes requirement of the design features included in the mine plan. The ROD will specify that these design features are requirements of any Project approval.

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			<p>not specify what proper dust control means (by including specific timing of measurement, application of controls, and recordkeeping requirements).</p> <p>Another listed EDF is, "All off highway diesel engines would be EPA Tier 4 or better."101 The EDFs listed in the SDEIS are unenforceable unless included as mitigation measures and as permit requirements. The Forest Service should include all EDFs as mitigation measures.</p>		
Samuel Penney (Chairman)	19396	66	<p>Perpetua did not specifically address long-term monitoring and maintenance in the ModPRO2 and similarly it is not described and addressed in the SDEIS. According to SDEIS Section 2.4.8.2 Reclamation Monitoring, monitoring would include erosion and sediment control monitoring along with slope stability monitoring, and the designations would be completed twice annually for erosion control purposes, once in the spring and once in the fall, and after three years for performance monitoring purposes. The SDEIS requires clarification whether the description is intended to mean that observational evaluations of erosion and slope stability will occur twice annually for three years and for what period thereafter? The revised SDEIS should also address what means other than observational, such as measurement of erosion or slope stability by physical methods that are in common use, are not proposed. This would include ortho-photographic methods to evaluate those features in addition to vegetation, as well as survey monuments and slope inclinometers as well as other means of measuring erosion and slope stability. While observational methods are important and a needed part of the plan, they are being supplemented, and in some cases replaced, by techniques that are more dependable and not subject to bias and level of expertise. They can also be performed remotely which in the case of slope stability is important to detect and/or prevent catastrophic failures.</p> <p>The SDEIS does include a description of Reclamation Maintenance Procedures that might need to be implemented. We would suggest the list however is incomplete in that it makes the assumption that no major reconstruction of features such as stormwater channels and covers will be required such as might result from storm events greater than the 100-yr design storm event, causing damage to stormwater features and resulting in mass wasting including localized surficial slope failures. It is possible that settlement of the TSF and/or waste rock piles could take place over many years after post-closure. The Forest Service should consider continuation of embankment inclinometer, survey monument monitoring, and Light Detection and Ranging surveys to monitor long-term movement and settlement of the waste rock piles and TSF. The Forest Service could also consider conducting long-term vegetation monitoring and maintenance to ensure reclaimed surfaces are adequately protected from erosional forces and to prevent weed infestations. The SDEIS should note that these measures would need to be performed for as long as the performance of the reclaimed areas is intended, and therefore must be capable of withstanding or being repaired as a result of the most extreme climate impacts that might be expected to occur throughout and beyond the foreseeable future. The SDEIS should clearly and concisely note that there is no such thing as walk-away reclamation for the Project. The description in this regard is critical to evaluating not only the effectiveness of the proposed reclamation and closure measures by monitoring the post-reclamation results, but also in evaluating the potential for long-term impacts to occur if those features necessary to ensure the ongoing effectiveness are not maintained.</p> <p>In contrast to the SDEIS for the proposed Project, the Donlin Gold Project Final EIS Section 2.3.2.5.2 Closure and Post-Closure contained detailed information on long-term monitoring and maintenance, which should be considered the minimum necessary for the DEIS.</p>	MIT	<p>In addition to the monitoring included in the Reclamation Closure Plan. The Project includes a Water Resources Monitoring Plan and an Environmental Monitoring and Mitigation Plan Framework.</p> <p>The Final EIS includes a mitigation measure addressing long-term maintenance of site reclamation and restoration.</p>
Samuel Penney (Chairman)	19396	67	<p>In terms of post-closure management, the proposed Project will require extensive monitoring and maintenance. Monitoring should include water quantity, water quality, fish, wildlife, aquatic biota, revegetation, erosion, dam stability, and other monitoring to ensure that reclamation and closure measures are performing as intended and within acceptable standards. Monitoring would also determine when maintenance and corrective actions are needed to maintain roads, covers, stormwater channels, and other measures to ensure that reclamation remains viable over time.</p> <p>These monitoring and maintenance activities, in addition to operations, will need to be performed potentially in perpetuity, and should be described in the SDEIS in detail.</p>	MIT	<p>Chapter 2 of the EIS summarizes the Project's management, monitoring, and mitigation plans. Additional details are available in the plans themselves which are available for review along with the EIS document.</p>

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Samuel Penney (Chairman)	19396	68	<p>According to SDEIS Section 2.4.7.14 Closure and Reclamation Financial Assurance, the Forest Service would require financial assurance that, "...would provide adequate funding to allow the Forest Service to complete reclamation and post closure operation, including continuation of any post closure active or passive water treatment, maintenance activities, and necessary monitoring for as long as required to return the site to a stable and acceptable condition." The amount of financial assurance would be determined by the Forest Service and would, "...address all Forest Service costs that would be incurred in taking over operations because of operator default." The SDEIS goes on to state that calculation of the initial bond amount would be completed following the Record of Decision when enough information is available to adequately and accurately perform the calculation.</p> <p>The Forest Service has taken the position that it does not address financial assurance in the SDEIS; however, we do not agree with this position. Financial assurance is an essential element of a proposed mining project and should have been disclosed in the SDEIS for the proposed Project, because the viability of the reclamation, closure, and post-closure management is a critical factor in evaluating potential long-term indirect, direct, and cumulative impacts and determining whether the proposed project can be considered fully protective of environmental resources. Furthermore, this information is essential for an adequate analysis of the proposed Project, because it could make the difference between a project that is adequately managed over the long-term by the site operator and an unfunded or underfunded contaminated site that becomes a public liability that must be addressed under the CERCLA.</p>	MIT	Reclamation cost estimates and financial assurance decisions are conducted by the Forest Service in a separate administrative process outside the NEPA scope.
Samuel Penney (Chairman)	19396	144	A Wildlife Habitat Mitigation Plan has been provided by Perpetua, but it is the Tribe's understanding that it has not been accepted by the Forest. Please provide additional information about why this plan has not been formally accepted by the Forest? Mitigation of environmental impacts and reclamation of National Forest Service lands is part of the need for action.	MIT	The Forest Service has opted to add any mitigation requirements associated with effects on wildlife and habitat that result from the Section 7 consultation.
Samuel Penney (Chairman)	19396	165	<p>4.3 Air Quality</p> <p>The Forest Service relies on the IDEQ air permit for assuring requirements under the Clean Air Act are met. There are several issues with this. First, the Forest Service cannot claim as mitigation measures state of Idaho PTC plans that have not yet been finalized. The PTC's Fugitive Dust Control Plan, Operations and Maintenance Plan, Access Management Plan, and Haul Road Capping Plan, although referenced in the PTC, have not yet been written, and will not be subject to a public comment process. The Forest Service must clearly identify mitigation measures in the SDEIS necessary to minimize the Project's adverse impacts to the environment.</p>	MIT	<p>The Forest Service assessed air quality effects from the Project separately from IDEQ's air quality Permit to Construct. The Forest Service determined that compliance with the PTC would satisfy clean air act requirements.</p> <p>The Final EIS includes a monitoring measure for dust emissions.</p>
Samuel Penney (Chairman)	19396	170	<p>4.4 Climate Change</p> <p>The SDEIS fails to offer mitigation or adaptation measures for climate change impacts. Mitigation measures for climate change could be integrated into the habitat restoration components of this project, and the construction and operation of the facilities. In addition, adaptation measures that could protect the road from washouts, reduce the likelihood of accidents causing forest fires, and innumerable actions that reduce risk, improve soil health, improve the capacity of the area to absorb carbon and cool water, could be proposed.</p>	MIT	The Final EIS includes a mitigation measure associated with minimizing carbon emissions.
Samuel Penney (Chairman)	19396	189	Despite the legal inadequacies of Idaho's minimum stream flow water rights, given how important the state of Idaho considers minimum stream flow water rights to the protection of ESA listed species, should not mitigation or compensation measures be pursued?	MIT	SDEIS Section 4.8.2.2 examines the potential Project effects on minimum stream flows. Mitigation of any effects on minimum stream flows would be incorporated into the Project water rights as issued by the IDWR. The Forest Service has protested some of the Project's water rights applications and is engaged through the IDWR process regarding resolution of those protests including mitigation measures.
Samuel Penney (Chairman)	19396	192	Section 4.8.3 is titled Mitigation Measures, however, mitigation isn't actually discussed. For example, what happens if surface water flows are less than predicted? Monitoring will occur and may increase but an actual mitigation measure isn't provided. Please provide examples of what this might be.	MIT	The Final EIS includes additional details regarding the mitigation of any effects identified by monitoring results.
Samuel Penney (Chairman)	19396	324	Monitoring of Operations	MIT	The Forest Service would require to be copied on State IPDES and Cyanidation monitoring reports and would independently review those reports. While the Forest Service does not have

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			Water treatment and the monitoring of mine-influenced waters are described in the 2021 Water management Plan which refers to discharges, outfalls and applicable water quality limits as permitted under the Idaho Pollutant Discharge Elimination System. However, the application for this permit has not yet been declared final or approved yet so much remains unknown. Additional water treatment options will continue to be evaluated during operations to optimize the approach to water treatment during all mine phases. What kind of Federal oversight will this evaluation be under? Assuming that the claimant will be monitoring these water treatment options does not provide much confidence in the outcome, similar to the fox watching the hen house scenario.		authority to modify Idaho State monitoring requirements, identified water quality issues would be incorporated into Forest Service requirements as implemented in the Project's Water Resources Monitoring Plan which would be required via any Project approval.
Samuel Penney (Chairman)	19396	368	Further, the lack of mitigation measures presented in the SDEIS to avoid, or minimize adverse impacts is unacceptable. Mitigation measures need to compensate for habitat loss, fragmentation, and disturbance that would occur under the alternatives.	MIT	Additional requirements associated with effects on wildlife and habitat resulting from the Section 7 consultation would be incorporated into the Project decision.
Samuel Penney (Chairman)	19396	385	The SDEIS fails to fully incorporate and analyze components of Perpetua's proposed mitigation measures and the RCP. The Tribe is pleased that design features and best management practices are included in the SDEIS but recommends that these are supported by best available science and formalized in an implementation and monitoring effectiveness plan. This plan should also include documentation of suspected injury and/or mortality from exposure to chemicals, metals, or emissions associated with the proposed actions. To ensure compliance with the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act, the Tribe requests that the Forest develop a conservation plan that lists migratory birds of concern as a surrogate for all migratory birds potentially impacted by the Project. It would include avoidance and minimization measures to avoid birds and their habitats, as well as compensatory mitigation for unavoidable impacts to birds and their habitat.	MIT	Forest Service requirements regarding avian protection would apply to the Project along with requirements on power line installations. Fulfillment of these requirements along with the wildlife protection requirements of IDEQ's Cyanidation Permit precludes the need for a specific avian protection plan.
Diana Bryant		3	<p>Even more important to me is the proposed use of the Johnson Creek Road and the East Fork Road from Yellow Pine to Stibnite for the first three years of this project while they construct the Burnt Log Road and extension into the mining area. I would hope that the permits to operate the mine would be held until the Burnt Log Road extension was complete. Anyone who has traveled those roads know the dangers to the heavy mining truck traffic and to residents and visitors trying to compete with that traffic safely. In past mining operations they have used convoys for all the mining traffic. setting a time to gather at Landmark in the early a.m. with a guide car which led them all the way to the mine. Then there was a set time they returned in convoy in the late afternoon. While it took some planning for residents and recreationists to depart and enter the area to avoid the convoys. it reduced the risk of accident with two way traffic and the guide car could control the speed of the mining traffic (which has already become a problem. even now).</p> <p>I would strongly advise that this be a requirement of the mine traffic using the Johnson Creek and South Fork Roads. Also, the mine should be held responsible for dust abatement at least beginning at milepost 16 through and into Yellow Pine to mitigate the bad air quality created by the mining traffic for local residents and travelers.</p>	MIT	Deferring mine construction until completion of the Burntlog Route extends the duration of the Project construction and its impacts and would not be economically feasible.
Samuel Cousins		24	<p>18. Perpetua Track Record.</p> <p>The SDEIS did not do a good job of evaluating and disclosing the effectiveness of each of its mitigation measures in the action alternatives, or the total aggregate effect of the total package of mitigation measures under each alternative. Effectiveness of the mitigation measures used is key to environmental consequences, as multiple court decisions have established. One key factor in the criteria for effectiveness is the past track record in applying mitigation. What has been the track record of Perpetua Resources in applying mitigation measures to their other mining and construction projects comparable to this one? How effective has their mitigation program over the short term, but also the long term such as the 25 year total lifespan of this project's activities? What projects of this size have they completed, and how well or how poorly? What did the Forest Service learn from this record, and how did it apply that to the level of credibility Perpetua's plans and promises have in their assessment? The Forest Service needs to report this.</p>	MIT	The Forest Service review of proposed design features and mitigation activities was based on the review of those designs and plans. The Forest Service identified areas of uncertainty regarding performance of those plans and incorporated measures to address those uncertainties (e.g., SDEIS Sections 4.8.3 and 4.9.3).

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Samuel Cousins		25	<p>19. Effectiveness of Future Mitigation Less Likely Than Immediate Effects. The overall mitigation philosophy of the Midas proposal tries to portray a degraded present condition as a static, negative condition, to contrast against a conceptual optimistic restored future condition. This is an unequal comparison. It fails to correctly portray the present condition as dynamic, with long-term restoration and natural recovery underway. The Meadow Creek valley floor for example, has decades of restoration completed. However, the Proposed Project would undo much of that by covering it over with spent deposits and create another major open wound on the landscape again. Is it really wise and necessary to rip off the scab and create a new wound there?</p> <p>The analysis needs to project positive trends of the current recovery and restoration situation over time, not just a static current situation. Similarly, from an economic analysis standpoint, the DEIS and DSEIS pose the tradeoff as between actual ongoing recovery now at Stibnite, and proposed recovery ("restoration") benefits decades in the future. Therefore, those benefits will be uncertain. But, the adverse consequences of construction and operation will be real, and nearterm.</p> <p>Those costs will be almost certain. Thus, this is an unequal tradeoff, sacrificing present benefits (environmental qualities) today, for uncertain benefits (environmental remedies of damage) in the future. The SDEIS needs to reframe the cost-benefit tradeoff analysis between the two categories of benefits more objectively.</p>	MIT	Effects of the proposed site restoration work under the ASAOC Phase 1 were described under the No Action Alternative to the extent that those positive effects are known. There are no committed restoration efforts in place beyond the ASAOC Phase 1.
David Santos		4	<p>4. UNDERSTATED EFFECTS, OVERSTATED MITIGATION SUCCESS, INADEQUATE MITIGATION.</p> <p>As in the DEIS, time and time again, the DSEIS understated the magnitude, longevity, and complexity of adverse effects the Project will inflict on the environment. And often it relies on optimistic assumptions and unrealistically high success rates from prescribed measures and mitigations that have repeatedly failed over five decades of destructive mining in similar contexts as Stibnite across the country. If these measures had worked, the nation would not have the repeated cases of continuing, unsolved, festering environmental disasters from mining. One kind of insanity is repeating the same measures over and over and expecting different results.</p> <p>This is particularly true of:</p> <p>Table 2.4-12 Prominent Regulatory and Forest Plan Requirements. P. 2-94.</p> <p>Table 2.4-13 Proponent Proposed Design Features. P. 2-106.</p> <p>Worse, the sections that need to contain the most specific and tailored mitigation measures to prevent, avoid, compensate, or otherwise counteract destructive environmental effects, are empty or severely limited:</p> <p>2.4.9.1 Agency Identified Mitigation. P. 2-118.</p> <p>2.4.9.2 Stibnite Gold Mitigation Plan. P. 2-118.</p> <p>The first is blank except for a reference to the mitigation section in Chapter 4. The second contains only four separate stand-alone mitigation plans listed:</p> <ol style="list-style-type: none"> 1. Stibnite Gold EMMP 2. Fisheries and Aquatic Resources Mitigation Plan 3. Fishway Operations and Management Plan 4. Conceptual Stream and Wetland Mitigation Plan <p>The DEIS and DSEIS list and analyze in depth 16 separate environmental components for Issues and Environmental Effects caused by the Project. And yet the preparers chose to develop detailed mitigation plans for only four? Why were the four resources chosen? And why were not chosen for mitigation plans? Among them were seven:</p> <ol style="list-style-type: none"> 2. Climate Change 3. Soils and Reclamation 	MIT	The Final EIS includes additional mitigation measures associated with Climate Change, Water Resources, and Tribal Rights and Interests. Further mitigation requirements have been developed for wildlife via the Section 7 consultation process and for wetlands via the Compensatory Mitigation Plan as required by the USACE for its 404 permitting. Forest Service requirements, project design features, and reclamation closure planning meet the requirements associated with reclamation and special designations subject to performance monitoring requirements.

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			<p>5. Surface Water & Groundwater 7. Wetland & Riparian 9. Wildlife & Wildlife Habitat 15. Special Area Designations 16. Tribal Rights and Treaties</p> <p>Why did these major resources substantially affected by the Project not warrant being given specific mitigation plans? The proponent and Forest Service expend considerable effort and pages to document the adverse effects of the new modified mining Project. And yet they expend comparatively little effort trying to reduce the residual effects of the Project post application of management requirements and mitigation measures. Between DESIS and FEIS, the FOREST SERVICE needs to live up to its mission, tighten down, and instruct Midas-Perpetua to find measures to further reduce adverse effects on the above five resource areas, as well as the four above with mitigation plans. And in addition, it needs to challenge Midas-Perpetua to reduce adverse effects on the rest of the 16 resource areas in the DSEIS.</p> <p>The Forest Service has missed the boat in a key area. In the DSEIS it has no separate resource section for an essential public resource area: Public Health and Safety. Both Alternatives considered will greatly increase existing threats to human safety and life, including groundwater poisoning, surface water poisoning, toxic chemical and waste spills, road traffic collisions, land and water recreationist sickening and injury, and air pollution effects on workers and recreationists, for starters. Some threats were mentioned though briefly in the document, e.g. potential " ... localized, temporary, and major impacts from infrequent large avalanches." P.4-16. This is unquestionably a critical area and should be treated as such in the SDEIS. Aspects of this issue are scattered among several other resource areas, but that fragments it and dilutes its importance, as well as hinders a comprehensive "hard look." Human health impacts need to the FEIS as a separate resource section, and the direct, indirect, and cumulative effects of the Alternatives on Public Health and Safety need to be analyzed more objectively. Due to the critical possibility of loss of human life and health, the FOREST SERVICE needs to develop and disclose a Worst Case Scenario, and need to be provide it for public review and comment.</p> <p>The DSEIS analysis needs to be realistic and objective based on past success/failure rates of impact reduction. What is the success likelihood of each of the mitigations listed and proposed?</p> <p>And what are the consequences of failure? And of the mitigations collectively? Stibnite is a historic poster child for failed mitigations in mining and reclamation. The same laws of physics apply today, the same law of unintended consequences, the same Murphy's law. And the same human nature to shortcut and take the easy way out. The ecosystem elements and systems are fragile, the mineral deposits are complex, the site is extremely harsh, the environmental obstacles are severe, cause-effects are highly complex, unknowns are multiple, and the best intentions of numerous mining companies and government agencies have individually and collectively failed for a century. Stibnite was and remains a mining disaster area. Superimposing a massive new mining event that almost doubles the with two massive open-pit mines that nearly double the mining footprint will make the whole system much worse. Soil will be massively displaced, water quality will degrade with hotter temperatures and increased sediment, fish populations will decline or be destroyed, wildlife habitat will be fragmented and destroyed, and recreation experience will be degraded and displaced, among the major significant and long-lasting effects. Species extinction will be accelerated. Climate change impacts will be increased by the Project and be cumulatively exacerbated. The farther into the future the mitigations that cost money, the more likely they will not be funded, or implemented, or monitored. Reclamation as designed and promised will become increasingly unlikely. The rose-colored SDEIS write-up of environmental consequences will more likely become obsolete. It is Stibnite's past, and its likely future. The FOREST SERVICE needs to fix the effects analysis. It needs to replace unfounded over-optimistic analyses of mitigations and their net effects, with realistic risk analyses of adverse effects, and mitigations to reduce those effects further.</p>		

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David Santos		5	<p>5. GOING BEYOND THE PROPONENT'S PREFERRED ALTERNATIVE.</p> <p>The Forest Service adopts the mining company's preferred alternative as its own Preferred Alternative. This is unusual and highly suspect for something of this magnitude and complexity. The agency has its own entirely different institutional purpose and mandate. It should not take the easy way out. It should not favor exactly the same alternative the project proponent promotes. The SDEIS does not do enough, as NEPA requires, to "rigorously explore and objectively analyze" alternatives to and mitigations for the damage the Proposed Action will cause. The Preferred Alternative does not try hard enough. It falls short of the Forest Service's mission to Care for The Land and Serve People. It also needs to further analyze the major negative effects to soils, surface water, ground water, wetlands and riparian areas, fisheries and aquatic resources, wildlife populations and wildlife habitat, Tribal Rights and Interests, and Public Health and Safety.</p>	MIT	Comment noted. Statement of position.

Forest Plan Amendments

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	40	<p>VII. THE PROJECT FAILS TO COMPLY WITH NATIONAL FOREST MANAGEMENT ACT (NFMA)</p> <p>The SDEIS fails to comply with all of the requirements of the Payette and Boise Forest Plans in violation of the National Forest Management Act (NFMA), 16 U.S.C. § 1601 et seq. Congress enacted NFMA in 1976 to establish a new legal framework for managing natural resources on National Forest lands. Among other requirements, NFMA requires the Forest Service to prepare a land and resource management plan, or "forest plan," for each National Forest. 16 U.S.C. § 1604(a). Each plan must include standards and guidelines for how the forest shall be managed. 16 U.S.C. §§ 1604(c), (g)(2) & (g)(3). Once a forest plan is adopted, all resource plans, permits, contracts, and other instruments for use of the lands must be consistent with the plan. 16 U.S.C. § 1604(i). "It is well-settled that the Forest Service's failure to comply with the provisions of a Forest Plan is a violation of NFMA." Failing to follow, or to evaluate and document compliance with a Forest Plan provision can also be a NEPA violation.</p> <p>The Forest Plans for the Payette and Boise National Forests that apply to the Stibnite Gold Project set forth numerous standards, guidelines, goals, and objectives to protect the environment and cultural resources. SDEIS at 4-4. However, the Stibnite Gold Project, as proposed for approval, fails to comply with many Forest Plan provisions, and the Forest Service has failed to explain how the Project complies with many other Forest Plan provisions in violation of NFMA and NEPA.</p> <p>As detailed herein and in our previous comments, the fact that Perpetua has filed claims under the Mining Law covering the public lands at the site does not mean that the Forest Service's obligations under federal public land laws like the Organic Act and NFMA do not apply. That was the agency's argument that was rejected most recently in the Rosemont case.</p> <p>A. The project is not consistent with the Boise and Payette Forest Plans.</p> <p>The Forest Service proposes amending the Forest Plan to accommodate the Stibnite Gold Project. As discussed in the next section (B), the amendments are unlawful. As discussed in this section, even if lawful, the amendments do not address numerous Forest Plan provisions that apply to the Project and will not, or might not, be met, and which have not been disclosed to the public and discussed or analyzed in the SDEIS.</p> <p>In 2019, the Forest Service recognized that approving the Stibnite Gold Project would violate numerous Forest Plan provisions, and that it might violate many more provisions. The Forest Service's draft Forest Plan consistency table from July 2019 identifies roughly 175 different Forest Plan provisions that apply</p>	FPA	<p>All Land and Resource Management Plan (LRMP) standards and guidelines for the Boise and Payette National Forests were checked for compliance. The LRMP consistency spreadsheet (2019_0718_MG_REVIEW_SGP_DRAFT_FSPlanConsistency_Final) is included in the project record and briefly describes the rationale if the project applies to, complies, or does not comply with each plan component. Specifically, it was determined that the requirements of MIST08 and MIST 09 are addressed in the operating plan and SDEIS and that no amendment would be required.</p> <p>The NFMA provides that "plans can be amended in any manner whatsoever" (16 U.S.C. 1604(f)(4)). The 2012 rule provides that, "[t]he responsible official has the discretion to determine whether and how to amend the plan." (36 CFR 219.13(a)).</p> <p>Five plan components from the Payette NF LRMP and nine plan components for the Boise NF LRMP were determined to require project-level amendments. Those plan components and the proposed project level amendments are discussed in Appendix A of the SDEIS.</p> <p>There were four alternatives analyzed in the DEIS and three alternatives analyzed in the SDEIS (one new alternative, one similar to the DEIS, and No Action). Section 2.6 of the SDEIS identify the nineteen alternatives considered but eliminated from further detailed study (three mining methods, two processing methods, four project facility locations, six potential transportation and access road locations, and four water management). These various alternatives analyzed or considered thoroughly addressed RCA impacts.</p> <p>Regulatory and Forest Plan requirements, design features, and mitigation measures were identified (SDEIS Section 2.4.9) and considered in the analysis. Analysis specific to wetlands and riparian resources in Section 4.11 of the SDEIS.</p> <p>It is acknowledged that "construction of the SGP would permanently impact wetlands and other WOTUS subject to regulation under Section 404 of the Clean Water Act (CWA) and requires a Department of the Army (DA) permit pursuant to Section 404. Perpetua's Compensatory Mitigation Plan describes mitigation to address the requirements of the USACE and EPA under the Compensatory Mitigation for Losses of Aquatic Resources under CWA Section 404 (Final Rule)" (SDEIS p 2-120).</p>

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			<p>to the Stibnite Gold Project, but which the Forest Service either determined would not be met or was unsure would be met. See id. This is never disclosed in the SDEIS.</p> <p>Appendix A to the SDEIS, titled “Payette National Forest and Boise National Forest Land and Resource Management Plans Consistency Review and Amendments”, is focused exclusively on the proposed amendments and merely glosses over these Forest Plan consistency issues in one and a half pages. SDEIS, App. A, pp. A-1 – A-2. There, the Forest Service acknowledges: “It is recognized that not all proposals would move towards or achieve desired conditions, goals, or objectives and there may be tradeoffs between moving towards or achieving these for one resource or another.” SDEIS, App. A, p. A-1. But the Forest Service provides no further information about which goals and objectives the Project will detract from and to what degree, and the Forest Service makes no similar acknowledgment for the many standards and guidelines the Project would violate or threatens to violate. Instead, the Forest Service states: “Additional information on the consideration of Forest Plan consistency, including guidelines, is contained in the Project Record.” SDEIS, p. A-2.</p> <p>This failure to disclose and consider important information about the Project and the many Forest Plan standards, guidelines, objectives, and goals it may be inconsistent with violates NEPA. Further, allowing the Stibnite Gold Project to proceed in violation of binding Forest Plan standards, and in violation of guidelines without offering an explanation, violates NFMA.</p> <p>Among many other important Forest Plan provisions that the Stibnite Gold Project might violate — and which are nowhere mentioned in the DEIS or SDEIS — are binding Forest Plan standards designed to protect riparian areas and streams. Recognizing the ecological complexity and importance of riparian zones, as well as their vulnerability to land management activities like mining, the Payette and Boise Forest Plans establishes “Riparian Conservation Areas” (RCAs), which extend 300 feet to either side of streams and 150 feet to either side of intermittent streams.</p> <p>Among other provisions to protect RCAs, the Payette and Boise Forest Plans have standards MIST08 and MIST09, which apply to mineral resource projects, like the Stibnite Gold Project. MIST08 prohibits locating new “structures,” “support facilities,” and “roads,” in RCAs unless “no alternative exists.” Even when there is no alternative, the Forest Service must “minimize degrading effects to RCAs and streams, and adverse effects to TEPC species” from any such RCA incursions. And road incursions into RCAs incursions must be kept to the “minimum necessary for the approved mineral activity.” MIST09 prohibits locating “solid and sanitary waste facilities” in RCAs unless “no alternative exists.” “[I]f no alternative to locating mine waste (waste rock, spent ore, tailings) facilities in RCAs exists,” then the Forest Service must take specifically listed steps to prevent, monitor, and mitigate potential impacts.</p> <p>The Wallowa-Whitman Forest Plan includes virtually similar standards to MIST08 and MIST09. In Hells Canyon Preservation Council v. Haines, a federal district court held that the Forest Service violated NFMA when it approved constructing mining roads and settling ponds within RCAs without first performing a thorough analysis of whether in fact there was no alternative to each incursion into RHCAs and without providing specific assurances that new road construction was limited to the minimum amount necessary.</p> <p>Similarly here, the Forest Service has failed to thoroughly analyze whether there are alternatives to each RCA incursion under the alternatives, and failed to provide specific assurances that any RCA incursions are being kept to the minimum necessary. While the SDEIS lists MIST08 in a table (SDEIS p. 2-99), it never fully states the standard and fails to explain whether, or how, the Stibnite Gold Project will satisfy the standard. The same is true for MIST09. SDEIS, p. 2-95. Yet Perpetua’s proposal would locate many roads, structures, and facilities in RCAs. The SDEIS fails to acknowledge or consider which of the alternatives being considered have the least RCA incursions, and fails to consider whether there are additional alternatives to each proposed RCA incursion. And for RCA incursions that truly cannot be avoided, the Forest Service has also failed to minimize degrading effects to RCAs and streams, and adverse effects to TEPC species. Additionally, for proposed mine waste facilities, the Forest Service has failed to show how it is taking the specific steps listed in MIST09 to prevent, monitor, and mitigate potential impacts.</p>		

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			<p>The Forest Service must address these Forest Plan inconsistencies and protect RCAs by carrying out required alternatives analyses, altering the Project, imposing additional monitoring and mitigation measures, and making all other necessary changes through a supplemental or revised SDEIS.</p> <p>Not only must the Forest Service ensure the Project complies with MIST08 and MITS09, but it must ensure the Project complies with other standards, guidelines, goals, and objectives in the Forest Plans. This includes provisions designed to protect: the environment from the harmful effects of mining (see Payette Forest Plan at pages III-48 - III-51); threatened, endangered, proposed, and candidate species (id. pp. III-8 - III-15); air quality (id. pp. III-16 - III-17); soil, water, riparian, and aquatic resources (id. pp. III-18 - 24); wildlife (id. pp. III-25 - III-28); vegetation, botanical resources, and non-native plants (id. pp. III-30 - III-37); and other public land values. But the SDEIS fails to disclose and consider these provisions, fails to state whether or explain how the Project will comply, and fails to provide information and analysis sufficient to take a hard look at these issues.</p> <p>The Forest Service cannot simply sweep these issues under the rug by claiming the proposed Forest Plan amendments somehow cover these dozens and dozens of inconsistencies with the Forest Plans. The Forest Service must actually consider the relevant Forest Plan provisions and must explain to the public whether and how the Stibnite Gold Project complies with them; and where it does not comply, must make changes to the Project, reject the Project, or amend the Forest Plan consistent with, among other laws and regulations, the substantive requirements of the 2012 Planning Rule.</p> <p>B. The proposed forest plan amendments are not consistent with the 2012 planning rule.</p> <p>1. The Forest Service failed to comply with the Organic Act and NFMA when it amended the Forest Plans.</p> <p>The SDEIS is also under the mistaken belief that the Forest Service must amend the Payette National Forest Plan in order to allow Stibnite’s proposed plans to be approved. The SDEIS states:</p> <p>It is recognized that not all proposals would move towards or achieve desired conditions, goals, or objectives and there may be tradeoffs between moving towards or achieving these for one resource or another.</p> <p>Most areas of the PNF and BNF are open to mineral activities, including the Stibnite Gold Project (SGP) area. The desired condition for mineral projects is that operating plans include appropriate mitigation measures and contain bonding requirements commensurate with the costs of anticipated site reclamation. Where practicable, sites are returned to a condition consistent with management emphasis and objectives. (Payette Forest Plan, p. III-48; Boise Forest Plan, p. III-50).</p> <p>Much of this rationale violates federal law by making achievement of the environmental requirements of the Forest Plan, NFMA, and the 1897 Organic Act subservient to Perpetua’s desired mining operations.</p> <p>First, NFMA and the Organic Act do not allow the Forest Service to “tradeoff” public land and environmental protection requirements with the Stibnite Gold Project’s desired economic returns. At the outset, it should be noted that under the Organic Act and NFMA, all Forest Plan standards, guidelines, and desired conditions must be met.¹⁰¹ One of the Organic Act’s guiding principles directs the agency to “improve and protect” the national forests. 16 U.S.C. § 475. It further requires the Secretary of Agriculture (through the Service) to “make provisions for the protection [of the lands] against destruction by fire and depredations.” 16 U.S.C. §551. The Service “will insure the objects of such [forest] reservations, namely, to regulate their occupancy and use and to preserve the forests thereon from destruction.” Id. “[P]ersons entering the national forests for the purpose of exploiting mineral resources ‘must comply with the rules and regulations covering such national forests.’ 16 U.S.C. § 478.” Instead of complying with these mandates, the Forest Service proposes to eliminate the forest protection requirements of the Forest Plan.¹⁰³ The agency’s belief that it must comply with the NFMA and Organic Act only “where practicable” violates these laws. SDEIS Appx. at A-1 (“Where practicable, sites are returned to a condition consistent with management emphasis and objectives.”).</p>		

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	41	<p>Second, the fact that the public lands on which Perpetua has filed its claims are “open” for claiming under the Mining Law does not override the agency’s NFMA and Organic Act requirements. As noted herein, this relies on the mistaken view that the agency’s authority over the project is limited to reviewing the mining plan under alleged “rights” under the Mining Law. The agency is not under any statutory obligation to amend the Forest Plan based on purported “rights” under the Mining Law that have not been shown to meet all the prerequisites for such “rights” under that Law. Third, the agency’s self-imposed restriction on its authority to comply with all Forest Plan requirements is unfounded: “a standard is a binding limitation placed on management actions. It must be within the authority and ability of the Forest Service to enforce.” SDEIS Appx. at A-1. This statement implies that the agency does not have “the authority and ability” to enforce standards, guidelines and desired conditions in the Forest Plan due to Perpetua’s purported “rights” under the Mining Law. As noted herein, however, the Forest Service has not made the necessary factual determinations to support such assertions of “rights.” For the Rosemont mine, “[t]his was a crucial error as it tainted the Forest Service’s evaluation of the Rosemont Mine from the start.” That court held that such use/occupancy, without verification that such rights under the Mining Law actually exist on those lands/claims, was not authorized by the Mining Law, and thus was not governed by the agency’s mining regulations.</p> <p>Even if the agency’s assumption of “rights” under the Mining Law was supported by the evidence on the ground (which as noted herein is not the case), the agency cannot amend the Forest Plan, or disregard its requirements, to allow mining operations to damage the fisheries, wildlife, and other resources under its Part 228A regulations and the Organic Act. Under the Organic Act and Part 228A regulations, the agency must “maintain and protect fisheries and wildlife which may be affected by the operations.” 36 C.F.R. §228.8(e) (emphasis supplied). These impacts also violate USFS’s duties to “minimize adverse environmental impacts on National Forest surface resources.” 36 C.F.R. §228.8. “The operator also has a separate regulatory obligation to ‘take all practicable measures to maintain and protect fisheries and wildlife habitat which may be affected by the operations.’ 36 C.F.R. §228.8(e).”¹⁰⁶ “Under the Organic Act the Forest Service must ...require [the project applicant] to take all practicable measures to maintain and protect fisheries and wildlife habitat.”¹⁰⁷ These duties are in addition to the agency’s/project’s failure to fully protect all uses, including Treaty-guaranteed uses and rights.</p> <p>Thus, the proposed Forest Plan amendments violate the Organic Act and the National Forest Management Act. This is also true because under the NFMA, the agency cannot amend a Forest Plan unless the amendment is supported by a legally-adequate EIS, which as shown herein, has not been done.</p>	FPA	<p>The 2012 rule provides that, “[t]he responsible official has the discretion to determine whether and how to amend the plan.” (36 CFR 219.13(a)). A project-level amendment is appropriate when the amendment(s) applies only to the project (36 CFR 36 CFR 219.13 (b)(1)).</p> <p>When a plan amendment is made together with, and only applies to, a project or activity decision, the analysis prepared for the project or activity may serve as the documentation for the preliminary identification of the need to change the plan (36 CFR 219.13 (b)(1)).</p> <p>Regulatory and Forest Plan requirements, design features, and mitigation measures were identified (SDEIS Section 2.4.9) and considered in the analysis.</p> <p>It is acknowledged that “construction of the SGP would permanently impact wetlands and other WOTUS subject to regulation under Section 404 of the Clean Water Act (CWA) and requires a Department of the Army (DA) permit pursuant to Section 404... (Perpetua’s Compensatory Mitigation Plan) describes mitigation to address the requirements of the USACE and EPA under the Compensatory Mitigation for Losses of Aquatic Resources under CWA Section 404 (Final Rule)”.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	42	<p>2. The proposed Forest Plan amendments violate NEPA and the 2012 Planning Rule.</p> <p>The reader is advised to use SDEIS Appendix A tables while reading this section, in order to guide them through the relevant sections, parts, and subparts of the Planning Rule.</p> <p>The SDEIS proposes four project-specific amendments to the BNF and PNF Forest Plans. See SDEIS Appx. A. As discussed above, the Forest Service has the authority to reject this project as inconsistent with the Forest Plan and the discretion to deny approval. But when the Forest Service decides to resolve that inconsistency by amending the Forest Plan, that amendment must be consistent with the substantive requirements of the 2012 Planning Rule, 36 C.F.R. Part 219, as amended.</p> <p>Consistency of any Forest Plan amendment with the substantive requirements of the Planning Rule is not subject to valid existing (mining) rights, but must be adhered to.</p> <p>The Planning Rule sets out substantive requirements for each forest plan and dictates various components that must be included in each plan, including standards, objectives, and guidelines in order to ensure that each forest plan supports ecological, social, and economic sustainability. 36 C.F.R. § 219.10. A forest plan standard “is a mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.” Id. § 219.7(e)(1)(iii). Forest plans, however, may be amended “at any time.” Id. § 219.13(a).</p>	FPA	<p>The responsible official must determine which substantive requirements within §§ 219.8 through 219.11 of the 2012 rule are directly related to the plan direction being added, modified or removed by the amendment, and apply those requirements to the amendment and must clearly document the rationale for the determination of which substantive requirements apply and how they were applied. The rationale for how the amendments are related to the applicable substantive requirements and rationale for each are identified for each proposed amendment in Table 1 (pp A-5 to A-11), Table 2 (pp A-15 to A-20), Table 3 (pp A-24 to A-28) and Table 4 (pp A-31 to A-36).</p> <p>The effects of the project-specific amendments are those of the SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS (SDEIS, Table 2.2-1).</p> <p>Project-level Section 7 Endangered Species Act consultation is ongoing. The Biological Opinion has not yet been issued by the USFWS.</p> <p>The Aquatic Conservation Strategy (ACS), which was developed in response to Section 7 consultation on the LRMP revisions, was incorporated into the Payette and Boise NF LRMPs (2003) and the Wildlife Conservation Strategy (WCS) was included as an amendment to the Boise LRMP (2010). Forest-wide and Management Area direction incorporated the ACS for the Boise and Payette LRMPs and the WCS for the Boise LRMPs. All LRMP standards and Guides for the Boise and Payette National Forests were checked for compliance. The LRMP</p>

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			<p>When a proposed project will be inconsistent with a forest plan the Forest Service may, subject to valid existing rights, resolve the inconsistency by: (1) modifying the project; (2) rejecting the project; (3) amending the forest plan so the project is consistent with the forest plan; or (4) making project-specific forest plan amendments in conjunction with approval of the project. Id. § 219.15(c). For each plan amendment, however, the Forest Service must “[d]etermine which specific substantive requirement(s) [of the 2012 Planning Rule] are directly related to the plan direction being added, modified, or removed by the amendment and apply such requirement(s) within the scope and scale of the amendment.”108 Id. § 219.13(b)(5) (emphasis added). In other words, all forest plan amendments, including project-specific amendments such as the ones at issue here, must be consistent with relevant substantive requirements of the 2012 Planning Rule. And unlike the Forest Service’s discretion to amend the Forest Plan, the directive to apply the substantive requirements of the Planning Rule to a proposed amendment is not subject to valid existing rights. Therefore, any plan amendment for any project must be consistent with the 2012 Planning Rule.</p> <p>In the SDEIS, beginning on page A-2, the document describes standards and guidelines and when amendments are needed. The SDEIS neglects to discuss the biological opinions (BOs) from NOAA and FWS on the Payette and Boise Forest Plans. Those BOs contain terms and conditions the Forest Service must follow. The BOs also discuss how they were determined, assuming the Forest Service would not only implement the standards, but also the guidelines. The SDEIS does not mention the BOs for the Forest Plans.</p> <p>a. Project Specific Amendments are not appropriate for this effort.</p> <p>The amendments proposed are for the life of this project only. That timeframe is identified as a minimum of 20 years, not including indefinite water treatment, monitoring, exploration, and maintenance of mitigations. The SDEIS (Appendix A) states “impacts to aquatic, terrestrial, and watershed resource conditions would be expected to occur for the length of the proposed SGP.” This statement is in direct conflict with the disclosed effects in the SDEIS, which state that the detrimental and significant environmental effects of this project will persist well beyond the stated 20 years. The next section highlights some of the effects which the SDEIS documents in Chapter 4:</p> <ol style="list-style-type: none"> 1. Elevated water temperatures are modeled to last over 100 years which will directly and adversely affect three ESA- listed fish species. The SDEIS– neither in Appendix A’s rationale for the proposed Forest Plan amendments nor in Chapter 4–does not analyze the immediate and long-lasting effects on the populations of these fishes and how that will impact perpetuation of those populations. Nor does it discuss how the Forest Plans’ Aquatic Conservation Strategy (resultant from the Forest Plan Biological Opinions) will be addressed, altered and impacted. 2. The Burntlog Route will have long term effects on wolverine, whitebark pine, Visual Quality Objectives (VQOs), Roadless Character and Wilderness. The SGP does not include removing the road prism from the landscape post project. Wolverines are proposed for listing as Threatened and discussed in the Boise LRMP Wildlife Conservation Strategy (WCS). A population of whitebark pine, recently listed under the ESA as threatened, will be destroyed with construction of the road. The VQO’s will be forever altered, as will the roadless and wilderness character. 3. The SGP will change the Forest Plan’s desired conditions for the mining area and beyond, for generations. Nowhere in the SDEIS is there a discussion regarding this change. 4. The Forest Service ignores the needs for change identified in the 2003 Forest Plans.111 The SDEIS does not address the effects of ignoring the “need for change” Topic 6, identified in the 2003 Forest Plans, on page II-23, which led to the Aquatic Conservation Strategy. The SDEIS is silent on this topic and how or when it plans to return to the Aquatic Conservation Strategy post mining activities (which may be in perpetuity) at Stibnite. There is no disclosure of the effects of non-implementation of the Aquatic Conservation Strategy. <p>The proposed Amendment 1 waives all timing requirements for effects that degrade forest resource conditions caused by the Stibnite Gold Project because “[d]ue to the nature of proposed SGP activities,</p>		<p>consistency spreadsheet (2019_0718_MG_REVIEW_SGP_DRAFT_FSPlanConsistency_Final) is included in the Project record and briefly describes if the project applies to, complies, or does not comply with each plan component.</p> <p>Five plan components from the Payette NF LRMP and nine plan components for the Boise NF LRMP were determined to require project-level amendments for the SDEIS. Those plan components and the proposed project level amendments are discussed in Appendix A of the EIS.</p> <p>The responsible official has the discretion to determine whether and how to amend the plan and to determine the scope and scale of any amendment. (36 CFR 219.13 (a)).</p>

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			<p>impacts to aquatic, terrestrial, and watershed resource conditions would be expected to occur for the length of the proposed SGP. SDEIS Appx. at A-3; see also A-5 to A-11. Point blank, proposed Amendment 1 is the Forest Service's concession that the project will not avoid resource degradation in the "temporary time period (up to 3 years)" and is not "designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years)." SDEIS Appx. A-3. Even assuming that the project will last for 20 years, as discussed throughout this letter and below, the effects as analyzed in the SDEIS will last much longer. This makes the SDEIS's assertion that "[t]he proposed plan amendment maintains the intent of the original plan standard" a dubious proposition.</p> <p>The Forest Service is proposing project specific amendments because amendments that change the Forest Plan beyond this project would require completion of an Ecological Sustainability Analysis. See 36 C.F.R. § 219.8 (requiring any Forest Plan revision to "provide for social, economic, and ecological sustainability within Forest Service authority" and maintain consistency with "the inherent capability of the plan area"). Yet, the SGP will adversely change the conditions of the landscape for at least 100 years. Even if a definite project completion date existed for the SGP—that is, proposed Amendment 1 had an actual sunset date—the proposed "revision" to the Forest Plan creates conditions that will continue to degrade forest resources for time frames that extend well beyond the SGP's proposed project-specific amendment. This contravenes the Planning Rule's substantive requirement to include plan components, including standards and guidelines, that "maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity" of those ecosystems. 36 C.F.R. § 219.8(a)(1).</p> <p>For example, regarding aquatic species, the SGP must meet the Forest Plans' Aquatic Conservation Strategy, which is to maintain or improve the conditions for those species. However, it is unclear how Amendment 1 could ever comport with the Aquatic Conservation Strategy given that the SGP's effects on these resources will last for at least 100 years. Moreover, for the Boise NF, the SGP must meet the Wildlife Conservation Strategy for wolverines—which it fails to do because of the proposed Burntlog Route. As stated above, even if Perpetua purports to have mining "rights," the Forest Service cannot merely cast aside the Planning Rule's substantive requirements, which appears to be the purpose and effect of proposed Amendment 1. Because proposed Amendment 1 is a Forest Plan revision that permits resource degradation far exceeding the lifetime of the proposed project that it is intended to address, it violates the substantive requirements in 36 C.F.R. § 219.8 of the Planning Rule.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	43	<p>b. The SDEIS failed to analyze the impacts of the proposed Forest Plan amendments, in violation of the Planning Rule and NEPA.</p> <p>Under the Planning Rule, any amendment requires disclosure of the effects the amendment is going to generate. 36 C.F.R. § 219. Although the Planning Rule, as amended, allows the Forest Service to analyze and disclose the effects of a proposed project-specific amendment in the same NEPA document it prepares for the project itself, this was not done. There are no details given in the SDEIS anywhere of the nature (it should be included in the description of the alternatives) or effects of any of the four proposed amendments. This alone is a violation of NFMA and NEPA.</p> <p>c. The Forest Service failed to identify "species of conservation concern" as required under the 2012 Planning Rule for the proposed amendments.</p>	FPA	<p>The effects of the project-specific amendments are those of the SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS (SDEIS, Table 2.2-1). Effects of the SGP on various resources are disclosed in Chapter 4 of the SDEIS.</p> <p>36 CFR 219.13(b)(6) states "For an amendment to a plan developed or revised under a prior planning regulation, if species of conservation concern (SCC) have not been identified for the plan area and if scoping or NEPA effects analysis for the proposed amendment reveals substantial adverse impacts to a specific species, or if the proposed amendment would substantially lessen protections for a specific species, the responsible official must determine whether such species is a potential SCC, and if so, apply section § 219.9(b) with respect to that species as if it were an SCC".</p> <p>Although impacts would occur to plant, fish and wildlife species, neither substantial adverse impacts or lessened protections for a specific species would occur (SDEIS Sections 4.10, 4.12, and 4.13).</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	45	<p>C. Proposed Amendment 1: General Management Actions</p> <p>The SDEIS proposes a sweeping Forest Plan amendment that would eviscerate a majority of the BNF and PNF Forest Plan standards and guidelines and violate the substantive standards in the 2012 Planning Rule in order to approve the Stibnite Gold Project. These standards and guidelines are critical to Appendix B of the Forest Plans, which move aquatic, watershed, and terrestrial conditions toward desired conditions. Effects of waiving this standard are not adequately analyzed in the SDEIS, therefore</p>	FPA	<p>The responsible official must "determine which specific substantive requirement(s) within §§ 219.8 through 219.11 are directly related to the plan direction being added, modified, or removed by the amendment and apply such requirement(s) within the scope and scale of the amendment". §§ 219.13(b)(5).</p> <p>The effects of an amendment can be beneficial or adverse. If scoping or NEPA effects analysis for the amendment reveals substantial adverse effects, the responsible official must</p>

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			the amendment does not meet the intent of the original plan standard. The SDEIS proposes to amend both the Payette and Boise Forest Plans in certain management areas to allow the Stibnite Gold Project to “degrade aquatic, terrestrial, and watershed resource conditions” through the duration of project implementation (including construction, operations, closure, reclamation, exploration; and various post-reclamation actions, like water treatment potentially in perpetuity, stream channel maintenance, more exploration, and monitoring). This would be a change from the current Forest Plan standards that only allow projects or actions to degrade these resources “in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).” As discussed further below, this proposed amendment is problematic on several fronts.		identify and apply the specific substantive requirement(s) within §§ 219.8 through 219.11 associated with those effects. Paragraph (b)(5)(ii)(A) also clarifies that if the proposed amendment would substantially lessen protections for a specific resource or use, the responsible official must identify and apply the associated specific substantive requirement(s). (FR 81, 241 p 90731). The rationale for how the amendments met the applicable substantive requirements and rationale for each are identified for proposed amendment 1 in Table 1 of Appendix A in the EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	46	<p>The life of the Stibnite Gold Project may continue for an indefinite period, or in perpetuity. Therefore, indefinite and “in-perpetuity” timeframes for these actions should be included in the timeframes for the proposed amendment. Resource degradation for indefinite timeframes and for a larger impact area could result in a “significant environmental effect” and needs a more extensive Forest Plan amendment process. See 36 C.F.R. § 219.13b(3). With the existing low populations of Chinook salmon and steelhead, the times that degradation would be allowed — even if only for the lifetime of construction, operations, and closure — could destroy several generations of this fish species.</p> <p>The SDEIS, Chapter 4, describes project actions that degrade aquatic and terrestrial conditions indefinitely and in perpetuity. Examples for ESA-listed Chinook salmon include less optimal habitat, mortality, injury, and temporary and permanent displacement. Examples for ESA-listed steelhead include mortality, injury, temporary or permanent displacement, temporal loss of habitat, and decrease in net productivity for decades. Examples for ESA-listed bull trout include injury or mortality to individuals, permanent displacement from the analysis area, net decrease in quantity and quality of habitat, net loss of thermally suitable habitat, and a net loss of critical habitat. Exceedances of water quality standards are anticipated to extend indefinitely post-closure (SDEIS Table 2.8-1).</p> <p>The No Action alternative moves toward desired conditions described in the Forest Plans. The rationale for the amendment (SDEIS Appendix A), states that Action Alternatives would depart from desired conditions, and then theoretically move back toward them. The analysis in SDEIS Chapter 4 does not demonstrate how aquatic, terrestrial, and watershed conditions resulting from Action Alternatives, would depart from desired conditions, and then move toward them. Neither does it describe how conditions resulting from the No Action Alternative will move toward and achieve those desired conditions. And neither does it compare conditions between the Action and No Action alternatives, as required by NEPA. Therefore, the effects of waiving the timeframes for allowable degradation of conditions cannot be compared to the No Action alternative, which moves toward desired conditions (Forest Service 2003, 2010a). Engineered stream channels need maintenance over time to generate and support aquatic habitat suitable for the four special status salmonids; these actions are not described in the SDEIS, but will need to occur in perpetuity.</p> <p>Indefinite or “forever” amendments to the Forest Plan should not be done through project-specific amendments because they establish a particular trajectory for resource conditions that once implemented forever move away from desired conditions—that is, they fail to provide for “sustainability.” See 36 C.F.R. 219.8 (requiring “ecological sustainability”) (emphasis added). Additionally, indefinite or “forever” project specific amendments violate the NFMA, which requires that Forest Plans be “maintain[ed]” and “revise[d]” “us[ing] a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences.”</p>	FPA	<p>The effects of the project-specific amendments are those of SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS (SDEIS, Table 2.2-1). Effects of the SGP on various resources are disclosed in Chapter 4 of the SDEIS.</p> <p>The responsible official must “determine which specific substantive requirement(s) within §§ 219.8 through 219.11 are directly related to the plan direction being added, modified, or removed by the amendment and apply such requirement(s) within the scope and scale of the amendment”. §§ 219.13(b)(5).</p> <p>The effects of an amendment can be beneficial or adverse. If scoping or NEPA effects analysis for the amendment reveals substantial adverse effects, the responsible official must identify and apply the specific substantive requirement(s) within §§ 219.8 through 219.11 associated with those effects. Paragraph (b)(5)(ii)(A) also clarifies that if the proposed amendment would substantially lessen protections for a specific resource or use, the responsible official must identify and apply the associated specific substantive requirement(s). (FR 81, 241 p 90731).</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	47	<p>2. The scale of impacts of proposed Amendment 1 exceeds the rationale for a project-specific amendment.</p> <p>The Stibnite Gold Project will affect aquatic and watershed resources beyond the management areas proposed for Amendment 1. Anticipated impacts cannot reasonably be limited to those management areas proposed for this amendment.</p>	FPA	<p>The effects of the project-specific amendments are those of the SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS (SDEIS, Table 2.2-1). Effects of the SGP on various resources are disclosed in Chapter 4 of the SDEIS.</p> <p>The analysis area for fish and aquatic habitat “includes the area where effects (direct/indirect and cumulative) may be caused by the proposed activities (FSH.1909.15, 15.2a). Alternative components include the mine site, all associated mine support infrastructure, all access and haul roads (proposed and existing), all utility infrastructure (proposed and upgraded), and off-</p>

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			<p>The SDEIS describes the analysis area as the entire East Fork South Fork Salmon River, and upper South Fork Salmon River watershed. SDEIS at 3.12.2 (Figure 3.12-1). “The analysis area encompasses all areas in which fish resources and fish habitat may be affected directly or indirectly by the Stibnite Gold Project, and not merely the immediate area involved.” SDEIS at 3.12.2. The surface water quality analysis area is also described to include streams and lakes located in the 22 sub-watersheds and MAs that encompass the proposed mine site, access roads, transmission lines, and on-site facilities within the East Fork and South Fork Salmon River watersheds. SDEIS at 3.9.2. Yet Chapter 4 only analyzes effects to fisheries or water quality at the mine site area; it fails to analyze consequences of the project to fisheries and surface water quality in the larger analysis area downstream and outside of the local mine site. For example, impacts to waters downstream of the Yellow Pine Pit Lake -- which may be the most impacted waters--are not evaluated. Such impacts that could occur well-beyond the local mine site include, but are not limited to, increased temperatures, increased risk of spills, increased impacts from roads, and increased metals concentrations.</p> <p>Clearly, the geographic scale of the impacts does not match, and well exceeds, that of the management areas identified and affected by the proposed amendment. By failing to include impacts beyond the mine site, the geographic scope of the proposed amendment was unreasonably narrow. The true impacts of this proposed amendment were neither considered nor disclosed to the public.</p>		site facilities” (SDEIS p 4-325). Effects of the SGP on fish and fish habitat were analyzed in the SDEIS (Section 4.12).
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	48	<p>3. Proposed mitigations do not sufficiently minimize impacts to avoid degradation allowed by proposed Amendment 1.</p> <p>The lists of design features and mitigations (U.S. Army Corps of Engineers NWW-2013-0321, 2021, Draft Conceptual Stream and Wetland Mitigation Plan; TetraTech 2021, Draft Wildlife Habitat Mitigation Plan; Brown and Caldwell 2021, Final Fisheries and Aquatic Resources Mitigation Plan) are intended to reduce impacts to various resources. The tables in SDEIS Appendix A justify the compliance of the amendment with the 2012 planning rule requirement with general statements such as: “The mitigations and reclamation actions developed for each resource are created to maintain and restore ecosystem integrity;” and “The mitigations and reclamation actions are developed to minimize impacts to fish and wildlife and maintain and/or restore terrestrial and aquatic habitat.” They are merely lists, with no rationale or interpretation or analysis. SDEIS Chapter 4.11-4.12 clearly describes multiple aquatic and watershed degradations, yet omits any analysis of specific mitigations.</p> <p>Mitigation methods proposed are not sufficient to reliably reverse impacts, much less improve existing, impaired habitat during or after additional mining occurs. The SDEIS needs to include analysis of the specific mitigations that allegedly “correct” specific aquatic and watershed degradation.</p>	FPA	<p>Regulatory and Forest Plan requirements, design features, and mitigation measures were identified (SDEIS Section 2.4.9) and considered in the analysis (SDEIS Chap. 4).</p> <p>It is acknowledged that “construction of the SGP would permanently impact wetlands and other WOTUS subject to regulation under Section 404 of the Clean Water Act (CWA) and requires a Department of the Army (DA) permit pursuant to Section 404. Perpetua’s Compensatory Mitigation Plan describes mitigation to address the requirements of the USACE and EPA under the Compensatory Mitigation for Losses of Aquatic Resources under CWA Section 404 (Final Rule).”</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	49	<p>4. Proposed Amendment 1 is not based on best available science.</p> <p>The Planning Rule requires that the Forest Service’s proposed amendment be “informed by the best available scientific information, scoping, effects analysis, monitoring data or other rationale.” 36 C.F.R. § 219.13(5)(I). The Forest Service’s amendment was not based on best available science. Its fisheries and water quality analyses were flawed as described above. The Forest Service failed to act in accordance with this section of the Planning Rule.</p>	FPA	<p>The decision document approving a plan amendment must document how the best available science was used (36 CFR 219.14(a)(3)).</p> <p>The ROD will be informed by the Final EIS (40 CFR 1505.2(b)).</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	50	<p>5. Proposed Amendment 1 is not consistent with the substantive requirements of the Planning Rule.</p> <p>As established above, Forest Plan amendments must be consistent with the substantive requirements of the Planning Rule. Here, proposed Amendment 1 is not. The SDEIS repeatedly, for almost every requirement, states that the proposed plan amendment maintains the intent of the original plan standard, while allowing for the implementation of the proposed Stibnite Gold Project (SDEIS Appx. A). However, it has failed to demonstrate how proposed Amendment 1, which would allow degradation of aquatic, terrestrial, and watershed condition resources indefinitely into the future or in perpetuity, is consistent with the Planning Rule’s substantive requirements for:</p> <ul style="list-style-type: none"> ● Sustainability of ecosystem integrity; ● Sustainability of air, soil, and water; 	FPA	<p>The responsible official must “determine which specific substantive requirement(s) within §§ 219.8 through 219.11 are directly related to the plan direction being added, modified, or removed by the amendment and apply such requirement(s) within the scope and scale of the amendment”. §§ 219.13(b)(5).</p> <p>The effects of an amendment can be beneficial or adverse. If scoping or NEPA effects analysis for the amendment reveals substantial adverse effects, the responsible official must identify and apply the specific substantive requirement(s) within §§ 219.8 through 219.11 associated with those effects. Paragraph (b)(5)(ii)(A) also clarifies that if the proposed amendment would substantially lessen protections for a specific resource or use, the</p>

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			<ul style="list-style-type: none"> ● Diversity of plant and animal communities; ● Ecosystem diversity; ● Species-specific plan components for recovery of listed or proposed species; and ● Integrative resource management. <p>a. Proposed Amendment 1, substantive requirements: Sustainability of ecosystem integrity</p> <p>First, the proposed amendment does not meet the requirement to maintain or restore ecosystem integrity. 36 C.F.R. § 219.8(a)(1). The SDEIS claims that the amendment meets this requirement (SDEIS Appx. A at A-5). However, the simple statements there do not demonstrate that the amendment is consistent with the ecosystem integrity component for several reasons.</p> <p>The SDEIS does not document maintenance and restoration of integrity of the aquatic ecosystem, but instead documents exceedances in water quality and blocked fish habitat (SDEIS Chapter 4). The aquatic ecosystem would experience adverse impacts to surface water quality during operations and the post closure/reclamation period, and exceedance of water quality standards would continue after operations into the post closure/reclamation period (Maest 2022).</p> <p>The SDEIS describes project actions which severely degrade aquatic and terrestrial conditions indefinitely and in perpetuity. Examples for ESA-listed Chinook salmon include less optimal habitat, mortality, injury, and temporary and permanent displacement. Major examples for ESA-listed steelhead include mortality, injury, temporary or permanent displacement, temporal loss of habitat, and decrease in net productivity for decades. Major examples for ESA-listed bull trout include injury or mortality to individuals, permanent displacement from the analysis area, net decrease in quantity and quality of habitat, net loss of thermally suitable habitat, and a net loss of critical habitat. Exceedances of water quality standards are anticipated to extend indefinitely post-closure (SDEIS Table 2.8-1).</p> <p>The analysis in the SDEIS does not support that “[t]he mitigations and reclamation actions developed for each resource are created to maintain and restore ecosystem integrity” SDEIS Appx. A. The terms “ecological integrity,” “ecological sustainability,” “ecosystem integrity,” and “ecosystem diversity” do not even appear anywhere in the body of the SDEIS in Chapter 4. Restoring ecosystem integrity during operations and after closure is not only not described, but impossible to assure.</p> <p>Our expert review of the SDEIS demonstrates the absolute inadequacy of the analyses of the potential impacts to fisheries and water quality, and the clear inconsistency with meeting the Planning Rules substantive requirements (These aspects are similarly ignored, and impacts similarly inevitable, in the SDEIS):</p> <p>O’Neal 2020, Gregory 2022: “While some important aspects of habitat complexity and connectivity were characterized in baseline assessments referenced in the document (e.g., channel and riparian habitat, existing large woody debris, zones of groundwater and surface water exchange, etc.), they are ignored in the DEIS predictions of impacts. Degradation of those habitats from decreased flows, road crossings, increased sediment loads, spills, and other activities associated with mine development will inevitably impact salmonid populations.”</p>		<p>responsible official must identify and apply the associated specific substantive requirement(s). (FR 81, 241 p 90731).</p> <p>The rationale for how the amendments met the applicable substantive requirements and rationale for each are identified for proposed amendment 1 in Table 1 of Appendix A of the EIS.</p> <p>Effects of the SGP on fish and fish habitat were analyzed in the SDEIS (Section 4.12).</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	51	<p>b. Proposed Amendment 1, substantive requirements: Sustainability of air, soil, and water</p> <p>Second, the proposed amendment does not meet the requirement for ecological sustainability for air, soil, and water. 36 C.F.R. § 219.8(a)(2). The SDEIS does not claim that this amendment is consistent with the substantive requirement of the Planning Rule, but that it “retains the plan components to maintain or restore these resources” (SDEIS Appx. A).</p> <p>The SDEIS does not demonstrate that the plan amendment meets this requirement. First, as discussed above, there are long-term predicted impacts to water quality during operations and post-closure. In addition, “groundwater flows are poorly predicted, their role in salmonid survival and resulting impacts is unaddressed, and impacts to water quantity and quality are vastly underestimated in the DEIS,” and “ground and surface water flows are poorly characterized and treatment is neither sufficiently described nor tested for effectiveness (O’Neal 2020, Gregory 2022).” These aspects are similarly underestimated</p>	FPA	<p>The responsible official must “determine which specific substantive requirement(s) within §§ 219.8 through 219.11 are directly related to the plan direction being added, modified, or removed by the amendment and apply such requirement(s) within the scope and scale of the amendment”. §§ 219.13(b)(5).</p> <p>The effects of an amendment can be beneficial or adverse. If scoping or NEPA effects analysis for the amendment reveals substantial adverse effects, the responsible official must identify and apply the specific substantive requirement(s) within §§ 219.8 through 219.11 associated with those effects. Paragraph (b)(5)(ii)(A) also clarifies that if the proposed amendment would substantially lessen protections for a specific resource or use, the responsible official must identify and apply the associated specific substantive requirement(s). (FR 81, 241 p 90731).</p>

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			and insufficiently described in the SDEIS. An amendment that would allow these predicted adverse impacts to water quality is not consistent with the requirement to “maintain or restore” water quality or water resources in the area.		The rationale for how the amendments met the applicable substantive requirements and rationale for each are identified for proposed amendment 1 in Table 1 of Appendix A of the EIS. Effects of the SGP and water treatment on water quality along were analyzed in SDEIS Section 4.9.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	52	<p>c. Proposed Amendment 1, substantive requirements: Diversity of plant and animal communities</p> <p>Third, proposed Amendment 1 does not meet the ecosystem integrity component under the diversity of plant and animal communities requirement. 36 C.F.R. § 219.9(a)(1).</p> <p>The SDEIS rationalizes that it meets this requirement. However, there is no reference provided in Appx. A regarding ecological integrity or maintenance and restoration of plant and animal community diversity. Instead, references provided there document impacts long term and into the future.</p> <p>Physical impacts to plants and animals and their habitats from mining are underestimated in the SDEIS. While some important aspects of habitat complexity and connectivity were characterized in baseline assessments referenced in the document (e.g., off channel and riparian habitat, existing large woody debris, zones of groundwater and surface water exchange, etc.), they are ignored in the SDEIS predictions of impacts. Degradation of those habitats from decreased flows, road crossings, increased sediment loads, spills, and other activities associated with mine development will inevitably impact salmonid populations.</p> <p>The SDEIS also assumes no interactions among impacts, which are a key component of ecological integrity. By considering fish species, stream reaches, and limited habitat impacts (e.g., stream dewatering, temperature increases, metals concentration increases, road impacts) all separately, the SDEIS fails to acknowledge the broad ecological understanding that multiple stressors will amplify one another’s effects on the ecosystem. This leads to a serious underestimate of impacts to fish and their habitat. This amendment is therefore inconsistent with the Planning Rule.</p>	FPA	The effects of the project-specific amendments are those of the SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS (SDEIS, Table 2.2-1). Effects of the SGP on vegetation (Section 4.10), fish and fish habitat (Section 4.12), and wildlife and wildlife habitat (Section 4.13) were analyzed in the SDEIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	53	<p>d. Proposed Amendment 1, substantive requirements: Ecosystem diversity</p> <p>Fourth, the proposed amendment fails to be in accordance with substantive provisions on ecosystem diversity: 36 C.F.R. § 219.9(a)(2). Plan components are intended to maintain or restore key characteristics. The SDEIS describes degradation of those key characteristics. For example, temperature is a key characteristic of the life history of salmon and trout, which are rare aquatic animal communities with three species listed under the ESA. According to the SDEIS (pgs. ES-11, ES-18, 4-280, 4-336), some streams would have potential water temperatures that are lethal to salmonids during the summer for up to 100 years or more, when vegetation growth may or may not attain stream shading to reduce temperatures. Diversity of ecosystems relies on terrestrial and aquatic food webs. Mountain whitefish (<i>Prosopium williamsoni</i>), suckers (<i>Catostomus</i> sp.), anadromous Pacific lamprey (<i>Entosphenus tridentatus</i>) and other important fish, freshwater insects, algae, and other primary producers are all critical elements of the foodwebs supporting salmonids considered in the EIS. But here, by “[i]gnoring impacts to salmonid foodwebs” the DEIS “ignor[ed] impacts to salmonids at large.” Impacts were ignored similarly in the SDEIS. The SDEIS, therefore, has not demonstrated that it meets the requirements for ecosystem diversity.</p>	FPA	The effects of the project-specific amendments are those of the SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS (SDEIS, Table 2.2-1). Direct, indirect, and cumulative effects of the SGP on fish and fish habitat (Sections 4.12 and 5.12) were analyzed in the SDEIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	54	<p>e. Proposed Amendment 1, substantive requirements: Species-specific plan components for the recovery of listed or proposed species</p> <p>Fifth, there are additional species-specific plan components that are problematic with respect to proposed Amendment 1. See 36 C.F.R. § 219.9. The SDEIS does not demonstrate that the proposed amendment meets this requirement. The SDEIS (Appendix A A-7) states:</p> <p>The mitigations and reclamation actions are developed to minimize impacts to fish and wildlife and maintain and/or restore terrestrial and aquatic habitat. There would be impacts to individual Endangered</p>	FPA	<p>Project-level Section 7 Endangered Species Act consultation is ongoing. No Biological Opinion has yet been issued by the US Fish and Wildlife Service.</p> <p>When a plan amendment is made together with, and only applies to, a project or activity decision, the analysis prepared for the project or activity may serve as the documentation for the preliminary identification of the need to change the plan (36 CFR 219.13 (b)(1)).</p> <p>Regulatory and Forest Plan requirements, design features, and mitigation measures were identified (SDEIS Section 2.4.9).</p>

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			<p>Species Act (ESA)-listed wildlife and fish species and habitat, but the implementation of the Stibnite Gold Project would not result in jeopardy (pending Section 7 consultation).</p> <p>However, there is no documentation in the SDEIS of a “responsible official’s determination that the required plan amendment components are sufficient to provide the ecological conditions necessary to contribute to the recovery of federally listed or proposed species (and viable SCC)”. As preliminarily determined, the project will degrade conditions for ESA-listed bull trout, Chinook salmon, steelhead, and their critical habitats; and may indirectly impact westslope cutthroat trout (SDEIS at 4.12.2). In short, the Stibnite Gold Project management actions, together with proposed Amendment 1, are predicted to adversely affect listed fish species and their habitats.</p> <p>According to the SDEIS, the project will decrease or provide “less optimal” critical habitat overall for Chinook salmon and bull trout, increase some stream temperatures to lethal levels for salmonids in perpetuity, and result in exceedances of National Marine Fisheries’ and U.S. Fish & Wildlife Service’s and other criteria for antimony, arsenic, copper, and mercury during operations and indefinitely post-closure. An amendment to this standard needs to include effects analysis and demonstration of compliance with substantive requirements of the planning regulations.</p> <p>Though the implementation of the Stibnite Gold Project may not result in jeopardy (pending Section 7 consultation), significant adverse effects to ecological conditions and species are documented throughout Chapter 4 in the SDEIS, demonstrating that the project is inconsistent with NFMA.</p> <p>f. Proposed Amendment 1, substantive requirements: Integrative resource management</p> <p>Finally, the proposed amendment is not in accordance with the substantive requirement for integrated resource management for multiple use.</p> <p>The SDEIS (Appendix A) states that the amendment meets this requirement; and that: the lists of design features and mitigations (US Army Corps of Engineers NWW-2013-0321, 2021, Draft Conceptual Stream and Wetland Mitigation Plan; TetraTech 2021, Draft Wildlife Habitat Mitigation Plan; Brown and Caldwell 2021, Final Fisheries and Aquatic Resources Mitigation Plan) are intended to reduce impacts to various resources. The tables in SDEIS Appendix A justify the compliance of the amendment with the 2012 planning rule requirement with general statements such as: “The mitigations and reclamation actions developed for each resource are created to maintain and restore ecosystem integrity;” and “The mitigations and reclamation actions are developed to minimize impacts to fish and wildlife and maintain and/or restore terrestrial and aquatic habitat.” They are merely lists, with no rationale or interpretation or analysis. SDEIS Chapter 4.11-4.12 clearly describes multiple permanent and long-term aquatic and watershed degradations, yet omits any analysis of specific mitigations. The SDEIS needs to include analysis of the specific mitigations that allegedly “correct ” specific aquatic and watershed degradation.</p> <p>According to O’Neal (2020) and Gregory (2022):</p> <p>While the proposed alternatives describe some remediation of historic impacts, mine cleanup efforts (mitigation) simply cannot restore habitat to pre-mining conditions and cannot outweigh impacts from currently proposed mining. The (S)DEIS assumes that mitigation and restoration efforts are possible and effective. The (S)DEIS assumes that mitigation for historic mining efforts will offset impacts from proposed mining efforts. Experience has shown that habitat restoration and mitigation are difficult, and often ineffective” (O’Neal 2020).</p> <p>Moreover, effects of climate change are not predicted to enable the terrestrial and aquatic ecosystems on the plan area to adapt to change. “Temperature increases ignore climate change, are otherwise underestimated and their impacts are unreasonably minimized. In addition to other shortcomings of the model used to predict project related temperature changes, it fails to incorporate temperature increases due to climate change. Climate change is already impacting bull trout and cutthroat trout habitat and those impacts will only be compounded by project related temperature increases. Moreover, even impacts of predicted temperature changes (up to about 7° C) are minimized despite the pivotal role of</p>		<p>The effects of the project-specific amendments are those of the SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS (SDEIS, Table 2.2-1). Direct, indirect, and cumulative effects of the SGP on fish and fish habitat (Section 4.12 and 5.12) were analyzed in the SDEIS.</p>

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			<p>temperature in determining spawn and emergence timing, incubation rates, and salmonid growth and subsequent survival.</p> <p>In conclusion, the SDEIS has failed to demonstrate how proposed Amendment 1, which would allow degradation of aquatic, terrestrial, and watershed condition resources indefinitely and possibly into perpetuity, is consistent with the Planning Rule’s substantive requirements. This proposed amendment would thus violate NFMA. The fact that a full analysis of the proposed amendment’s impacts are not disclosed in the SDEIS render this SDEIS in violation of NEPA.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	55	<p>D. Amendments 2 and 3: Total Soil Resource Commitment and Visual Quality Objectives The SDEIS proposes to amend both the Payette and Boise Forest Plans by waiving several Forest Plan standards relating to total soil resource commitment and visual quality objectives. See SDEIS Appx. A at A-12, A-21. It is clear from the SDEIS impact analysis that the degradation of soils and visual quality will be permanent features of the landscape, even after closure and reclamation. Furthermore, as described above, the “lists” of mitigation measures are just that — lists without any substance, detail, or analysis of how the proposed amendments will be consistent with the identified Planning Rule requirements.</p> <p>These proposed amendments meet neither the requirements of NFMA nor NEPA.</p>	FPA	<p>The effects of the project-specific amendments are those of the SGP. Direct, indirect, and cumulative effects of the SGP on soil (Section 4.5 and 5.5), specifically TSRC (Sections 4.5.2.2 and 4.5.2.3) and visual resources (Section 4.20 and 5.20) were analyzed in the SDEIS.</p> <p>The responsible official must determine which substantive requirements within §§ 219.8 through 219.11 of the 2012 rule are directly related to the plan direction being added, modified or removed by the amendment, and apply those requirements to the amendment and must clearly document the rationale for the determination of which substantive requirements apply and how they were applied. The rationale for how the amendments are related to the applicable substantive requirements and rationale for each are identified for these proposed amendments in Table 2 and Table 3 of Appendix A of the EIS.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	56	<p>E. Amendment 4: Fish Passage Diversion Proposed Amendment 4, which would waive the requirement that new surface diversions provide upstream and downstream fish passage, fares no better under a similar analysis of the consistency of the proposed amendment with the Planning Rule requirements. It appears that the intent of this amendment is to remove the Forest Plan standard. The SDEIS should clarify this issue when it provides the required analysis of the impacts of this proposed amendment. It does not. Proposed Amendment 4 is not consistent with the Planning Rule’s substantive requirements.</p>	FPA	<p>The responsible official must determine which substantive requirements within §§ 219.8 through 219.11 of the 2012 rule are directly related to the plan direction being added, modified or removed by the amendment, and apply those requirements to the amendment and must clearly document the rationale for the determination of which substantive requirements apply and how they were applied. The rationale for how the amendment is related to the applicable substantive requirements and rationale for each are identified for this proposed amendment in Table 4 of Appendix A of the EIS.</p> <p>The effects of the project-specific amendments are those of the SGP. Direct, indirect, and cumulative effects of the SGP on fish and fish habitat (Section 4.12 and 5.12) were analyzed in the SDEIS.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	57	<p>1. Proposed Amendment 4, substantive requirements: Ecosystem integrity</p> <p>As discussed above for the proposed Amendment 1, proposed Amendment 4 also does not meet the requirements for ecosystem integrity found in 36 C.F.R. § 219.8(a)(1), and § 219.9(a)(1).</p> <p>To justify this amendment to the Forest Plan, the SDEIS states:</p> <p>“...the Meadow Creek diversion that would not allow for fish passage would be in place for 10 to 17 years. After that time, habitat for listed fish species in upper Meadow would be permanently blocked due to the TSF/TSF buttress, while other habitat would be made available by the removal of fish-passage barriers (Sections 4.12.2.2). The SGP design features and mitigations developed for fish habitat are developed to maintain and restore ecosystem integrity and the intent of compensatory mitigation would be to offset impacts that cannot be avoided or minimized (e.g. blocked fish access to upper Meadow Creek) (SDEIS Section 2.4.9). (SDEIS Appx. A).</p> <p>Ten to 17 years of blocked fish passage for the Meadow Creek diversion, permanent blockage of upper Meadow Creek, 13 years of blockage of the East Fork South Fork Salmon River (EFSFSR), uncertain speculative fish passage beyond those 13 years in perpetuity, and permanent blockage of the upper EFSFSR, even considering removal of other fish passage barriers and mitigation, would result in an overall decrease in quantity and quality of bull trout, steelhead, and Chinook salmon habitat.</p> <p>This decrease in habitat does not maintain or restore the structure, function, composition, and connectivity of aquatic ecosystems, as required in 219.8 and 219.9 above.</p> <p>Both the Yellow Pine pit barrier cascade and the remnant box culvert will be removed to allow for natural upstream fish passage by both resident and anadromous species. This “natural upstream fish</p>	FPA	<p>The responsible official must determine which substantive requirements within §§ 219.8 through 219.11 of the 2012 rule are directly related to the plan direction being added, modified or removed by the amendment, and apply those requirements to the amendment and must clearly document the rationale for the determination of which substantive requirements apply and how they were applied. The rationale for how the amendment is related to the applicable substantive requirements and rationale for each are identified for this proposed amendment in Table 4 of Appendix A of the EIS.</p> <p>The effects of the project-specific amendments are those of SGP. Direct, indirect, and cumulative effects of the SGP on fish and fish habitat (Section 4.12 and 5.12) were analyzed in the SDEIS.</p>

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			<p>passage” would depend largely on the success of the “Fish Tunnel.” The East Fork Fish Tunnel is described in Brown and Caldwell et al. 2021: Fishway Operations and Management Plan. Claims of the success of this tunnel are assumed in the body of the SDEIS. However, “There is some question regarding the effectiveness and efficacy of the EFSFSR tunnel to pass fish (USFWS 2019). The U.S. Fish and Wildlife Service (USFWS) notes, in a letter to Midas Gold (now Perpetua Resources) dated October 3, 2019, “[E]ven after close consultation and collaboration with NMFS, meeting applicable NMFS passage criteria and guidelines, and executing all potential adaptive management measures, there exists a reasonable probability that the project will not be able to volitionally pass fish safely, timely, or effectively” (USFWS 2019). Results are presented with the assumption that the tunnel would allow volitional passage (SDEIS 2-60).</p> <p>There is little rationale to support the proven success of such a tunnel in the SDEIS. Of the three references cited, none analyzed Chinook salmon, bull trout or steelhead, or sites with characteristics similar to Stibnite (i.e., from an accessible river to an inaccessible channel upstream). Gowans et al. 2003 tracked Atlantic salmon in Scotland on a river system from a reservoir through four fish passes including fish ladders, fish lifts, and a tunnel. Only 4 out of 54 tagged adults made it to spawning grounds. Wollenbaek et al. 2011 examined genetic connectivity of lake-dwelling Arctic char in Norway across a dam through a subterranean tunnel and spill gates. The char were represented by two genetically distinct lake populations, and connectivity was demonstrated, but it was questioned to what extent char utilized the tunnel for upstream migration. Rogers and Cane (1979) indicated “numbers of fish succeeding the tunnel and weir” for Atlantic salmon from a pumped storage reservoir to upstream spawning grounds in New Wales, but the complete study was unavailable.</p> <p>The backup plan, should the tunnel not work, would be to trap and haul fish up and downstream of the Yellow Pine pit until the reconstructed East Fork channel is completed (this relies on the assumption that the constructed and enhanced stream reaches would perform as described in the Stream Design Report). According to the DEIS, about 100,000 fish are modeled to be “affected” (injured/killed) from 1.6 km of stream removals and diversions in the East Fork (Table 4.12-2b, and p. 4.12-17) due to dewatering, getting caught in screens, traps, dipnets, seines, and electroshocking; during transport; at the relocation site by predation, lack of food, disorientation, and competition; and from increasing temperatures, decreased dissolved oxygen, and predation from being stranded in partially dewatered areas.(From DEIS Table 4.12-2b: 84,066 Chinook salmon + 1,009 steelhead + 620 bull trout + 10,647 cutthroat trout = 96,342 fish potentially affected). While this analysis was included in the DEIS and these components of the plan have not changed, this information is not included in the SDEIS. This discrepancy must be explained.</p> <p>This magnitude of injury or death would certainly be considered a degradation, not maintenance and restoration, of ecological integrity of aquatic ecosystems and watersheds.</p>		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	58	<p>2. Proposed Amendment 4, substantive requirements: Diversity of plant and animal communities, and ecosystem diversity</p> <p>As discussed above for the proposed Amendment 1, proposed Amendment 4 also does not meet the requirements for ecosystem integrity found in 36 C.F.R. § 219.9(a)(2). The SDEIS (Appendix A, A-32) claims that substantive requirement at 36 C.F.R. § 219.9(a)(2) does not apply to this proposed amendment. This requirement states:</p> <p>The plan must include plan components, including standards or guidelines, to maintain or restore the diversity of ecosystems and habitat types throughout the plan area. In doing so, the plan must include plan components to maintain or restore: (i) Key characteristics associated with terrestrial and aquatic ecosystem types; (ii) Rare aquatic and terrestrial plant and animal communities; and (iii) The diversity of native tree species similar to that existing in the plan area.</p> <p>This requirement is certainly directly related to this project-specific amendment. Plan components, while intended to maintain or restore key characteristics, are determined in the SDEIS to degrade those key characteristics. For example, connectivity is a key characteristic of the life history of salmon and trout, which also comprise rare aquatic animal communities, with three species listed under the ESA in the project area. Blocking fish passage to upstream habitats will decrease the quantity and quality of bull</p>	FPA	<p>The responsible official must determine which substantive requirements within §§ 219.8 through 219.11 of the 2012 rule are directly related to the plan direction being added, modified or removed by the amendment, and apply those requirements to the amendment and must clearly document the rationale for the determination of which substantive requirements apply and how they were applied. The rationale for how the amendment is related to the applicable substantive requirements and rationale for each are identified for this proposed amendment in Table 4 of Appendix A of the EIS.</p> <p>The effects of the project-specific amendments are those of SGP. Direct, indirect, and cumulative effects of the SGP on fish and fish habitat (Section 4.12 and 5.12) were analyzed in the SDEIS.</p>

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			trout and Chinook salmon habitat. (SDEIS at 4.12). This decrease in habitat does not maintain or restore key characteristics or rare aquatic animal communities, as required in 219.8 and 219.9 above.		
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	59	<p>3. Proposed Amendment 4, substantive requirements: Additional species-specific plan components</p> <p>Third, the proposed amendment does not comply with additional species-specific plan components found in 36 C.F.R. § 219.9(b). As described above, the requirement directs that the Forest Service make a determination “whether or not the plan components... provide ecological conditions necessary to contribute to the recovery of federally listed threatened and endangered species...”</p> <p>There is no documentation in the SDEIS of a responsible official’s determination that the required plan components are sufficient to provide the ecological conditions necessary to: contribute to the recovery of federally listed threatened and endangered species, and conserve proposed and candidate species.</p> <p>In fact, the SDEIS indicates that the Forest Service has preliminarily found that the entire Stibnite Gold Project project will adversely affect ESA-listed bull trout, Chinook salmon, steelhead, and their critical habitats; and may indirectly impact westslope cutthroat trout. (SDEIS 4.12)</p> <p>Though the implementation of this amendment would not result in jeopardy (pending Section 7 consultation), significant adverse effects to ecological conditions and species are documented throughout Chapter 4 in the SDEIS. An amendment to this standard needs to include effects analysis and demonstration of compliance with substantive requirements of the planning regulations.</p> <p>In conclusion, none of the proposed amendments are consistent with the Planning Rule. None of the proposed amendments were adequately analyzed as to their effects, violating both NFMA and NEPA.</p>	FPA	<p>The responsible official must determine which substantive requirements within §§ 219.8 through 219.11 of the 2012 rule are directly related to the plan direction being added, modified or removed by the amendment, and apply those requirements to the amendment and must clearly document the rationale for the determination of which substantive requirements apply and how they were applied. The rationale for how the amendments are related to the applicable substantive requirements and rationale for each are identified for this proposed amendment in Table 4 of Appendix A of the EIS.</p> <p>The effects of the project-specific amendments are those of SGP. Direct, indirect, and cumulative effects of the SGP on fish and fish habitat (Section 4.12 and 5.12) were analyzed in the SDEIS.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	113	<p>11. The proposed Forest Plan amendments are not compliant with the Forest plans, specifically regarding the Aquatic Conservation Strategy, USFWS and NOAA Biological Opinions, Terms and Conditions, and Reasonable and Prudent Alternatives</p> <p>The timeline for mine operation is approximately 12 years with reclamation and closure of approximately 5 years. Due to the nature of proposed SGP activities, impacts to aquatic, terrestrial, and watershed resource conditions would be expected to occur for the length of the proposed SGP, and beyond. This impact time length is in excess of the Forest Plan direction, which indicates that “Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years).” The Forest Plan amendment that waives this requirement does not maintain the intent of the original plan standard. SDEIS mitigations and reclamation actions will not restore or maintain aquatic resource conditions, according to adverse effects described in Chapter 4.</p>	FPA	<p>The Aquatic Conservation Strategy (ACS), which was developed in response to Section 7 consultation on the LRMP revisions, was incorporated into the Payette and Boise NF LRMPs (2003) and the Wildlife Conservation Strategy (WCS) was included as an amendment to the Boise LRMP (2010). Forest-wide and Management Area direction incorporated the ACS for the Boise and Payette LRMPs and the WCS for the Boise LRMPs.</p> <p>All LRMP standards and Guides for the Boise and Payette National Forests were checked for compliance. The LRMP consistency spreadsheet (2019_0718_MG_REVIEW_SGP_DRAFT_FSPlanConsistency_Final) is included in the project record and briefly describes if the project applies to, complies, or does not comply with each plan component.</p> <p>The effects of the project-specific amendments are those of the SGP. Direct, indirect, and cumulative effects of the SGP on fish and fish habitat (Section 4.12 and 5.12) were analyzed in the SDEIS.</p>
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	114	<p>12. The proposed Forest Plan amendment that waives the requirement for fish passage at surface water diversions is not compliant with the Forest plans, specifically regarding the Aquatic Conservation Strategy, USFWS and NOAA Biological Opinions, Terms and Conditions, and Reasonable and Prudent Alternatives</p> <p>Blocking fish passage results in harm to fish. SDEIS design features and mitigations will not maintain or restore connectivity or cold water refugia, important components of aquatic ecosystem integrity. The SDEIS admits that “bull trout may be extirpated from the reaches upstream from the TSF when the reaches within the footprint would be dewatered and flow would be diverted into the diversions that route water around the facilities. With the gradient barrier that would be created along the TSF, there would be no mechanism by which bull trout would be able to volitionally (i.e., naturally) recolonize the reaches upstream from or on top of the TSF.”</p>	FPA	<p>The effects of the project-specific amendments are those of SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS (SDEIS, Table 2.2-1 p 2-4). Direct, indirect, and cumulative effects of the SGP on fish and fish habitat (Section 4.12 and 5.12) were analyzed in the SDEIS.</p> <p>Project-level Section 7 Endangered Species Act consultation is ongoing. No Biological Opinion has yet been issued by the USFWS.</p>
Small, Nathan (Chairman, Fort Hall Business Council,	18903	8	The Project, as described by Perpetua, cannot meet existing standards developed in the Forest Management Plan for the Boise/Payette National Forest and accordingly is requesting four significant, project-specific amendments so their mine can proceed. The Project needs these amendments so they can: 1) divert waters that create fish passage barriers in critical habitat; 2) allow for the total degradation	FPA	The NFMA provides that “plans can be amended in any manner whatsoever” (16 U.S.C. 1604(f)(4)). The 2012 rule provides that, “[t]he responsible official has the discretion to determine whether and how to amend the plan.” (36 CFR 219.13(a)). Comment noted.

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Shoshone-Bannock Tribes)			<p>of productive soils in the watershed; 3) diminish listed fish populations and degrade their aquatic habitats; and, 4) degrade the watershed in perpetuity.</p> <p>These impacts are irreversible and will not be mitigated fully by the Project, instead the Project is requesting an exemption for their operation from requirements agreed to during the Forest Planning Process that involved thousands of stakeholders. While this project is often referred to as 'compliant' or 'environmentally-friendly', it begs the question of why there is a need to change the conditions in the Forest Plan... from the Tribes perspective there is no need to allow these amendments so the mining can proceed without mitigating for those impacts.</p>		
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	59	<p>Payette National Forest is the lead agency, but mining actions will impact Management area 13 of Payette and Management Areas 17, 19, 20 and 21 of the Boise Forest. The Forest Service may want to ask for separate public participation for each of these Management Plans or combine them and then increase the public participation time to comment.</p>	FPA	<p>CEQ regulations identify that to the fullest extent possible, agencies should cooperate to reduce duplication (40 CFR 1506.2(b) and (c)).</p>
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	3	<p>The Forest Service provides a brief overview of Forest Plan consistency requirements in Appendix A. However, Appendix A largely focuses on the proposed Forest Plan Amendments that would remove or modify certain Forest Plan components in order to allow the SGP to move forward. It does not adequately discuss the consistency issues between the proposed action and the Payette and Boise National Forest Plans as they are in place today. The Forest Service discusses how the MMP aligns with the forest-wide goals and objectives as the Boise and Payette National Forest Plans as they relate to minerals and geology resources, but recognizes that not all proposals would move towards or achieve desired conditions, goals, or objectives.</p> <p>Further, the Forest states that there may be tradeoffs between moving towards or achieving these for one resource or another.¹ From there, the Forest Service goes straight into the proposed Land and Resource Management Plan Amendments without going into detail of what desired conditions, goals, or objectives may be threatened by the proposed action. It is up to the reader to look into the proposed project-specific amendments to analyze what may be threatened by comparing the current language. At the very least, the Forest Service should disclose this information to the public about what Forest Plan standards, guidelines, objectives, and/or goals would be threatened by the SGP and how, if left as is, the proposed action would not comply with the Boise and Payette National Forest Plans.</p>	FPA	<p>All Land and Resource Management Plan (LRMP) standards and Guides for the Boise and Payette National Forests were checked for compliance. The LRMP consistency spreadsheet (2019_0718_MG_REVIEW_SGP_DRAFT_FSPlanConsistency_Final) is included in the project record and briefly describes if the project applies to, complies, or does not comply with each plan component.</p>
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	4	<p>The Forest Service proposes four project-specific amendments to the Boise and Payette National Forest Plans. These amendments are proposed for the life of the SGP, or approximately 20 years, and would be required to approve the 2021 MMP. The SDEIS discloses that “impacts to aquatic, terrestrial, and watershed resource conditions would be expected to occur for the length of the proposed SGP.” However, as outlined in Table 1.7-1, proposed Amendment 1 seeks to remove current Forest Plan components that state: “Management actions, including salvage harvest, may only degrade aquatic, terrestrial, and watershed resource conditions in the temporary time period (up to 3 years), and must be designed to avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).” The removal of this language to simply state that “Project implementation actions may degrade aquatic, terrestrial, and watershed conditions in the areas affected by the project,” is concerning. As it reads, the Forest Service outright acknowledges that the SGP will neither avoid resource degradation in the temporary time period (up to 3 years) nor avoid resource degradation in the short term (3-15 years) and long term (greater than 15 years).</p> <p>Amendment 1 showcases the long term effects of the proposed action. Modeling shows elevated water temperatures will last over 100 years and may impact ESA-listed fish species.³ The construction of the Burnt Log Route will also contribute to long term resource degradation, particularly for Roadless character and wildlife, even if the road is constructed for administrative and project use only.</p> <p>Another concerning forest-plan amendment seeks to remove requirements of fish passage for new water diversions. The current PNF Standard SWST09 states: “In fish-bearing waters, do not authorize new</p>	FPA	<p>The effects of the project-specific amendments are those of the SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS (SDEIS, Table 2.2-1). Direct, indirect, and cumulative effects of the SGP on fish and fish habitat (Section 4.12 and 5.12) were analyzed in the SDEIS.</p> <p>The rationale for how the amendments met the applicable substantive requirements and rationale for each are identified for proposed amendment 1 in Table 1 of Appendix of the EIS.</p>

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			<p>surface diversions unless they provide upstream and downstream fish passage and, if needed, include either fish screens or other means to prevent fish entrapment/entrainment.”</p> <p>Proposed Amendment 4 would remove this fish passage requirement. Our groups are concerned with these project-specific Forest Plan amendments, as they show a disconnect between how the SGP is portrayed to the public as a restoration effort and how it would measurably change conditions for the worse over an indefinite time period. Degradation of watershed, terrestrial, and Roadless resources should be avoided using the current Forest Plan components. However, it is clear that the proposed action cannot be accomplished with the current Forest Plan standards because of the difficulty or failure to meet component timeframes.</p>		
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	696	"The waiving of the above standards meets the following purpose and needs for the SGP: " These purpose and need statements no longer reflect the purpose and needs stated in Chapter 1. Please update to ensure that the amendments still meet the purpose and need as revised.	FPA	Appendix A was updated to reflect the purpose and need statements in Chapter 1.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	697	"except for areas under the Tailings Storage Facility (TSF)/TSF Buttress and in the vicinity of backfilled open pits where some metal concentrations are predicted to exceed baseline conditions (Section 4.9.2.2). " Please provide the timeframe for this. And acknowledge that there is an overall improvement long term.	FPA	Sentence was revised to state: “Post-closure, surface water and groundwater quantity would return to similar baseline flow patterns (Section 4.8.2) and water quality (with treatment) would meet standards for surface waters and groundwater, improving on existing conditions except for areas under the Tailings Storage Facility (TSF)/TSF Buttress and in the vicinity of backfilled open pits where some metal concentrations are predicted to exceed baseline concentrations that were previously above water quality standards in their existing condition (Section 4.9.2.2).”
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	698	"In the PNF Activity Area for the SGP, which is comprised of the PNF portion of the Headwaters East Fork South Fork Salmon River, Sugar Creek, and No Man’s Creek- East Fork South Fork Salmon River subwatersheds where existing conditions of TSRC are below 5 percent of the area, waive the requirement that management activities shall leave the area in a condition of 5 percent or less TSRC following completion of the activities. " Is a replacement percentage required?	FPA	A replacement percentage is not required. The reclamation would ultimately reduce the TSRC back below 5%. It would just take a very long time to do so.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	699	"The amendment of this standard meets the following purpose and needs for the SGP: " These purpose and need statements no longer reflect the purpose and needs stated in Chapter 1. Update, and make sure that the amendments still meet the purpose and need as revised.	FPA	Appendix A was updated to reflect the purpose and need statements in Chapter 1.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	700	"The suspension or modifications of these standards meet the following purpose and needs for the SGP: " These purpose and need statements no longer reflect the purpose and needs stated in Chapter 1. Please update to ensure that the amendments still meet the purpose and need as revised.	FPA	Appendix A was updated to reflect the purpose and need statements in Chapter 1.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	701	219.9 Sustainability, under the last column, please revise "The existing upgrades to the transmission line... " to be " The upgrades to the existing transmission line... "	FPA	Revision made.
Alan Haslam (Vice President, Permitting,	19325	702	"2.4.2Proposed Amendment " Please clarify if new VQO's need to be established since the others are waived.	FPA	The amendments specify that the VQOs are to be waived for specific portions of the Project area.

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Perpetua Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	703	"The suspension or modifications of these standards meet the following purpose and needs for the SGP: " These purpose and need statements no longer reflect the purpose and needs stated in Chapter 1. Please update to ensure that the amendments still meet the purpose and need as revised.	FPA	Appendix A was updated to reflect the purpose and need statements in Chapter 1.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	24	Comments provided for Appendix A include technical clarifications including several requests to verify that the purpose and need statements included in the Appendix are consistent with those presented in Chapter 1.	FPA	Comment noted.
Siegel	19355	2	There are other irregularities in the DSEIS. The four amendments to the forest plan (SDEIS Appendix A) run counter to conservation and forest health objectives. This is a concern. In the SDEIS, the proposed amendments are justified because they “meet the outstanding rights of mining.” The plan states that these amendments are acceptable because the mining events are limited to the life of the Stibnite project (identified as 20 years) and will cause only temporary and reversible degradation of aquatic, terrestrial, and watershed conditions in the areas affected by the project. These assertions are questionable.	FPA	The NFMA provides that “plans can be amended in any manner whatsoever” (16 U.S.C. 1604(f)(4)). The 2012 rule provides that, “[t]he responsible official has the discretion to determine whether and how to amend the plan.” (36 CFR 219.13(a)). The effects of the project-specific amendments are those of SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS (SDEIS, Table 2.2-1).
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	240	Similarly, the forest plan states that the Forest Service is to “provide for a quality wilderness experience for the Salmon National Forest portion of the FCRNRW.” One way to partially mitigate these and other impacts is for Perpetua Resources to limit or restrict what types of activities employees can do in the area. In addition, we recommend that Perpetua fund a year-round ranger patrol program to conduct outreach, education and enforcement activities along the Wilderness boundary and any other sensitive areas with increased recreational or mine staff pressure as one of several mitigation efforts. We note that the Boise Forest Plan already calls out for improved signing regarding wilderness boundary: Objective 2035 Enhance interpretive signing and information regarding the wilderness boundaries.	FPA	As a mitigation measure, the Forest Service would require Perpetua, as the Project owner, to develop and implement a Burntlog Route Access Plan to restrict public access. While public access restrictions would not eliminate potential impacts of mine traffic associated with wildlife interactions and wilderness solitude, the enforcement of the Transportation Management Plan, the Burntlog Route Access Plan, and project design features would be effective as a means to minimize impacts. Public access restrictions would also reduce the potential for unauthorized route creation leading to possible wilderness intrusions.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	254	i. Forest Plan Inconsistencies In addition to the above comments regarding the impact that the proposed MMP will have on Burntlog Creek in regards to the WSRA, this action is contradictory to the amended 2010 Boise National Forest Plan specific to Management area 20. As described in the Plan, “the Lower Burntlog Creek and Upper Burntlog Creek subwatersheds have been identified as important to the recovery of listed fish species, and as high-priority areas for restoration.” While being identified as priority areas for restoration, new road construction and associated impacts fall woefully short of this goal. Based on the MMP, the following General Standards and Objectives will not be followed: General Standard 2001: Manage the Burntlog Creek eligible river corridor to its assigned classification standards, and preserve its outstandingly remarkable values and free-flowing status until the river undergoes a suitability study and the study finds it suitable for designation by Congress, or releases it from further consideration as a Wild and Scenic River. Objective 2014: Improve water quality by reducing road-related accelerated sediment delivery to upper Johnson Creek and its tributaries. Objective 2015: Assist in de-listing South Fork of Salmon River drainage, including upper Johnson Creek, from the State of Idaho's impaired water bodies list by applying appropriate and active watershed restoration to reduce sediment, which is the identified pollutant of concern.	FPA	All Land and Resource Management Plan (LRMP) standards and Guides for the Boise and Payette National Forests were checked for compliance. The LRMP consistency spreadsheet (2019_0718_MG_REVIEW_SGP_DRAFT_FSPlanConsistency_Final) is included in the project record and briefly describes if the project applies to, complies, or does not comply with each plan component. Specifically: General Standard 2001: No outstandingly remarkable values or the free-flowing status for the Burntlog Creek eligible river corridor are affected by the SGP. In regard to objectives, the Forest Service's prior interpretation of consistency, that projects need only be consistent with plan standards and guidelines, and not the 2012 Planning Rule consistency provisions at 36 CFR 219.15(d), also applies when an amendment developed and approved under the 2012 Planning Rule does not change the text of the plan direction but simply applies existing plan direction to a different, or an additional, area or areas within the plan area. See the preamble to the Proposed Planning Rule for further explanation, 76 FR 8480, 8501 (February 14, 2011).

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			<p>Objective 2016: Improve stream bank stability by reducing sediment delivery to Johnson Creek, and by revegetating banks with native plant species as needed.</p> <p>Objective 2017: Restore aquatic and riparian habitats in Johnson Creek and its tributaries by reducing bank instability and accelerated sediment from existing roads and other disturbances.</p> <p>Objective 2018: Prioritize restoration to improve or maintain Chinook salmon, steelhead, and bull trout spawning and rearing habitats. Allow some temporary impacts in order to achieve short-term and long-term benefits to water quality and fish habitat as long as those impacts do not threaten the viability of local fish populations.</p> <p>Objective 2019: Restore instream fish habitat in the Upper Burntlog and Lower Burntlog subwatersheds so that it is not a limiting factor in listed fish species and native cutthroat population recovery.</p> <p>Objective 2020: Identify fish passage barriers and sediment delivery sources in the Burntlog drainage, and design and implement corrective actions to reduce impacts to native fish and their habitat.</p> <p>With even a cursory review of the above objections and general standards it becomes clear that road building and the associated increased likely sedimentation of Burnt Log Creek are contradictory to the BNF Forest Plan.</p>		
Samuel Penney (Chairman)	19396	237	<p>Under both action alternatives, the Forest would be violating Forest Plan Standards applicable to whitebark pine. The action alternatives would violate the following Standards on the Payette National Forest: TEST03, TEST04, TEST08, TEST11, TEST28, TEST31, MA13 MPC 3.1-1301, MA13 MPC 3.1-1302, and MA13 MPC 3.2-1306. The action alternatives would violate the following Standards on the Boise National Forest: TEST03, TEST04, TEST08, TEST11, TEST28, TEST31, MA18 1801, MA18 1802, MA18 1804, MA20 MPC 3.1-2010, MA21 MPC 3.1-2108, MA19 MPC 3.2-1919, MA20 MPC 3.2-2010, MA21 MPC3.2-2113, MA20 MPC3.2-1914, MA20 MPC3.2-2005, MA21 MPC3.2-2108, MA20 2006, MA19 1911, and MA21 2105. The Forest needs to disclose the Standards that will not be met, provide justification for the violations, and explain why the Forest is not proposing project-level amendments.</p>	FPA	<p>All Land and Resource Management Plan (LRMP) standards and guidelines for the Boise and Payette National Forests were checked for compliance. The LRMP consistency spreadsheet (2019_0718_MG_REVIEW_SGP_DRAFT_FSPlanConsistency_Final) is included in the Project record and briefly describes if the project applies to, complies, or does not comply with each plan component. Specifically:</p> <p>PNF and BNF TEST03: Consistency with recovery plans identified.</p> <p>PNF and BNF TEST04: No amendment is needed because adverse effects on proposed or candidate species would not lead to listing.</p> <p>PNF and BNF TEST08: No amendment is needed because the SGP would not adversely affect the long-term persistence of TEPC plant species (WBP).</p> <p>PNF and BNF TEST11: No amendment is needed because storage of fuels and other toxicants shall be located outside of occupied TEPC plant habitat is included as a design feature (Table 2.4-12).</p> <p>PNF and BNF TEST28: Pending ESA consultation for WBP</p> <p>PNF and BNF TEST31: Pending ESA consultation for WBP</p> <p>PNF MA13 MPC 3.1-1301: Being amended (Section 2.1, Appendix A)</p> <p>PNF MA13 MPC 3.1-1302: Mechanical vegetation treatments are not a component of the alternatives. Vegetation will be removed as required for transmission line upgrade, road construction, and mine site development. The effects to timber resources are disclosed in Section 4.14 of the SDEIS. Environmental design features to minimize impacts to water quality and habitat are listed in Section 2.4.9, Table 2.4-12.</p> <p>PNF MA13 MPC 3.2-1306: Being amended (Section 2.1, Appendix A)</p> <p>BNF MA18 1801, MA18 1802, MA18 1804: There are no proposed Project components in BNF MA18.</p> <p>BNF MA20 MPC 3.1-2010: Being amended (Section 2.1, Appendix A)</p> <p>BNF MA21 MPC 3.1-2108: No SGP-related activities occur within MPC 3.1.</p> <p>BNF MA19 MPC 3.2-1919: Being amended (Section 2.1, Appendix A)</p>

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					<p>BNF MA20 MPC 3.2-2010: Being amended (Section 2.1, Appendix A)</p> <p>BNF MA21 MPC3.2-2113: Being amended (Section 2.1, Appendix A)</p> <p>BNF MA20 MPC3.2-1914: Not a plan component - incorrect numbering</p> <p>BNF MA20 MPC3.2-2005: Being amended (Section 2.1, Appendix A)</p> <p>BNF MA21 MPC3.2-2108: Not a plan component - incorrect numbering</p> <p>BNF MA20 2006: Mechanical vegetation treatments are not a component of the alternatives. Vegetation will be removed as required for transmission line upgrade, road construction, and mine site development. The effects to timber resources are disclosed in Section 4.14 of the SDEIS. Environmental design features to minimize impacts to water quality and habitat are listed in Section 2.4.9, Table 2.4-12.</p> <p>BNF MA19 1911: The Project would have no impacts to the Back Creek RNA.</p> <p>BNF MA21 2105: No SGP-related activities occur within Chilcoot Peak RNA.</p>
Samuel Penney (Chairman)	19396	245	Under both action alternatives, the Forests would be violating Forest Plan Standards applicable to botanical resources. The action alternatives would violate the following Standards on the Payette National Forest: BTST01, BTST02, BTST03, WIST01, WIST02, MA13 MPC 3.1-1301, MA13 MPC 3.1-1302, and MA13 MPC 3.2-1306. The action alternatives would violate the following Standards on the Boise National Forest: BTST01, BTST02, BTST03, WIST02, WIST08, WIST09, MA18 1801, MA18 1802, MA18 1804, MA20 MPC 3.1-2010, MA21 MPC 3.1-2108, MA19 MPC 3.2-1919, MA20 MPC 3.2-2010, MA21 MPC3.2-2113, MA20 MPC3.2-1914, MA20 MPC3.2-2005, MA21 MPC3.2-2108, and MA20 2006. The Forest needs to disclose the Standards that will not be met, provide justification for the violations, and explain why the Forest is not proposing project-level amendments.	FPA	<p>All Land and Resource Management Plan (LRMP) standards and Guides for the Boise and Payette National Forests were checked for compliance. The LRMP consistency spreadsheet (2019_0718_MG_REVIEW_SGP_DRAFT_FSPlanConsistency_Final) is included in the project record and briefly describes if the project applies to, complies, or does not comply with each plan component. Specifically:</p> <p>BNF and PNF BTST01: The restoration plan includes measures to restore habitat. Impacts disclosed in Section 4.10.</p> <p>BNF and PNF BTST02: Included as environmental design features (Section 2.4.9, Table 2.4-12).</p> <p>BNF and PNF BTST03: Included as environmental design features (Section 2.4.9, Table 2.4-12).</p> <p>PNF WIST01: Mechanical vegetation treatments are not a component of the alternatives, other than required for transmission line upgrade and road construction.</p> <p>BNF and PNF WIST02: No sensitive species would trend towards listing under ESA as result of implementation.</p> <p>PNF MA13 MPC 3.1-1301: Being amended (Section 2.1, Appendix A)</p> <p>PNF MA13 MPC 3.1-1302: Being amended (Section 2.1, Appendix A)</p> <p>PNF MA13 MPC 3.2-1306: Being amended (Section 2.1, Appendix A)</p>
Samuel Penney (Chairman)	19396	247	Under both action alternatives, the Forests are likely to violate Forest Plan Standards and Guidelines for non-native plants. The action alternatives have the potential to violate the following Standards and Guidelines on the Payette National Forest: NPST03, NPST06, NPST07, NPST08, NPST10, NPST11, NPGU01, NPGU02, NPGU03, NPGU04, NPGU05, and NPGU06. The action alternatives have the potential to violate the following Standards and Guidelines on the Boise National Forest: NPST03, NPST06, NPST07, NPST08, NPST10, NPST11, NPGU01, NPGU02, NPGU03, NPGU04, NPGU05, and NPGU06. The Forest needs to disclose the Standards and Guidelines that will not be met, provide justification for the violations, and explain why the Forest is not proposing project-level amendments for Standards.	FPA	<p>All Land and Resource Management Plan (LRMP) standards and Guides for the Boise and Payette National Forests were checked for compliance. The LRMP consistency spreadsheet (2019_0718_MG_REVIEW_SGP_DRAFT_FSPlanConsistency_Final) is included in the project record and briefly describes if the project applies to, complies, or does not comply with each plan component. Specifically:</p> <p>BNF and PNF NPST03; BNF and PNF NPST06; BNF and PNF NPST07; BNF and PNF NPST08; BNF and PNF NPST10; and BNF and PNF NPST11: Included as environmental design features (Section 2.4.9, Table 2.4-12).</p> <p>BNF and PNF NPGU01; BNF and PNF NPGU02; BNF and PNF NPGU03; BNF and PNF NPGU04; BNF and PNF NPGU05; and BNF and PNF NPGU06: Deviation from compliance with a guideline does not require a Forest Plan amendment (as with a standard), but rationale for deviation must be documented in the project decision document” (PNF Forest Plan, p. GL-17 and BNF Forest Plan, p. IV-21) (Final EIS p A-2).</p>

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Samuel Penney (Chairman)	19396	371	Under both action alternatives, the Forests would be violating Forest Plan Standards for wildlife and wildlife habitat. The action alternatives would violate the following Standards on the Payette National Forest: TEST15, TEST34, WIST01, WIST03, WIST06, MA13 MPC 3.1-1301, MA13, MPC 3.1-1302, and MA13 MPC 3.2-1306. The action alternatives would violate the following Standards on the Boise National Forest: TEST15, TEST34, WIST03, WIST06, WIST08, WIST09, MA18 1801, MA18 1802, MA18 1804, MA20 MPC 3.1-2010, MA21 MPC 3.1-2108, MA19 MPC 3.2-1919, MA20 MPC 3.2-2010, MA21 MPC3.2-2113, MA20 MPC3.2-1914, MA20 MPC3.2-2005, MA21 MPC3.2-2108, and MA20 2006. The Forest needs to disclose the Standards that will not be met, provide justification for the violations, and explain why the Forest is not proposing project-level amendments.	FPA	All Land and Resource Management Plan (LRMP) standards and guidelines for the Boise and Payette National Forests were checked for compliance. The LRMP consistency spreadsheet (2019_0718_MG_REVIEW_SGP_DRAFT_FSPlanConsistency_Final) is included in the project record and briefly describes if the project applies to, complies, or does not comply with each plan component. Specifically: BNF and PNF TEST15: Minerals extraction management actions which change lynx habitat to an unsuited condition are exempt from meeting the standard. BNF and PNF TEST34: There would be no increase to mileage of groomed over snow routes (SDEIS Table 2.2-1). PNF WIST01: Mechanical vegetation treatments are not a component of the alternatives, other than required for transmission line upgrade and road construction. BNF and PNF WIST03: Included as environmental design features (Section 2.4.9, Table 2.4-12). BNF and PNF WIST06: This standard is being met through a variety of environmental design features (Tables 2.4-12 and 2.4-13; Section 4.13.2.2). PNF MA13 MPC 3.1-1301; MA13 MPC 3.1-1302; and MA13 MPC 3.2-1306: Being amended (Section 2.1, Appendix A) BNF WIST08 and WIST09: Mechanical vegetation treatments are not a component of the alternatives, other than required for transmission line upgrade and road construction. BNF MA18 1801; MA18 1802; and MA18 1804: There are no proposed Project components in BNF MA18. BNF MA20 MPC 3.1-2010; MA21 MPC3.2-2113: Being amended (Section 2.1, Appendix A) BNF MA20 MPC3.2-1914: No Project components occur in MPC 3.1. This MPC is upstream of all Project activities.
Samuel Penney (Chairman)	19396	425	The SDEIS lists fourteen Forest Plan standards to be amended to the Payette and Boise National Forest Land and Resource Management Plans as project-specific. "When a proposed project is not consistent with Forest Plan standards applicable to the location of a project and/or the types of activities proposed, the Forest has the following options: (1) modify the proposed project to make it consistent with the Forest Plan; (2) reject the proposal; (3) amend the Forest Plan so that the project would be consistent with the Forest Plan as amended; or (4) amend the Forest Plan contemporaneously with the approval of the project so the project would be consistent with the Forest Plan as amended." The Forest's discretion to exercise any of these options to achieve Forest Plan consistency with a project is not unbounded, however. The Agency's action is expressly "subject to valid existing rights." There is no question that the Tribe's rights reserved in its 1855 Treaty with the United States are "valid existing rights" applicable to the Project area. To avoid harm to the Tribe's treaty reserved rights and resources while maintaining consistency with Forest Plan standards, the Tribe recommends that the Forest reject the Project in its entirety.	FPA	Comment noted. Position statement.
Samuel Penney (Chairman)	19396	427	The Project-level general management actions amendments that allows for degradation of resource conditions in the short term and avoids long-term resource degradation at a Forest-wide scale are of particular concern. These amendments label the entire project area as a sacrifice zone. How can this even be considered while the Forest is trying to minimize adverse environmental effects?	FPA	The effects of the project-specific amendments are those of the SGP. The temporal and spatial scale of the effects were disclosed in the SDEIS.
Samuel Penney (Chairman)	19396	428	Under the preferred alternative (2021 MMP), the Forest is proposing to amend 14 Forest Plan Standards. The Tribe has identified the following additional Plan standards that the Tribe has determined the Project will violate and therefore requests the Forest analyze to determine compatibility/compliance:	FPA	All Land and Resource Management Plan (LRMP) standards and guidelines for the Boise and Payette National Forests were checked for compliance. The LRMP consistency spreadsheet (2019_0718_MG_REVIEW_SGP_DRAFT_FSPlanConsistency_Final) is included in the

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			<ul style="list-style-type: none"> ● PNF standards #1302 - Activities associated with the project would degrade water quality and habitat for treaty-reserved resources. ● BNF ST01 - Have all the plant species been inventoried? ● PNF SWST02 + BNF SWST02 - Detrimental disturbance of soils is estimated to be as high as 16% on the proposed transmission right of way under both action alternatives. ● PNF + BNF ST03 - Have all the special status plant species been inventoried? ● PNF + BNF LSST02 - Some project infrastructure may not fully comply with right-of-way planning and may not serve the needs of all parties. ● PNF + BNF LSST12 - The Water Management Plan does not speak to monitoring water withdrawals, nor has the water rights been approved yet. ● PNF + BNF MIST09 - Mining operations (solid and sanitary waste facilities) within riparian conservation areas would increase toxic metal from facilities and long term degradation of surface treaty resources would occur. ● PNF + BNF SWST06 - The determination of instream flows needed for protection of water-related resources have not been accomplished. ● PNF + BNF SWST07 - 303(d) improvement would not be attained. ● PNF + BNF SWST10 - Trees and snags important for treaty wildlife resources would be removed from riparian conservation areas for operations. ● PNF + BNF SWST 12 - Project components located in landslide-prone areas and mitigation measures will not be sufficient to avoid triggering landslides. ● PNF + BNF TEST03 - It is unknown if this project would be consistent with consultation on the Forest Plans. Project specific consultation is ongoing however, it is anticipated that the Project would not meet some portions of the recovery plans for listed species. ● PNF + BNF TEST04 - Project specific consultation is ongoing, however, it is anticipated that the Project could contribute to ESA listing. ● PNF + BNF TEST07 - Stream diversions during construction, operations and closure/ postclosure will not meet this standard. Fisheries habitat would be permanently blocked in Meadow Creek by the tailings storage facility and its buttress. ● PNF + BNF TEST08 - Have all the plant species been inventoried? ● PNF + BNF TEST11 Where will toxicants be stored in relation to sensitive plants and whitebark pine habitat, have all the site specific details been fully developed? ● PNF + BNF TEST15 - Five of the seven lynx analysis units exceed the 30% of habitat in unsuitable condition and additional habitat would be converted to unsuitable condition. ● PNF + BNF TEST28 + TEST31 -This mine proposal will have adverse effects on whitebark pine by removing them along the Burntlog route. ● PNF + BNF TEST34 - There would be a net increase in groomed or designated over snow routes over baseline in lynx analysis units. ● PNF + BNF TRST04 - Tribal consultation is ongoing but restoration, enhancement, and maintenance measures have not been agreed upon, it seems likely that some effects to plant communities of tribal interest would be unavoidable. 		<p>Project record and briefly describes if the project applies to, complies, or does not comply with each plan component. Specifically:</p> <p>PNF standards #1302: Mechanical vegetation treatments are not a component of the alternatives, other than required for transmission line upgrade and road construction.</p> <p>BNF ST01: No amendment needed because POO/restoration plan include mitigations. Impacts disclosed in Section 4.10.</p> <p>PNF SWST02: No amendment needed. See Section 4.5.2.2 of the SDEIS which documents detrimental disturbance would remain at 15% or below.</p> <p>PNF + BNF ST03: Unsure which plan component is being referenced.</p> <p>PNF + BNF LSST02: ROWs associated with this Project are on private land.</p> <p>PNF + BNF LSST12: Addressed in the Fish and Aquatic Resources Mitigation Plan and the Fishway Operations and Management Plan.</p> <p>PNF + BNF MIST09: Addressed in the operating plan and DEIS.</p> <p>PNF + BNF SWST06: Addressed in the SDEIS (Section 4.9). Many cooperating and consulting agencies included in Project development.</p> <p>PNF + BNF SWST07: Addressed by water quality management plan.</p> <p>PNF + BNF SWST10: Included as environmental design features (Section 2.4.9, Table 2.4-12).</p> <p>PNF + BNF SWST12: Slope stability is addressed in the SDEIS Section 4.2.</p> <p>PNF + BNF TEST03: Included as environmental design features (Section 2.4.9, Table 2.4-12).</p> <p>PNF + BNF TEST04: Adverse effects on proposed or candidate species would not lead to listing.</p> <p>PNF + BNF TEST07: This is addressed in the proposed amendment (SDEIS Appendix A).</p> <p>PNF + BNF TEST08: No alternatives would affect the long-term persistence of TEPC plant species.</p> <p>PNF + BNF TEST11: This is included as a design feature.</p> <p>PNF + BNF TEST15: Does not apply to the Project.</p> <p>PNF + BNF TEST28 + TEST31: Section 7 consultation for whitebark pine is being conducted.</p> <p>PNF + BNF TEST34: There would be no increase to groomed over snow mileage.</p> <p>PNF + BNF TRST04: Addressed in SDEIS (Sections 1.8, 4.24, 6.2.3).</p> <p>PNF + BNF WIST01: Mechanical vegetation treatments are not a component of the alternatives, other than required for transmission line upgrade and road construction. Standard deleted for BNF during 2010 Amendment.</p> <p>PNF + BNF WIST02: No sensitive species would trend towards listing under ESA as result of implementation (SDEIS Section 4.13).</p> <p>PNF + BNF WIST03: Included as environmental design features (Section 2.4.9, Table 2.4-12).</p>

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			<ul style="list-style-type: none"> ● PNF + BNF WIST01 - This standard may not be met depending on the exact location of project components in relation to large tree size class distributions by potential vegetation group with the project's watersheds. ● PNF + BNF WIST02 - Sensitive plant species surveys have not been completed for the project area so some impacts to habitat may be unavoidable even with mitigation. They may be project facilities located in sensitive plant, wildlife or fish treaty-resource areas that may contribute to ESA listing in the future. ● PNF + BNF WIST03 - Proposed mitigation measures may not avoid disruption of treaty resource reproductive success during nesting or denning periods given the year-round nature of the proposed mine. ● PNF + BNF WIST05 - Surveys have not identified active nest stands, but there would be direct loss of mature forest habitat. ● PNF + BNF WIST06 - Proposed mitigation measures may not avoid displace of treaty reserved wildlife resources in winter/spring ranges given the year-round nature of the proposed mine and the intensity of the noise, air quality, and water related impacts anticipated. ● BNF-21 #2154 - New roads (Burntlog sections) would be constructed in riparian areas and adverse effects to treaty reserved resources and their habitat may be realized by implementing this project without demonstrable short- or long-term benefits to those species or their habitats. 		<p>PNF + BNF WIST05: No known active nests in proposed activity areas (SDEIS Section 4.13).</p> <p>PNF + BNF WIST06: Included as environmental design features.</p> <p>BNF-21 #2154: Analysis demonstrates avoidance of adverse effects (SDEIS Section 4.11 and 4.12). ESA consultation ongoing.</p>
Samuel Cousins		6	<p>Forest Plan Protections Dropped. The Proposed Project would need to make multiple Amendments to the Payette and Boise National Forest Plans to allow the Agency to waive important safeguards for the land and waters of the Stibnite area and set a precedent weakening all Plan protective measures. This is unacceptable. The Forest Plans' Standard and Guidelines are the product of decades of laborious public review and comment, give-and-take, and balancing of uses and interests. They implement the Forest Plans' Goals and Objective at the Forest or M.A. level. There are long-standing reasons for each of them. None should be amended casually just to allow one Project to be constructed and operated. They should not be amended unless there is no other environmentally preferable option or alternative available to meet the limited requirements of the archaic 1872 General Mining Law. Amending them should not become a precedent for the Forest to cite in further ignoring its own Standards and Guidelines, those or other ones, on the Forest in the future. The DSEIS needs to upgrade the justification for each of the Forest Plan amendments it proposes. But first, the Forest Service needs to take a good hard look at reducing the number of amendments by adjusting the Alternatives to conform with the Plan Standards and Guidelines and land allocations. This is especially justified in one of the most environmentally critical and sensitive areas of the Payette NF that has intense public interest and scrutiny.</p>	FPA	The NFMA provides that "plans can be amended in any manner whatsoever" (16 U.S.C. 1604(f)(4)). The 2012 rule provides that, "[t]he responsible official has the discretion to determine whether and how to amend the plan." (36 CFR 219.13(a)).
Samuel Cousins		29	<p>23. Forest Plan Amendment. The DSEIS briefly and inadequately handles the attempt to make numerous Forest Plan amendments. It tries to make the Plans accommodate the Project, rather than take the harder route and make the Project accommodate the Forest Plans. The 36 CFR 219 Regulation requirements (219.13 (b) (5)) need to be fully met.</p>	FPA	The responsible official must determine which substantive requirements within §§ 219.8 through 219.11 of the 2012 rule are directly related to the plan direction being added, modified or removed by the amendment, and apply those requirements to the amendment and must clearly document the rationale for the determination of which substantive requirements apply and how they were applied. The rationale for how the amendments meet the applicable substantive requirements and rationale for each are identified for each proposed amendment in Table 1, Table 2, Table 3, and Table 4 of Appendix A of the EIS.
John Rygh		3	<p>With regard to soil impacts and reclamation success, the following two issues are identified under the heading of Soils and Reclamation Cover Material (SDEIS p. 4-74).</p> <p>Issue: The SGP may result in long-term adverse impacts to soil resources.</p> <p>The definitive answer to the first issue is "yes it will". Section 4.5.2.2 indicates that Total Soil Resource Commitment (TSRC) guidelines in the PNF Forest Plan to limit TSRC to 5% of activity area would be violated with the project leading to a TSRC of 17%. Reclamation activities would not reduce this amount as noted on p. 4-78:</p>	FPA	<p>Section 2.6 of the SDEIS discusses 17 alternatives that were considered but were eliminated from further detailed analysis in the EIS for the reasons stated. These included underground mining and other alternatives that were considered.</p> <p>Underground mining practices were common in the past but have largely been replaced by open pit mining due to efficiencies of scale provided by improvements in mining equipment and methods. Underground mining is still conducted worldwide but has been shown to only be practical when the target ore body is too deep to mine profitably by open pit and the ore grades are high enough to cover costs. The history of the Stibnite property is an example of</p>

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			<p>"As a general rule, the processes responsible for restoration of soil productivity occur over a very long timeframe (centuries to millennia) and do not directly correlate to successful reclamation, which is mainly oriented to short-term objectives. And, "Thus, the recovery of greater than 40 percent soil productivity within a SO-year timeframe is unlikely {Forest Service 2022c).</p> <p>This unavoidable conclusion led to the Forest Service proposing a Forest Plan Amendment (FPA) which would waive the TSRC guidelines. This action may have been avoided if an underground mining alternative had been seriously considered rather than being summarily dismissed early in the analysis.</p> <p>Such an alternative combined with paste tailings backfill would have a drastically smaller surface disturbance footprint than the 2021 MMP alternative. The Forest Service should at least consider whether such an alternative could avoid having to make this FPA.</p> <p>As an aside, one wonders whether by giving the project a free pass on TSRC, can revegetation simply be foregone under the rationale that since the soil resource is irretrievably destroyed, what's the point in trying to accelerate soil development by a decade or two when it will take centuries or millennia to regain productivity? One would hope not.</p>		<p>this economic transition. The earlier mining activities at Stibnite were underground but later mining operations were all of the open pit type.</p> <p>The 2021 feasibility report only describes open pit operations for the proposed target orebodies. If underground mining of these orebodies was technically and economically feasible, we can be confident the experts involved with the NI-43-101 Feasibility Report would have discussed it. It can therefore be concluded that applying underground mining methods to development of the orebodies included in the 2021 MMP would not be financially feasible or comply with the purpose and need for the Project.</p> <p>If the same orebodies were to be developed by underground methods, other aspects of the project would not be feasible. The amount of development rock removed from the underground workings would be much less than is proposed in the 2021 MMP. This would provide less material for backfilling the Yellow Pine pit and to buttress the TSF embankment.</p> <p>The 2021 feasibility report does discuss the presence of potential, future underground mine targets for other, higher-grade orebodies within the SGP property. The report is clear that current exploration information of potential underground targets is insufficient and additional exploration of these targets is necessary before providing the required information on ore grades, continuity, scale, and geotechnical characteristics required to define a mineral resource. Therefore, future underground mining operations at the SGP is currently too speculative for evaluation under NEPA.</p> <p>There is no need to disregard Perpetua's purpose and need for the Project and to develop alternatives that may be purely conjectural and whose implementation would be remote and speculative.</p> <p>Revegetation of Project related disturbance is required per Forest Service reclamation requirements as described in SDEIS Section 2.4.7 and Table 2.4-12.</p>

General and Out of Scope

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Jim Constantopoulos	1007	3	I agree with the statement, "While no single alternative to a component of Midas's mining plan may prove to be solely without environmental or social impact, Midas has employed a technically thoughtful and industry standard approach in its consideration of the siting of the facilities necessary to support the development of their mineral deposit." The commitment to environmental and social issues is commendable, and I am impressed with how they propose to involve the community and regional stakeholders. The planned cleanup of legacy operations, environmental preservation, and restoration of fish habitat are critical aspects of this project which are well thought-out.	GEN	No further response required. General in nature or position statement.
Jim Constantopoulos	1007	4	<p>The changes outlined in the Modified Plan of Restoration and Operations (MODPRO2) reflect a solid commitment to environmental protection and restoration. The importance of this project in supplying the critical resource antimony in an environmentally conscious operation is of exceptional significance.</p> <p>Perpetua has collected a large amount of baseline data on present environmental conditions, including air, surface waters, groundwater, and much more, providing them with high-quality data to monitor the operation's environmental impact. Some of the more important activities that contribute to their environmentally sound plan include the fish passage around the Yellow Pine pit (an innovative solution), re-mining and processing the legacy tailings in the Meadow Creek Valley, reducing arsenic and mercury releases, and the backfilling of the open pits. I am sure that one concern individuals may have is the</p>	GEN	No further response required. General in nature or position statement.

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			Tailings Storage Facility (TSF). The planned engineering design appears to be very well thought out and will ensure the long-term stability of the TSF.		
Joni Stevenson (Cascade School District Superintendent)	3595	2	Perpetua Resources has been proactive in supporting the needs of the Cascade School District in a variety of ways. Over the years they have provided us with school supplies for students at the start of the school year, winter clothing for kids in need, grant money to support our Science classes, environmental impact requests to support initiatives with recycling, and support through scholarship opportunities for our graduating students. Perpetua Resources has been a great partner for the Cascade School District and we appreciate the support that they have shown our students, staff, and community. They have been an integral part of our journey of living into our mission statement of “Engaging every student every day in character development and rigorous education.”	GEN	No further response required. General in nature or position statement.
Greg Chaney (Representative Legislative District 10, Seat B)	4147	3	Perpetua has demonstrated its commitment to improving the Stibnite mining region, restoring the land to the way nature intended it to be. Considering the environmental degradation caused by previous mining activity, private investment is likely the only way we’ll restore the beautiful lands and waterways in that region of the state. Barriers blocking water passages for salmon and steelhead fish will be removed and plans focusing on spawning habitat access will create long-term improvements to our environment. This summer, the company began addressing the water quality at Stibnite. Through an Administrative Settlement Agreement and Order on Consent with the EPA and other federal agencies, Perpetua Resources began diverting waterways away from contaminated materials and rebuilding stream channels with geosynthetic liners to prevent water from interacting with the legacy mine waste. Next summer, they will begin picking up and safely storing 325,000 tons of historic mine waste. This was a voluntary action to start making Stibnite a better place.	GEN	No further response required. General in nature or position statement.
Sally Toone (Representative Legislative District 26)	4149	2	Perpetua has an important plan to become a steward of environmental restoration. The project proposed by the company will take an area damaged by 100 years of mining activity and invest the capital needed to make that beautiful area healthy once again.	GEN	No further response required. General in nature or position statement.
Sally Toone (Representative Legislative District 26)	4149	3	Perpetua has already acted on its pledge to make this process a community-centric initiative. By creating and signing their 2018 Community Partnership Agreement which led to the formation of the Stibnite Advisory Council, Perpetua Resources has given local communities an equal voice to provide input on the project design and created a system of transparency and accountability that will continue throughout the life of the project. In 2021, the Stibnite Advisory Council created a citizen’s water monitoring program to verify the ground and surface water quality conditions at Stibnite. This program is designed to independently monitor the water quality at Stibnite and it demonstrates the company’s values of transparency and accountability. It’s a clear indicator of this company’s guarantee of being a good corporate citizen and a model that we should not take for granted.	GEN	No further response required. General in nature or position statement.
Sally Toone (Representative Legislative District 26)	4149	4	I am pleased to welcome a company like Perpetua Resources Idaho that is clearly committed to investing in our communities and responsibly operating here for years to come. Thank you for your consideration on this important matter.	GEN	No further response required. General in nature or position statement.
Terry Gestrin (Representative)	4151	4	In February 2018, the Idaho House of Representatives and Senate passed, with overwhelming support, a joint memorial asserting that Idaho supports actions by the U.S. Forest Service in partnership with other state agencies to move forward to approve the Stibnite Gold Project in a timely and cost-effective manner. As lead sponsor of this joint memorial, I feel that this project is an exceptional opportunity to clean up years of environmental degradation and to provide significant economic contributions to our state. I have attached HJM 10 to this letter for your review.	GEN	No further response required. General in nature or position statement.
Carl Crabtree (Senator, Senate Finance)	4152	3	The company signed an Administrative Settlement Agreement and Order on Consent with the EPA, DOI and USFS in early 2021 to address time critical water quality concerns at Stibnite. This summer, they rerouted 3 waterways away from contaminated legacy material and put these waterways into lined	GEN	No further response required. General in nature or position statement.

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Committee - Vice Chair)			channels to prevent future interaction. Next summer they will begin picking up and safely storing 325,000 tons of historic tailings and waste. The company has committed to spending millions of dollars to carry out this work. Which I view as a testament to their commitment to restoring Stibnite to its original glory so that future generations of Idahoans can enjoy this remote area of our backcountry.		
Peter Riggs (Senator, Legislative District 3)	4153	3	Beyond the economic benefits of this project, The Stibnite Gold Project (SGP) is the only proposed solution for restoring the historic Stibnite Mine. The mine played a critical role in the WWI & II war efforts, which means that the majority of the mining up there occurred before the major federal environmental regulations were passed in the 1970s. As a result, the site is in serious need of environmental restoration. But no one is legally responsible for doing so. The SGP is the perfect opportunity to allow a private entity to go in there, mine the remaining minerals, and then use profits from mining to carry out tens of millions of dollars of necessary restoration work. The company plans to pick up, reprocess and safely restore over 10.5 million tons of historic tailings, restore the East Fork of the South Fork of the Salmon River channel to allow native fish species, including Chinook Salmon, to reach over 20 miles of currently inaccessible habitat, and to remove the largest source of sedimentation in the watershed.	GEN	No further response required. General in nature or position statement.
Fred Martin (Senator, Senate Health & Welfare Chair)	4178	3	Additionally, our state needs private investment to revitalize the Stibnite area. The government previously tried to repair the legacies left behind from over a century of mining, but there are still over 10 million tons of tailings and waste rock littering the project site. This project would reprocess and safely store these materials and prevent the negative impacts they cause on water quality while also repairing over 12 miles of waterways. Perpetua Resources is committed to reclaiming and restoring this land just as much as mining it, this is exactly what our state needs.	GEN	No further response required. General in nature or position statement.
Fred Martin (Senator, Senate Health & Welfare Chair)	4178	4	This summer they showed their commitment by rerouting streams away from historic mine waste and putting them back into lined stream channels to prevent future interaction with the waste. They've also planted over 60,000 trees and produced over 53,000 kWh hours of solar energy at Stibnite since they installed their solar panels over 5 years ago.	GEN	No further response required. General in nature or position statement.
Rick Youngblood (Representative, House Appropriations Committee)	5376	3	On top of the economic benefits of the project, the Stibnite Gold Project is the only viable solution for restoring a site that has been abandoned after 100 years of mining. Without the private investment that Perpetua's plan entails, Stibnite may never be restored. It will cost tens of millions of dollars to reclaim Stibnite and even more to return the site as close to natural conditions as possible like Perpetua has committed to do. And this restoration will not occur at the expense of the taxpayer. It is a solution that benefits all stakeholders involved and we would be remiss to ignore this opportunity.	GEN	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Chenele Dixon (Representative)	7139	2	I understand that Perpetua has placed a heavy emphasis on the surrounding communities in the area since they first started on the project over 12 years ago. Through that dialogue and the NEPA process there have been several key improvements to the plan. Some of these improvements include a reduction in the project footprint by roughly 13%. A reduction in mined material by 10%, 44 million tons and elimination of waste rock storage areas. The new plan also adds extra geosynthetic covers for additional long term water quality protection. Develops additional habitat features to replace bull trough habitat. And modifies the ore processing circuit to improve tailings chemistry.	GEN	No further response required. General in nature or position statement.
Dan Garner (Representative, District 34)	7142	3	Furthermore, approval of Stibnite would result in a \$1 billion investment from Perpetua, which is tied to their commitment for revitalization of an abandoned mine site. As outlined in the SDEIS, Perpetua plans to vastly improve on-site and off-site water quality, uplift wetlands quality, and open waterways that are critical for chinook and bull trout populations, as well as steel head spawning.	GEN	No further response required. General in nature or position statement.
Jack Nelson (Representative, District 26)	7149	2	Furthermore, the project will clean up over 10 million tons of legacy tailings and waste, restore the East Fork South Fork of the Salmon River and reconnect fish to 20 miles of river habitat that have been blocked over the past 80 years.	GEN	No further response required. General in nature or position statement.

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John Vander Woude (Representative)	7154	2	<p>A hundred years of mining in the Stibnite area has greatly harmed the environment. The abandoned pits, accelerated erosion, and elevated metals in surface and ground waters have harmed Idaho and marred its natural beauty. As laid out in their MMP, Perpetua is committed to cleaning up and restoring the environment surrounding the mine site. Restoring our land and our waters is essential to the future of Idaho's great outdoors and critical to the long-term health and well-being of the community.</p> <p>And right now, no one is responsible for restoring Stibnite. If the USFS selects the no action alternative, Stibnite might never be restored and our Salmon and other wildlife populations will continue to suffer for it.</p>	GEN	No further response required. General in nature or position statement.
Josh Wheeler (Representative, District 35)	7156	2	<p>Idahoans depend on our natural lands and it is important that we repair the Stibnite area for future generations. The total restoration needed in this area would not be viable without private investment. Perpetua has signaled its commitment to a \$1 billion dollar investment in this project, which would include numerous safeguards and revitalization efforts during operations.</p> <p>Previous damage from outdated mining practices includes blocked fish passages on the Salmon River, elevated levels of metals in our waterways, and accelerated erosion. Revitalization efforts in all these areas of concerns are included in the Supplemental Draft EIS for the Stibnite Gold Project. When you accompany Perpetua's vision for restoration with its financial commitments, this project needs to receive a greenlight by the Forest Service.</p>	GEN	No further response required. General in nature or position statement.
Judy Boyle (Representative, District 9, Seat B)	7158	3	<p>However, it is not only Idaho's economy that will benefit from the project. The Stibnite Gold Project area has been mined for over 100 years leaving legacy issues unsolved by either industry or government. With the Stibnite Gold Project, surrounding communities finally have a workable solution to address these expensive and complex legacy issues thanks to the willingness of Perpetua to tackle problems not of their creation.</p> <p>The area is plagued with abandoned pits, blocked fish passages, accelerated erosion, increased water sedimentation and many other environmental hazards. This project provides the type of private investment needed to restore these lands and re-establish the salmon and steel head fish passages for years to come.</p> <p>Perpetua has painstakingly studied many alternatives for each project phase of operations and restoration. We all should be very grateful for their steadfast efforts for Idaho.</p>	GEN	No further response required. General in nature or position statement.
Sage Dixon (Representative, District 1, Seat B)	7160	3	<p>Perpetua Resources has also shown that they will be excellent stewards of our lands by giving restoration and mitigation of harm brought on by prior projects a high priority. Thanks to Perpetua's willingness to invest more than 6 years of research and planning to address issues not of their own making, the Payette National Forest and surrounding communities now have a solution. The proposed plan submitted to the U.S. Forest Service is the most advantageous choice in terms of the community, the environment, and economic viability. I commend the company for its unwavering efforts to enhance and restore Stibnite, Idaho's natural beauty.</p>	GEN	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Brooke Green (Representative, District 18)	7183	2	<p>The Stibnite Gold Project provides a unique opportunity for a private entity to restore a site abandoned after 100 years of mining. Today, no one is legally responsible for restoring Stibnite. Therefore, the greatest threat to native fish populations and the East Fork of the South Fork of the Salam River is doing nothing.</p>	GEN	No further response required. General in nature or position statement.
Brooke Green (Representative, District 7)	7185	3	<p>Perpetua Resources is also dedicated to assisting in the cleanup of harm caused by years of mining that took place prior to stringent state and federal regulations, long before Perpetua was involved.</p> <p>With the removal of potentially dangerous minerals from our waterways and the removal of obstructions that currently prevent native salmon populations from reaching the Salmon River, Perpetua Resources' plans include a significant reclamation effort.</p>	GEN	No further response required. General in nature or position statement.
Doug Pickett (Representative, District 27)	7187	3	<p>Moreover, Perpetua has shown its commitment to the community as it pertains to this project. After 12 years, the company has worked with stakeholders to find the highest environmental standards on Stibnite</p>	GEN	No further response required. General in nature or position statement.

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			Gold. This includes 12 years of project investigation, six years of NEPA review/public review, combined with more than a thousand discussions and presentations on the viability of this project.		
Dustin Manwaring (Representative)	7189	2	<p>As it stands today, the Stibnite Gold Project site is a brownfield site. The U.S. government tried to restore the area years ago but the work that was done didn't go far enough. The old tailings piles left behind by previous mining companies lay unconstrained on the valley floor and are therefore a leading source of metal loading in the waterways at Stibnite.</p> <p>No one is legally responsible for restoring Stibnite. If this project is not approved, Stibnite may never be restored and the legacy mine issues will continue to impact water quality and wildlife. It is our duty as Idahoans, and mine personally as an Idaho State Representative, to help find solutions for places like Stibnite. And it is my belief, that Perpetua Resources' 2021 Modified Mine Plan as laid out in the supplemental draft environmental impact statement is the best solution for Stibnite.</p>	GEN	If the No Action Alternative were selected, Phase 1 of the ASAOC scope of work would still be completed.
Jim Guthrie (Senator, District 28)	7190	3	<p>In order to ensure that their operations leave the land in a better condition than it was found, Perpetua Resources has outlined in the 2021 Modified Mining Plan with the U.S. Forest Service how it will act as an environmental steward. Continuous operations, safety measures, and technological tools are cutting edge and fully compliant with all laws and regulations. Given the changes outlined in the Supplemental and the six years of regulatory review this project has undergone, I think the NEPA permitting process has been successful. The Stibnite Gold Project has improved steadily over time.</p> <p>And to help get the best version of this project approved, Perpetua and the US Forest Service both used community feedback. Now is the time to start this thing up.</p>	GEN	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Doug Okuniewicz (Senator, District 3)	7191	2	I am impressed with Perpetua Resources' commitment to repairing legacy environmental issues left over from mining activity that took place on and off for more than 100 years. This is a major investment that right now, no one other than Perpetua is willing to make. This private/public partnership is the right approach for Idaho and will solve environmental issues while providing the area with a significant economic boost. In reviewing the SEIS, I am very impressed with the further improvements the company has made to its plan based on the feedback they received on their draft EIS.	GEN	No further response required. General in nature or position statement.
Doug Okuniewicz (Senator, District 3)	7191	3	Some of these changes include the reduction of Hangar Flats Pit by 70%, a reduction in mined material by 10% and the inclusion of Stibnite Lake and more geosynthetic covers to features at Stibnite. The best part is that they anticipate environmental improvements from these changes, including: water temperatures reduced to be at or below the current conditions, uplift in wetlands quality and a 13% reduction in the project footprint over the original project design.	GEN	No further response required. General in nature or position statement.
Tammy Nichols (Senator, District 10)	7195	3	<p>There are several key components to this important project, following are just a few:</p> <ul style="list-style-type: none"> • Domestic source of antimony, this reserve could satisfy about 35% of overall commercial demand in the US for antimony and all Department of Defense demand • 500-600 direct jobs • \$232 million in average annual expenditures • Stibnite Gold Project will leave water quality considerably better than it is today • Open 21 miles of perennial habitat that is inaccessible today • Leave 63% more wetland acres 	GEN	No further response required. General in nature or position statement.
Todd Lakey (Senator)	7196	3	According to the project proposal, Perpetua Resources has given environmental stewardship a lot of consideration. Previous mining operations in this area were subject to less strict regulations, which resulted in an unfavorable impact on the environment. But this project will use private funding to repair environmental damage from the past.	GEN	No further response required. General in nature or position statement.
Melissa Durrant (Representative,	7199	3	The majority of mining that previously occurred in the Stibnite area took place long before reclamation provisions were mandated by both the state and federal government. This left the area afflicted by deforestation and accelerated erosion. Perpetua has committed to repairing the damage, as outlined in	GEN	No further response required. General in nature or position statement.

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District 23, Seat A)			their 2021 modified mine plan, and have promised to leave the land in a better condition than it is currently. They actually have already started the clean up process earlier this year and will continue to do so going forward and through the life of the mine.		
Ned Burns (Representative, District 26)	7200	2	Perpetua wants to rehabilitate the habitat around Stibnite through extensive reclamation. Perpetua has pledged to help reestablish the Salmon River's fish passages, clean up the landscape, and improve water quality by extracting toxic metals and sediment from waste rock that sits in our waterways, as explained in their 2021 Modified Mine Plan (MMP). Additionally, Perpetua's Preferred Alternative to use the Burntlog Route in the SDEIS will eliminate the need for a permanent water treatment, improved water temperature, six fewer stream crossings, and the safest route of transportation for the community and environment. These efforts will continue with the use of sustainable and modern mining practices, ensuring that the land is cared for after years of neglecting environmental legacies.	GEN	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Rod Furniss (Representative, District 31, Seat B)	7201	2	Therefore, the SDEIS improvements will provide: <ul style="list-style-type: none"> • A 13% reduction in the project footprint from the original design. • Water temperature reduced by 7-degree Fahrenheit to get to baseline conditions or below. • Water treatment is no longer needed permanently. • Reduces mined material by 10% (44 million tons). • Reduces the size of the Hangar Flats pit by 70% and completely backfills this pit. • Eliminates waste rock storage areas (168 acres). • Adds extra geosynthetic covers to protect long-term water quality. • Develops additional habitat features to replace bull trout habitat. • Increases riparian vegetation and low flow channels to lower stream water temperatures. 	GEN	No further response required. General in nature or position statement.
Ron Mendive (Representative)	7202	2	First off, I commend the U.S. Forest Service for promptly releasing the SDEIS, or supplemental draft environmental impact statement. I've recently held the position of Chair of the House Local Government Committee, and I've worked in the mining, logging, and construction industries in our state, so I have a particular interest in this project. I'm convinced that the SGP will benefit Idaho's economy as well as the environment after carefully reading the SDEIS. Therefore, it is in the state's best interest to adopt the Preferred Alternative presented in Perpetua Resources' proposal in order to keep the permitting process moving.	GEN	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Ron Mendive (Representative)	7202	4	The commitment of Perpetua Resources to safeguarding and enhancing the environment surrounding the Stibnite site is another advantage of this project. The region is in terrible shape as a result of years of legacy mining that took place before the strict regulatory requirements we now have in place. The SDEIS's Modified Mine Plan (MMP) by Perpetua will ensure that restoration and reclamation take place and that Stibnite is ultimately left in a better state than it is now.	GEN	No further response required. General in nature or position statement.
James Petzke (Representative, District 21)	7206	3	As a public-land hunter, Perpetua's pledge to safeguard the lands in and surrounding the Stibnite Gold Project area is another reason why I support this company's plan. We have already seen adjustments within the permitting process. There has been a 13% reduction in the project footprint over the original design. Water temperatures will be reduced by seven degrees to get to baseline conditions or below. And water treatment will no longer be needed permanently.	GEN	No further response required. General in nature or position statement.
Jerald Raymond (Representative, District 31, Seat A)	7210	3	Furthermore, Perpetua is committed to correcting the past mistakes and damage from previous mining. Right now, lands suffer from accelerated erosion, deforestation, and blocked waterways. Restoration of these lands and waterways is costly and requires private investment, which is one of the commitments from Perpetua in the SDEIS. Perpetua promises to clear up waterways and focus on the spawning habitats of several fish species, which will provide a fruitful habitat for these fish for years to come.	GEN	No further response required. General in nature or position statement.

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Jon O. Weber (Representative, District 34)	7212	3	Furthermore, the antimony reserves in the Stibnite Gold site is essential for America's national defense capabilities. Currently, 90% of the global antimony supply is sourced from Russia, China, and Tajikistan. With antimony used to manufacture ammunition for the US military, I believe it's imperative to locally source this critical resource. With Idaho having the only identified reserve of antimony in the US, it's time to act.	GEN	No further response required. General in nature or position statement.
Julie Yamamoto (Representative, District 11, Seat A)	7213	3	Beyond the educational and economic benefits of the SGP, Stibnite has been abandoned after 100 years of mining. Today, the historic mine site is plagued by legacy mine waste and features. Such as the Yellow Pine pit lake which blocks native fish species from accessing over 25 miles of habitat. Or the 10.5 million tons of spent ore and mine waste that lays unconstrained on the valley floor. No one is responsible for restoring Stibnite. Without Perpetua's investment at Stibnite, the site may never be restored to its natural glory. Perpetua's modified mine plan is the best, and frankly the only, solution for restoring the site. And it will truly be a boon for Idaho.	GEN	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Kevin Andrus (Representative, District 35)	7215	2	Perpetua is using the Stibnite Gold Project as an opportunity to clean up damage left from over 100 years of mining in the Stibnite Mining District. Working closely with state, federal and local officials, the company has designed a plan that will ensure Idaho's lands and waterways are restored. Currently, both the salmon and steelhead fish populations that pass-through Stibnite are blocked and cannot return to the headwaters of the Salmon River.	GEN	No further response required. General in nature or position statement.
Doug Ricks (Senator, District 34)	7259	3	Moreover, the need for this project is critical, as it would result in the only American-mined source of antimony. Not only would this bolster the transition to clean energy, through its use in long duration storage batteries and semiconductors, but it would provide a great asset to our US military. Antimony is essential to the primers in hundreds of munition types, which are currently obtained through foreign imports. Given 90-percent of the world's antimony is currently mined in China, Russia, and Tajikistan, I strongly believe it's time to act on the Stibnite Gold Project.	GEN	No further response required. General in nature or position statement.
Susan Dorris (Mayor, Donnelly)	8432	4	As with many of the respondents to the SD EIS, we support the Stibnite Gold Project for multiple reasons but want to focus on two major points - the ecological considerations and the economy. However, we believe that Perpetua Resources's efforts to improve and begin cleaning up the mess that exists at Stibnite now is important to highlight. Its restorations efforts will enhance the quality of water and improve the area from a conservationist's perspective. Even The Star News has mentioned the potential for improved water quality.	GEN	No further response required. General in nature or position statement.
Joe Iveson, Mike Paradis, Viki Purdy (Commissioners, Adams County)	8680	2	<p>The commitment to involving local community members in the development and planning of the Stibnite Gold Project became more concrete with the creation of the Stibnite Advisory Council. The Stibnite Advisory Council consists of representatives from each of the communities that entered into the community agreement with Perpetua Resources in 2018. Through the Council, local community members have been able to learn more about the project, request additional information from Perpetua Resources, voice concerns, and have their questions answered. This has fostered a deep understanding of the project and a sense of collaboration. In addition, SAC has been able to work with Perpetua and has requested funding from Perpetua to do a third-party analysis for validation of the water quality results that Perpetua has been sharing with agencies and the public over the last couple of years, this will be an on-going program. The Council also asked for a third-party review of their tailings storage facility, and this has been accomplished and it appears to us that Perpetua has nothing to hide, they just have a good plan.</p> <p>In our opinion, there has been a high level of transparency and accountability from Perpetua Resources throughout the planning stages of the Stibnite Gold Project and during the past six years of the National Environmental Policy Act (NEPA) review process since the formal submission of the Plan of Restoration and Operations (PRO) in 2016. After hearing from and meeting with Perpetua Resources over the past several years and reviewing the SDEIS published last month by the U.S. Forest Service, we believe the company is well-positioned to bring positive change to our region, both environmentally and economically.</p> <p>In the modern world, the rigorous environmental standards that exist today under NEPA, and strict financial assurance requirements will help ensure Perpetua Resources completes the approved mining</p>	GEN	No further response required. General in nature or position statement.

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			and restoration plan. We have observed Perpetua Resources consistently making every effort to work with local, state, and federal regulators; community members; and other stakeholders to ensure their plan creates new economic opportunities for rural communities like ours while at the same time ensuring environmental issues created by past operations are cleaned up to modern standards.		
Lori McCann (Representative, District 6, Seat A)	10234	2	In my travels through District 6 and down Idaho's back roads, I have witnessed firsthand the effects of decades of mining activity. We cannot afford to pass up the opportunity presented by Perpetua Resources' modified mine plan to clean up these legacies and bring modern mining to brownfield settings.	GEN	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Rick Cheatum (Representative, District 28)	10249	2	Stibnite Gold would allow Perpetua to: <ul style="list-style-type: none"> • Invest roughly \$1 billion into the Valley County community and provide 500-600 jobs. • Improve water quality and temperature, eliminate the need for permanent water treatment, and greatly reduce arsenic levels in the Salmon River. • Domestically source the only identified source of antimony in the US, which is critical in the production process of US military munitions and semiconductors. 	GEN	No further response required. General in nature or position statement.
Conway Ivey (Executive Chairman, Ivy Minerals, Inc.)	13274	2	Compared to the No Action Alternative, the SGP will fulfill the purposes of the National Environmental Policy Act (11NEPA)} by "encourage(ing) productive and enjoyable harmony between man and his environment to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation". The MMP will also help improve the balance of the "multiple use policy" of the US Forest Service by "managing the forest lands for sustainable multiple uses to meet the diverse needs of people while insuring the health of our natural resources." The importance of the multiple use policy for Valley County's economic well-being is emphasized by 87% of Valley County being under federal management, with the overwhelming majority of this being U.S Forest Service lands. Lack of balance in implementing this policy has harmed many local communities through the elimination of employment opportunities and a reduction in tax base that supports local infrastructure and public services. This has resulted in many younger residents with families having to move from the area in order to earn a sustainable living.	GEN	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Conway Ivey (Executive Chairman, Ivy Minerals, Inc.)	13274	5	The No Action alternative would do nothing to treat water draining from 5 historic ad its in the project area. And it will not result in removal or treatment of mining wastes from previous operators in the Stibnite mining area, where metals will be leached out into groundwater and surface waters for many decades or centuries. The SDEIS suggests that Perpetua may address some impacts from prior mine waste in a voluntary "Bridge Phase" even if the SGP is not approved. This is unlikely because if the MMP is not approved it is questionable whether Perpetua would have the financial resources or justification to continue. But the SDEIS is explicit in saying that Phase 2 and Phase 3 of the Administrative Settlement Agreement and Order on Consent (ASAOC) between Perpetua, EPA, and the USFS will not be implemented unless the SGP is approved. Thus, the no action alternative all but guarantees that potentially hazardous mine drainage, and pollution into the East Fork South Fork of the Salmon River (EFSFSR) from past mining wastes will continue, to the long-term detriment of both water quality and ESA fish species. By extension, the SGP will greatly increase environmental remediation activities in the project area though both its planned actions, and the probable implementation of all phases of the ASAOC, which is an enormous environmental benefit that should have been much more clearly stated in the SDEIS.	GEN	The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.
Conway Ivey (Executive Chairman, Ivy Minerals, Inc.)	13274	8	As I considered the list of 172 mitigation requirements and commitments, I was also impressed by the environmental benefits of the overall plan being proposed by Perpetua for the project area. Particular highlights include: <ul style="list-style-type: none"> • Restoring fish access to the EFSFSR above the Yellow Pine Pit, and in Meadow Creek. The enormous expense of providing access via a tunnel during mine operations shows the level of commitment by Perpetua to environmental restoration. And the final mitigation plans for stream habitats and fish access 	GEN	No further response required. General in nature or position statement.

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			<p>as part of the mine reclamation activities ensure that excellent conditions will exist into perpetuity, despite the SDEIS's unwarranted complaint that shading and consequently water temperature control may be delayed because the vegetation associated with such restoration takes time to grow.</p> <ul style="list-style-type: none"> • The mitigation plans to eliminate the huge sediment inputs from Blowout Creek, and the attendant restoration of wetlands and aquatic habitat along the creek. This provides site specific benefits along Blowout Creek, but also system level benefits in Meadow Creek and EFSFSR for fish and aquatic habitats by eliminating this large, persistent sediment source. • The extensive engineering associated with the Tailings Storage Facility to prevent both any failure in the future, or the possibility of contaminated runoff. Critics of mining everywhere always claim that TSFs are environmental disasters waiting to happen. But Perpetua has worked to provide a design engineered in this application to have such a high factor of safety that future failures are extremely unlikely with a probability of not occurring at almost 100%. The long-term collection and treatment of seepage from the TSF also ensures long-term environmental protection. • A wide variety of wildlife protection measures, including some that, to me, seemed unnecessary (e.g., many of the restrictions on lighting). Even if lighting has some impact the SDEIS fails to recognize that wildlife have the capacity to adapt to a changed environment. This is evidenced by the caribou coexisting with the Alaskan pipeline and, closer to home, the winter movement of deer and elk into the populated areas of McCall to avoid wolf predators. A mining project has the potential to affect wildlife, for example by exclusion from areas of active operations. But the USFS and Perpetua requirements and PDFs, collectively, provide as much protection as is needed to avoid significant effects, and, as with aquatics, commits Perpetua as part of its operations and reclamation to monitor sensitive species while also providing a strategy to avoid, minimize or mitigate impacts to wildlife. • The many road construction, maintenance, and operations-related mitigations to ensure that roads used for the SGP are safe, erosion free, and do not lead to fish passage, fuel spill, or traffic related problems. <p>A mining project that provides so many benefits to society and simultaneously improves the environment should be easy for the USFS to approve, as you should. But this being 2022, there are many stakeholders who will oppose this project, not because of the project impacts and benefits, but because they oppose any economic development on USFS managed lands. The USFS needs to strongly consider how these opponents plan to clean up existing contamination in the SGP area? How will they restore fish passage past the Yellow Pine Pit? How will they improve fish passage at existing road crossings that do not provide it? And how do they propose to provide a comparable number and quality of jobs, the tax revenue, and the nationally strategic mineral antimony that the United States needs? If the answer is that they provide no pathway to any of these benefits then the USFS must reject those comments, however earnest, that the SGP should be denied by the USFS.</p>		
Conway Ivey (Executive Chairman, Ivy Minerals, Inc.)	13274	9	<p>I personally have been active in the immediate Big Creek/Yellow Pine area since 1964 and through my mineral exploration company since 1978. Anyone who has been active in the area loves and respects its beautiful environment. Our company owns a significant number of mining claims in the area and is also developing claims in Nevada and Arizona. I have spent more than 40 years in mineral exploration and development.</p> <p>I have worked extensively with the Payette National Forest (PAF), Valley County, residents in the Yellow Pine/Big Creek area, representatives of both the Nez Perce Tribe and the Idaho Conservation League and representatives of numerous federal agencies. Much of this activity was as a founding member of the Big Creek/Yellow Pine Collaborative addressing road issues in the area including those in part of the MMP operating area. This Collaborative was established and sponsored by Senator Crapo. My commitment to the Collaborative and its objectives is evidenced by my attendance in all but three of its monthly meetings during its six year existence. My attendance required my flying from South Carolina to Boise and thence to Cascade by automobile for every meeting I attended. As a result, I personally know many of the stakeholders that would be affected by the MMP, and have listened to and understand the goals and concerns of these individuals and groups. My commitment is also evident in the large effort to identify and then implement Storm Damage Risk Reduction measures on the mining</p>	GEN	No further response required. General in nature or position statement.

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			<p>access roads I use to access may claims. This work has repaired and improved roads, resulting in the prevention of thousands of tons of sediment from entering streams and rivers in the Big Creek watershed.</p> <p>Given this background and experience, I am certain that PAF will receive many positive comments from citizens of the region that believe strongly in the need for the SGP, and the economic and strategic mineral benefits that the project would entail. I am equally certain the Nez Perce Tribe and representatives of environmental organizations will oppose the project based on the specific narrow objectives of their organizations. From experience and observation, they will spare little time or expense to generate a laundry list of possible impacts of the MMP alternative that, however unlikely, they will argue should lead to USFS rejection of any alternative except the No Action one. In many instances at this point in the process they will bring up requirements for further study on nonmaterial speculative project impacts that only serve to delay the project. Chasing these non-material impacts with further analysis is tantamount to the USFS making a No Action decision resulting in further environmental degradation.</p> <p>Already this obstructive strategy has been productive; from Midas Gold's initial application to the USFS in 2016 we are now going on seven years of NEPA analysis with not one but two draft Environmental Impact Statements, this most recent one being over 1,600 pages long. Any USFS argument that Midas/Perpetua's modification of their plans for the SGP are the reason for this extended NEPA analysis is disingenuous because so many of those changes were necessitated by early and strenuous environmental objections by opponents to the project. This classic strategy of agency analysis, requests for project changes, more analysis, more changes, and so on has been aptly called "Analysis Paralysis", something opponents of the SGP are quite experienced at. Continued delay will be implementing without legal approval the No Action Alternative and increase the probability of a final NO Action outcome by greatly restricting Perpetua's financial options. And it will also be ignoring the DoD's needs for timely development of a critical mineral.</p>		
Kevin Vivian (President, Agri-Service)	14669	3	If the COVID-19 pandemic has taught us anything, it is that we must re-shore our supply chains and increase domestic production of the materials and products critical to our national security. We can no longer rely on China and Russia for our products.	GEN	No further response required. General in nature or position statement.
Glenna McClure (Mayor, Riggins)	14781	2	<p>There are risks inherent in any mining operation and we have had a number of concerns raised by members of our community about the Stibnite Gold Project. After reviewing these concerns with Bob Crump, a local resident, retired Physicist and our appointed representative to the Stibnite Advisory Council, we have been assured that the new Modified Mine Plan (MMP) addresses our concerns even better than Alternative 2 presented in the 2020 DEIS. Bob has ten years of experience as an Engineering Specialist performing probabilistic risk assessment (PRA) of nuclear power plants using tools such as fault tree analysis (FTA), accident sequence analysis (ASA) and failure mode and effects analysis (FMEA) while working at the Nation Engineering Laboratory in Idaho Falls and Gulf General Atomics in San Diego.</p> <p>With the development of the Stibnite Advisory Council (SAC), the City of Riggins feels that our representative and the representatives from the other cities and counties are working hard to address any community concerns with regards to the Stibnite Gold Project. This past year, SAC has been discussing areas of concern regarding the transportation of sensitive loads along our local roadways and have asked Perpetua to consider joint training sessions to help our local fire, EMS and Sheriff department's learn how to address a potential hazardous material incident. Bob informed the City Council that the Stibnite Advisory Council (SAC) reviewed comments received during the 2020 DEIS comment period and based on those comments, SAC entered into an Independent Water Monitoring Program in 2021 with the University of Idaho to verify that the water sample results collected by Perpetua Resources were valid and verified by a third party and to date those results are consistent with what was shared by Perpetua.</p> <p>The Stibnite Advisory Council had also asked for a third party independent analysis of the Tailing Storage Facility (TSF) to assure SAC that the TSF would be designed and constructed such that its failure (leakage or breaching) could be considered as non-events. This study was completed and shared</p>	GEN	No further response required. General in nature or position statement.

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			at SAC's December meeting and indeed showed that the probability of TSF leakage or breaching was extremely low or essential! non-events.		
Glenna McClure (Mayor, Riggins)	14781	3	<p>The lifeblood of our community is solely based upon recreational activities on the Salmon River thus the USF and permitting agencies must assure the following:</p> <ol style="list-style-type: none"> 1) Legacy tailing will be reprocessed to remove mercury, arsenic and antimony that are currently contaminating Meadow Creek. 2) Burntlog Route will be utilized to keep truck traffic away from area streams as much as possible. 3) Make sure that at the end of the project, impoundment is appropriately de-watered and stabilized and that any of the water generated during the tailings consolidation process is appropriately treated prior to discharge. 4) The TSF will be designed/constructed such that there is minimal probability of leakage of impounded contents to groundwater due to the two different liners laid down on compacted soil, together forming what is termed a "composite liner." The first barrier applied is a Geosynthetic Clay Liner (GCL - sodium bentonite clay sandwiched between two layers of geotextile) which when coming into contact with water swells for a low permeability providing an effective hydraulic seal, and in this case equal to about 2.5 feet of compacted clay. The next liner, a linear low-density polyethylene (LLDPE) geomembrane, which has a half-life of approximately 450 years, is then applied on top of the GCL, constituting the second barrier to prevent tailing solution from seeping into the environment. 5) Ore processing will neutralize, stabilize or remove chemicals/heavy metals such as mercury, cyanide and arsenic as part of the processing cycle before any tailing materials are deposited into the TSF, further reducing risk of impacting water quality. 6) If trucks transport antimony concentrate through the City of Riggins, concentrate will be in appropriate enclosed containers (such as super sacks) to prevent dust emissions. Additionally, before antimony concentrate or any other toxic materials such as NaCN biscuits, mercury, etc is scheduled to be transported through the City of Riggins, emergency services personnel (Fire, EMS and Sheriff departments) will be notified prior to and trained on how to respond to transporting vehicle accidents. 7) A Hazmat Station shall be provided within 30 miles of Riggins to mitigate the risk of an accidental spillage of toxic wastes into the two rivers (Little Salmon River and Main Salmon) that roughly parallels Highway 95, the main route connecting north and south Idaho. The intent of this station is to provide a quick response with personnel, equipment and materials to quickly prevent and neutralize hazardous waste from entering the rivers. A Hazmat Team will be responsible for any spill that occurs along Highway 95 and the two rivers. 8) Perpetua Resources first priority will be the construction of the bypass tunnel so that anadromous fish and local fish populations will be able to access old spawning grounds after 80 plus years of no access. 9) The Supplemental Draft Environmental Impact Statement shall remain in effect throughout the duration of this project as stated. If Perpetua Resources sells or partners with another entity at any time through the completion as stated in the SDEIS, all of these terms and agreements shall remain in place for perpetuity. 10) With the new bonding requirements in place that Perpetua must bond for the actual costs of restoration, make sure those funds are set aside in bonds or trusts, do not allow corporate guarantee. Make sure Perpetua has no recourse but to restore the site after operations per the Stibnite Perpetua Resources Modified Mine Plan. 	GEN	<p>Items 1 through 5 of the comment are already included in the 2021 MMP described in Section 2.4 of the EIS. Items 6 and 7 are related to potential community relations and support offered by Perpetua outside the authority of the Forest Service. Perpetua has been informed of these two items and it has been recommended that they separately engage with the City of Riggins to address these comments.</p> <p>Items 8 is included in the 2021 MMP described in Section 2.4 of the EIS.</p> <p>Items 9 and 10 would be requirements of the Project decision.</p>
Stephen D'Esposito (President and	16502	1	As you can see from the attached December 6, 2022, Canadian Mining Journal article, "Using a regeneration lens, mine wastes becomes a resource," my company, Regeneration, turns legacy sites into environmental and community assets. We strongly support re-mining legacy mine and milling waste as a source of critical and economic minerals. Regeneration is a public-benefit company—our articles of incorporation define our social and environmental purpose as well as our commercial methods. As	GEN	No further response required. General in nature or position statement.

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CEO, Regeneration)			<p>explained in the article, Regeneration focuses on re-mining projects that pursue restoration opportunities while benefitting communities. Under the right conditions, using new and proven technologies, and with a focus on beneficial post re-mining closure outcomes, targeting legacy sites can be a win for the energy transition and security, communities, and the local environment; and offset the need for new mines in greenfield locals. Therefore, we advocate for prioritizing these impacted, legacy sites as source to help meet the world's need for critical and economic minerals.</p> <p>Regarding the Payette and Boise National Forests' October 2022 Supplemental Draft Environmental Impact Statement (SDEIS) on the Stibnite Gold Project (SGP) and Perpetua Resources Ltd.'s (Perpetua's) proposed plan to redevelop, re-mine, and restore the Stibnite Gold Mine, a project like this is emblematic of the kinds of environmental and social benefits that re-mining at legacy sites can potentially achieve. The SDEIS describes the water quality improvements, stream and aquatic habitat restoration measures, and socioeconomic benefits that are predicted to occur if the Forest Service authorizes SGP's proposed restoration and redevelopment plan for the SGP.</p> <p>We note that based on the public's comments on the 2020 Draft EIS, Perpetua refined and improved its mine plan, which the Forest Service is now evaluating in the SDEIS. Regeneration is assessing re-mining and restoration projects of various types and scales, in the U.S. and other jurisdictions, some more challenging and costly than others. All require funding to deliver restoration results. The combination of re-mining and restoration at legacy sites offers a potential breakthrough because re-mining can generate revenue for better closure outcomes, and brings needed infrastructure, capacity, and expertise. If government policy incentivizes these types of projects, with careful controls and protections to address real risks, including bonds, they present an opportunity for the Administration to address multiple objectives including its priorities on critical minerals, Tribal and community participation, and biodiversity improvement.</p> <p>The \$1.1 billion investment that Perpetua is proposing to redevelop and re-mine Stibnite illustrates the size of the challenge and opportunity. It's encouraging that Perpetua is willing to navigate the complexities and costs associated with historic mines. Both Perpetua and the Forest Service should be commended for addressing challenging on-the-ground and policy issues. We encourage more of this and support work with agencies, companies, and communities to address the unfortunate legacy of many of these sites.</p> <p>As described in the SDEIS, Perpetua's Proposed Action, which is also the Forest Service's Preferred Alternative, the project boundary does not include all of the legacy mine features at Stibnite. To address the need for additional, future cleanup measures, Perpetua, the U.S. Environmental Protection Agency (EPA), and the Forest Service negotiated an Administrative Settlement and Order on Consent (ASAOC) that outlines additional site restoration measures that Perpetua can pursue in the future if and when Perpetua is producing gold and antimony from the Stibnite Mine.</p> <p>Regeneration is encouraged that Perpetua, the EPA, and the Forest Service developed a vision for a broader cleanup and closure of the Stibnite mine site, including areas outside of the project boundary. We encourage this type of company/agency partnership that goes beyond minimum requirements.</p> <p>We recognize that economic redevelopment of the mine and additive restoration go hand-in-hand, underscoring the practical and financial challenges presented by legacy mine sites where restoration requires financing. We advocate for the use of several financial drivers to address legacy sites including re-mining, the value of nature-based solutions, future land use value, or a combination. In all cases this will require company vision and perseverance, agency innovation, and community participation. The alternative is the status quo where legacy sites sit for decades as a risk to communities and the environment, and we miss the opportunity to jumpstart access to critical minerals from these sites.</p> <p>Regarding policy, we recommend an innovative yet carefully managed program that targets sites with significant remaining economic value, like Stibnite, and orphan sites where re-mining may not cover full reclamation and restoration costs but can significantly offset a portion of the costs associated with addressing the abandoned mines problem. We have made these recommendations to the U.S.</p>		

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			<p>Interagency Working Group on Mining Reform, formed under Executive Order 14017 on America's Supply Chains.</p> <p>At Stibnite, we see important opportunities to address barriers to fish passage and the sub-optimal habitat conditions in area streams and a range of other restoration opportunities; we recognize that except for the limited restoration work under Phase 1 of the ASAOC, remediation is unlikely to occur without Perpetua's proposed redevelopment and re-mining project.</p> <p>We note that at Stibnite, the No Action Alternative would preserve the degraded status quo. We offer three points for consideration: 1) public policy and agency decision-making should take account of the fact that addressing the negative impacts of legacy mine sites will require an economic catalyst, which re-mining can provide; 2) the post-restoration ecological and land use value at these sites can be significant and may be underappreciated if not factored into a comprehensive plan; and 3) Regeneration supports the additional site restoration measures under the ASAOC and offers to work with agencies, the company, and communities to support these efforts in the future.</p>		
Kealey, Tom (Director, Idaho Department of Commerce)	16536	7	<p>As you know, previous mining projects left Stibnite decades ago and left an unfortunate legacy of environmental destruction in their wake. Based on what Perpetua has proposed for the Modified Mine Plan Alternative as analyzed in the Supplemental DEIS, the Stibnite Gold Project will not only help address these concerns, but do so while being held to the strictest environmental standards and regulations to ensure that past mistakes are not carried into the future. Just this last year, Department of Commerce staff helped Perpetua celebrate the commencement of vital legacy cleanup work at Stibnite. We were so thrilled to see Perpetua invest up to \$12 million in legacy cleanup work that would not otherwise be done without taxpayer intervention. It is precisely these types of private partnerships from companies willing to go above and beyond that make Idaho so unique.</p>	GEN	No further response required. General in nature or position statement.
Yvonne Fisher	16770	2	<p>Furthermore there would be massive impact to the River of No Return Wilderness including noise pollution, wildlife disturbance and displacement and increased pollution in the river. These need to be THOROUGHLY investigated without any glossing over of the harmful impact they would have on the environment. These chemicals are cancer causing and will impact local communities who have the right to file for damages to their health. In other words lawsuits. And quite rightly so! Why should the mine damage their health and the surrounding environment and not pay for it? Why is this allowed in the first place especially when our environment is so fragile?</p>	GEN	Impacts to wilderness, wildlife, and surface water were described in Sections 4.23, 4.13, and 4.9 of the SDEIS, respectively. Noise impacts were described in SDEIS Section 4.6, as well as specific to wildlife in Section 4.13. Hazardous materials and public health and safety were presented in Section 4.7 and 4.18 of the SDEIS, respectively.
Bowen, Mike (Executive Director, New Mexico Mining Association)	16872	4	<p>If Perpetua does not remediate the Stibnite mine site, the question has to be asked: who will? If the Forest Service does not approve the SGP, the Stibnite mine site could once again become an abandoned mine and a future Superfund site. It makes no sense to delay or deny the clear benefits of starting the site remediation in the near future, as would occur under the MMP for the SGP, compared to waiting years - possibly decades - for federal funding to remediate this site.</p> <p>Our October 2020 comments on the DEIS provided a detailed case history of the Questa Superfund Site that documents the glacial pace of the Superfund cleanup action. The State of New Mexico had to wait 32 years (from 1980 to 2012) for the Superfund environmental restoration work at Questa to begin and more than 40 years (from 1980 to 2021) for the final remedial actions to commence. EPA's Superfund website for the Questa Mine shows that the anticipated dates to complete construction, delete the Questa Mine from the National Priorities List, and to achieve sitewide readiness for anticipated reuse as "Not Yet Achieved." This "progress report" is based on a recent Five-Year Review that was completed on August 2, 2022.</p> <p>Comparing the planned 20-year schedule in the MMP to complete the mining and associated restoration activities at Stibnite, versus the 32-years it took the U.S. Environmental Protection Agency (EPA) to start the Questa Mine cleanup and the unknown future date when the cleanup will be completed, vividly illustrates that Perpetua's proposal to clean up Stibnite would produce a vastly superior outcome. Rather than waiting decades for a Superfund environmental cleanup to start and eventually be completed, the environment and the public can begin benefitting right away from Perpetua's expedited cleanup schedule in the MMP.</p>	GEN	<p>No further response required. General in nature or position statement.</p> <p>The Administrative Settlement and Order on Consent (ASAOC) work is separate from the NEPA permitting process and was initiated in direct response to a Citizens Clean Water Act Lawsuit by the Nez Perce Tribe.</p>

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			<p>Not wanting to wait for the Forest Service to complete the NEPA process for the SGP, Perpetua, the Forest Service, and the EPA entered into an Administrative Settlement and Order on Consent (ASAOC) in January 2021 that is a phased plan to remediate certain legacy mine features outside of the MMP project boundary. (See Section 1.3 of the SD EIS.) Perpetua initiated Phase 1 of the ASAOC in July 2022 to voluntarily address several areas outside the MMP project boundary that the parties identified as being time-critical. The ASAOC Phase 1 remediation measures include:</p> <ul style="list-style-type: none"> • Constructing stream diversion ditches to divert water away from legacy mine wastes that are contaminating area streams; • Removing approximately 325,000 tons of legacy development rock and tailings from locations in Meadow Creek and the East Fork of the South Fork of the Salmon River that are currently adversely impacting water quality; and • Conducting baseline studies at five historic mine adits that are discharging mine drainage. <p>The Forest Service and the EPA are directing these Phase 1 remediation activities, which are scheduled to be completed by 2025. In addition to Perpetua's \$12.5 million direct, on-the-ground remediation costs to perform Phase 1, Perpetua provided the agencies with a \$7.5 million performance bond to guarantee the Phase 1 work. Under the ASAOC, Perpetua may be able to pursue the conceptual site restoration measures in Phases 2 and 3 of the ASAOC if and when Perpetua is producing gold and antimony from the Stibnite Mine.</p> <p>It should be obvious from the remediation work already underway pursuant to the ASAOC and the remediation schedule in the MMP, that there is a very viable plan in place to remediate the Stibnite mine site using private-sector resources. It would be nonsensical for the Forest Service to delay or deny Perpetua's MMP to redevelop, remine, and remediate the Stibnite mine in favor of waiting for future but unidentified federal funding. Doing so would likely consign the Stibnite area to years - maybe decades - of ongoing environmental degradation.</p> <p>The \$1.1 billion price tag to remediate the Stibnite Mine needs to be considered in the context of what the Forest Service has spent to date to clean up this site. According to the November 8, 2021 letter from the Intermountain Region Regional Forester, Mary Farnsworth, to Idaho Congressmen Russ Fulcher and Mike Simpson, the Forest Service spent \$5.2 million to remediate the Stibnite mine site between 1992 and 2013. If the Forest Service does not approve the SGP, taxpayers would have to make up for the staggering shortfall between \$5.2 million and \$1.1 billion in order to remediate this site. However, based on the meager resources provided to the Forest Service to date to clean up the Stibnite mine site it seems highly unlikely that Congress will appropriate the funds necessary to enable the Forest Service to perform a meaningful future cleanup at Stibnite. Without Perpetua's proposed investment of \$1.1 billion to redevelop and remediate this site, the Stibnite Mine area will continue to create serious environmental and ecological problems in the Payette and Boise National Forests for the foreseeable future.</p> <p>The planned environmental cleanup work at Stibnite would start immediately and continue throughout the construction, operation, reclamation and closure phases of the project. As discussed Section 2.4-3 in the SD EIS, the major phases of the MMP include: mine construction (Years 1 - 3), active mining (Years 2 - 15), mine closure and reclamation (Year 16+), and postclosure water management and water treatment (Years 16 - 40.) Some environmental restoration measures would be implemented early during the MMP activities including reforestation of burned areas, revegetation, construction of the fish passageway tunnel around the western margin of the Yellow Pine Pit, riparian and stream habitat enhancements, wetlands mitigation, and remediation of Blowout Creek.</p> <p>Notwithstanding the military 's urgent need for the antimony from the SGP as discussed above, it is quite clear that Perpetua's MMP presents the Forest Service and taxpayers with a compelling opportunity to capitalize upon a private-sector plan to remediate this site in the near future. For this reason alone, the Forest Service should authorize the SGP as quickly as possible so the environmental restoration work can begin, funded by the redevelopment of a modern mine built by private capital to the highest environmental standards.</p>		

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Hendrickson, Emily (President, Women's Mining Coalition)	17429	23	<p>Although the MMP will significantly improve the environment in the Stibnite Mine area, some problematic legacy mine features will continue to leach metals into area streams after mining is completed because they are located outside of the MMP project area. As described in Section 1.3 of the SDEIS, Perpetua, the Forest Service and the U.S. Environmental Protection Agency (EPA) entered into an Administrative Settlement and Order on Consent (ASAOC) in January 2021 that is designed to remediate the legacy features outside of the MMP project boundary. The ASAOC is a phased restoration agreement. Phase 1 is underway. Phases 2 and 3 outline conceptual site restoration measures that Perpetua may be able to pursue in the future if and when Perpetua is producing gold and antimony from the Stibnite Mine.</p> <p>Recognizing the compelling need to address several of the features outside of the MMP boundary, Phase I of the ASAOC started in July 2022 and allows Perpetua to voluntarily eliminate or reduce contaminant sources as quickly as possible in areas identified as being time-critical. The Forest Service and the EPA are directing and supervising the ASAOC Phase I remediation activities, which will cost Perpetua \$12 million to complete. Under the terms of Phase I, Perpetua was required to provide the agencies with a \$7.5 million performance bond.</p> <p>As described in Section 1.3 of the SDEIS, the ASAOC Phase I actions are anticipated to be completed by 2025 and are intended to immediately improve water quality. The Phase I activities include constructing stream diversion ditches to divert water away from legacy mine wastes that are contaminating area streams, removing approximately 325,000 tons of legacy development rock and tailings from locations in Meadow Creek and the East Fork that are currently adversely impacting water quality, and conducting baseline studies at five historic mine adits that are discharging mine drainage.</p> <p>Phases 2 and 3 of the ASAOC give Perpetua the option to remediate additional legacy mine features located outside the MMP project boundary. However, these phases are contingent upon the SGP receiving project permits and will require additional baseline data and engineering studies.</p> <p>Because there is insufficient information at this time to analyze the environmental impacts associated with Phases 2 and 3, they are not included in this NEPA document as reasonably foreseeable future actions.</p> <p>Collectively, the MMP and Phases 1, 2, and 3 of the ASAOC would achieve a comprehensive, site-wide restoration and cleanup of the Stibnite Mine site. As such, the combination of these four activities represents “the gold standard” for addressing the legacy environmental problems at Stibnite. All parties should do everything possible to facilitate the performance of all four phases.</p> <p>The potential future pursuit of Phases 2 and 3 of the ASAOC represents an extremely important opportunity to achieve a permanent, site-wide environmental solution at this historic mining district. However, this future is unachievable without the MMP, which is the foundation for restoring the site and is also the economic driver that would enable the Phase 2 and 3 environmental restoration measures.</p> <p>The substantial but incomplete restoration of the Stibnite Mine site that will be achieved by implementing the MMP illustrates the complexities at some legacy sites where only a portion of the site may be economically feasible to restore through redevelopment. The substantial but partial cleanup under the MMP is an excellent case study of how a partial cleanup can be a worthwhile goal. It is also useful in the bigger policy dialogue about remediating abandoned mines. For more than two decades, constructive dialogue about cleaning up abandoned mines has been complicated and even thwarted by demands for unrealistic cleanup requirements that have substantially chilled both the private and the public sectors’ abilities to get involved with legacy sites.</p>	GEN	<p>The ASAOC work is separate from the NEPA permitting process and was initiated in direct response to a Citizens Clean Water Act Lawsuit by the Nez Perce Tribe. Phase 1 of the ASAOC has been initiated. Phases 2 and 3 of the ASAOC have been proposed but are contingent on approval of the SGP and subsequent detailed designs.</p> <p>No further response required. General in nature or position statement.</p>
Hendrickson, Emily (President, Women's Mining Coalition)	17429	24	<p>Perpetua’s MMP illustrates the substantial environmental improvements that can result from a partial cleanup and stands for the concept that “pursuit of the perfect must not be the enemy of the good.” The MMP initiates a path to a site-wide, comprehensive cleanup that will be achieved through incremental steps (e.g., Phase I of the ASAOC, the MMP, and the future potential Phases 2 and 3 of the ASAOC.) As</p>	GEN	<p>The 2021 MMP utilizing the Burntlog Route is the Agency Preferred Alternative.</p>

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
			<p>such, the phased cleanup model at the Stibnite Mine could potentially be a template for other legacy mine sites.</p> <p>Section 4.21.2.2 of the SDEIS states that Perpetua is proposing to invest \$1.1 billion to construct the SGP. With no other company, federal or state agency, community, or conservation group offering to make a similar investment, it should be obvious to all stakeholders that without Perpetua's MMP, the Stibnite mine site will not be cleaned up. Therefore, the MMP and the contingent and optional ASAOC Phases 2 and 3 future remediation activities are a unique opportunity to clean up the Stibnite mine site.</p> <p>To capitalize upon this opportunity, the Forest Service, the U.S. Army Corps of Engineers, and the Idaho state regulatory agencies need to approve the MMP as quickly as possible so the MMP remediation can get underway and hopefully enable (i.e. help pay for) the future expanded remediation envisioned under Phases 2 and 3 of the ASAOC. All stakeholders should support this well-conceived long-range plan to pursue comprehensive cleanup of this legacy mine site.</p>		
Kevin Proescholdt	17616	1	We also refer you to our earlier comments on the draft EIS. Many of those concerns we raised have not been addressed or only cursorily addressed.	GEN	Response to public concerns generated from comments on the 2020 DEIS is presented in Appendix B of the Final EIS.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	1	<p>Save the South Fork Salmon, Idaho Conservation League, Earthworks, Idaho Rivers United, Center for Biological Diversity, American Rivers, American Whitewater and Winter Wildlands Alliance submit these comments on the Stibnite Gold Project Supplemental Draft Environmental Impact Statement (SDEIS) prepared by the Payette National Forest. We appreciate the opportunity to comment.</p> <p>These comments represent the work of the coalition of groups listed below, which have notable expertise in environmental issues, including those issues that stem from mining projects, as well as numerous professional scientific consultants. We incorporate by reference all previous comments, including scoping comments, and comments on the Draft Environmental Impact Statement (DEIS) submitted by each of the individual groups described above, whether submitted individually or jointly, on the Stibnite Gold Project, and comments on the DEIS and SDEIS from the Nez Perce Tribe. This letter is in addition to any separate letters that the groups mentioned above may submit.</p> <p>Save the South Fork Salmon is a Valley County, Idaho, community-based non-profit organization dedicated to protecting the South Fork of the Salmon River watershed, its outstanding and remarkable natural values, and the economies that depend on those values.</p> <p>Save the South Fork Salmon has members that live, work, and recreate in and around the South Fork of the Salmon River and in the communities that will be impacted by the Stibnite Gold Project. Idaho Conservation League is a non-profit organization dedicated to preserving Idaho's clean water, wilderness, and quality of life through citizen action, public education, and advocacy. Idaho Rivers United's mission is to protect and restore the ecological integrity of Idaho's rivers and ensure their legacy remains for generations to come. American Rivers is a leading conservation organization working to protect and restore the nation's rivers and streams. American Whitewater is a national river conservation organization that advocates for the preservation and protection of whitewater rivers throughout the United States. Earthworks is a non-profit organization dedicated to protecting communities and the environment against the adverse effects of hard rock mining. Winter Wildlands Alliance (WWA) is a national non-profit working to inspire and empower people to protect America's wild snowscapes.</p> <p>Members of our organizations utilize the South Fork Salmon River watershed and surrounding area for recreational activities including family camping, road-biking, wildlife observation, scenery appreciation, birding, hunting and fishing, botanizing, whitewater kayaking, rock climbing, backcountry skiing, hiking, firewood cutting, berry and mushroom picking, mountain biking, and accessing wilderness as well as their private land holdings--to name just a few.</p>	GEN	No further response required. General in nature or position statement.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	6	<p>The Forest Service should reject the proposed mine plan because it:</p> <ol style="list-style-type: none"> 1) Conflicts with the Payette and Boise Forest Plans 2) Fails to minimize all adverse environmental impacts as required by the Federal Land Policy and Management Act and the Organic Act 3) Fails to demonstrate compliance with the Clean Water Act 4) Conflicts with established Treaty Rights 5) Fails to demonstrate compliance with the Endangered Species Act 6) Fails to provide mining claim data that demonstrates valid existing rights 7) Lacks key information necessary for an informed public review under NEPA 8) Fails to consider climate change and incorporate climate change within model projections 9) Considers only the mine applicant's proposed mine plan, failing to consider a reasonable range of alternatives as required by NEPA. 	GEN	Responses to these items are provided in the responses to the more detailed comments provided that this list summarizes.
Ronn Julian	17666	2	<p>The initial Operating Plan was not put together in an interdisciplinary manner. It was a mine-perfect document with little to no understanding of the other resource values, land uses and stakeholders. That fundamental misunderstanding has contributed greatly to the near 3-year long replanning gap. It is also interesting to note that the three primary authors of the initial Operating Plan are apparently no longer with the current Company.</p> <p>This project has effects that are beneficial and can be designed to make it thru the environmental and litigation phases. One deficiency that I noted early on when the Operating Plan was being developed was a lack of coordination and consultation with the Cascade District Ranger. Every time I asked the question of the company managers efforts to consult with the Boise NF, the answer was consistent: we are working through the Payette NF. That was difficult for me to understand given that the majority of the powerline and the access road is on the Boise National Forest. I suspect this lack of coordination and engagement has led in-part to the narrow range of alternatives. I hasten to add that recently departed Ranger Strohmeier did engage on one of the issues, but the mold had pretty well been cast by the time he was able to do so. Fatal error? Not for a moment, but a costly one both in terms of money and time. There is some space between the SEIS and the FEIS to remedy. If you fix it prior to a Record of Decision, it will be a much smaller cost than if The Court(s) rule(s) you to fix it. I emphasize Courts because no matter what the decision of the US District Court in Boise is, it will be appealed to the 9th Circuit Court, which carries the reputation as the toughest in the land.</p> <p>It is challenging for an environmental impact statement and record of decision to weather the changes that grow out of organizational and personnel changes in the project proponent arena, the agency arena and political arena. One or two changes can often have some huge influence. The Stibnite Gold Project has been ongoing long enough that it has encountered just about every conceivable change imaginable. The USFS changes include the Chief, Regional Forester and the Forest Supervisors on both the Boise and Payette (Responsible Officials) and staff turnover, not to mention the much needed change of contractor for the analysis. The name-change and associated turnover in Company managers has had a major influence on the process. The necessary changes to the proposed action mid-stream was a major curve ball. In addition, a change in the White House is also a factor. It will take a crisp and superb analysis and an A effort document to overcome all that change. Nothing less will suffice in the South Fork of the Salmon River.</p> <p>I don't know how you overcome the challenge presented by the quantity of information spread out through hundreds of documents over a span of years. I can only imagine you will continue to receive thousands of "votes" for or against the project. That is good and necessary background noise but it is not substantive and should not enter into the decision. The planning laws and accompanying regulations do not describe this work as referendum in character.</p>	GEN	No further response required. General in nature or position statement.

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Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	17	There are several unsupported assumptions, unknowns, and changing circumstances about the Stibnite Gold Project. As discussed already, an EIS must disclose sufficient details about each alternative to enable meaningful review of environmental effects and consideration of alternatives. Throughout the EIS and its supporting documents, the Forest Service makes numerous unsupported and unreasonable assumptions about the Stibnite Gold Project on issues that are unknown, subject to change, and/or still being decided—issues that could have major implications on the likely environmental effects, feasibility, and other factors related to each alternative, including the proposed action, and for the associated mitigation and monitoring	GEN	No further response required. General in nature or position statement.
Idaho Regulatory Agencies	17718	137	Reference of 2016 Integrated Report is outdated. Should only reference the 2022 Integrated Report. The 2022 integrated mapper report is: https://mapcase.deq.idaho.gov/wq2022/	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	140	Reference of 2018/2020 Integrated Report is outdated. Should only reference the 2022 Integrated Report.	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	152	DWS should be domestic water supply	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	178	The Stibnite Gold Project Supplemental Draft Environmental Impact Statement analyzes a No Action Alternative and 2 action alternatives: the Johnson Creek Route Alternative and the Proposed Action. The action alternatives comprise the same mining project, but each analyzes a different access route. The Proposed Action would use the Johnson Creek and Stibnite roads during initial construction phases and use the Burntlog Road as the primary access route for the remainder of the 20-year project. The Johnson Creek Route Alternative would use the Johnson Creek and Stibnite roads for the primary mine access throughout the 20-year project.	GEN	No further response required. General in nature or position statement.
Idaho Regulatory Agencies	17718	180	Providing access to the mine site will involve a variety of construction and maintenance activities, increased traffic, and transportation of industrial mining materials and fuels. The State of Idaho would anticipate adverse effects to fish and wildlife resources from these activities. The choice of access routes to the mine site involves trade-offs among fish and wildlife management priorities; each option has its own set of associated risks and anticipated effects on fish and wildlife resources. The Burntlog Road access route included in the Proposed Action would have potential effects primarily centered on terrestrial habitat and wildlife, e.g., migratory big game and wolverine habitat. Conversely, the Johnson Creek Route Alternative would have potential effects primarily centered on aquatic habitat and associated anadromous and resident fisheries.	GEN	No further response required. General in nature or position statement.
Idaho Regulatory Agencies	17718	182	The Proposed Action involves modification and extension of existing roads along the Burntlog Route. Development and use of this route has the potential to adversely affect wildlife prioritized under State management programs (e.g., big game habitat, wolverine) and wildlife-based recreation. However, this route would reduce risks to Salmon River fisheries inherent to the Johnson Creek Route. Design features, best practices, and adaptive modifications are available that may avoid, minimize, or offset effects on fish and wildlife.	GEN	No further response required. General in nature or position statement.
Idaho Regulatory Agencies	17718	3	Please clarify, within the Operations Area Boundary, whether all Surface Land management is Forest Service.	GEN	SDEIS Section 3.15 described the acreages of surface land management by management agency.
Idaho Regulatory Agencies	17718	7	“and 62 acres of public lands administered by the State of Idaho”. Please note here and throughout the document that State of Idaho lands administered by the Idaho Department of Lands are not public lands. They are Endowment Lands.	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	12	"The 2021 MMP, the revised Proposed Action, is based on the MODPRO2 (Perpetua 2021a)." As written, this means that the 2021 Modified Mine Plan is based on the MODPRO2, but the use of "based on" means the two are not identical? Is there a difference? If there is no substantial difference, then please state that the 2021 Modified Plan (revised Proposed Action) is the MODPRO2 (Perpetua, 2021a).	GEN	The 2021 MMP and MODPRO2 are different names for the same mine plan.

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Idaho Regulatory Agencies	17718	13	To limit confusion, "post-closure" needs to adhere to Idaho Rule definitions where "Closure" refers to cyanidation facilities. Therefore, second line should state: "...years, not including the long-term post-Permanent Closure of cyanidation facilities and their environmental monitoring or potential long-term water...." OR, you need to define these terms and note differences in usage.	GEN	A definition of post-closure has been added to the Final EIS.
Idaho Regulatory Agencies	17718	21	The dumped development rock would not be mechanically compacted, except as it nears the final reclaimed surface elevation of the backfilled area. IDAPA 20.03.02 – 140 - Best Management Practices and Reclamation for Mining Operations and Permanent Closure Facilities, 06.c – Grading and Filling states: Backfill and fill material should be compacted in a manner to ensure mass and surface stability.	GEN	No further response required. General in nature or position statement.
Idaho Regulatory Agencies	17718	92	Please note that H ₂ SO ₄ is not a mist. H ₂ SO ₄ is the molecular formula for sulfuric acid. It is a colorless, odorless, and viscous liquid that is miscible with water. Is this why it is referred to as a mist? If so, please note that miscible does not mean mist.	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	94	As written is incorrect. 1. Bentonite is not just light colored. 2. "or" should be "of." 3. Please consider this bentonite definition that is relevant for mining projects: <i>A clay mineral formed by the decomposition of volcanic ash, having the ability to absorb large quantities of water and to expand to several times its normal volume. Bentonite clay is the active protective layer of geosynthetic clay liners.</i>	GEN	Revisions made per comment.
Idaho Regulatory Agencies	17718	95	The Tailings Storage Facility Buttress is an earthen dam used to store water and waste that come as by products from the mining process. One could also discuss its factor of safety, etc.	GEN	No further response required. General in nature or position statement. SDEIS Section 4.2 describes the design Factor of Safety for the TSF.
Idaho Regulatory Agencies	17718	96	1. The definition for Closure is lacking in detail, and does not represent its regulatory usage for mine sites in the State of Idaho. In Idaho, Closure refers specifically to the decommissioning and reclamation of the cyanidation facilities and all materials treated with cyanide (IDAPA 20.03.02.071, .080, .091, .111, .112, .120., .140., and 150). 2. From the limited definition and its use in the document, Closure and Reclamation are being used interchangeably. Is this correct? If so, then why use the term Closure? 3. In parts of the document, Closure alludes to the processes and actions planned for and implemented when a mine ceases operations. Is this correct? 4. In parts of the document, Closure alludes to the whole-of-mine-life process, which includes decommissioning and reclamation. Is this correct? 5. In parts of the document, Closure alludes to a state when agreed completion criteria have been met, government "signoff" achieved, all obligations under both Federal and State of Idaho oversight have been removed, and Perpetua has been released from all forms of Reclamation financial security. Is this correct? 6. It may be beneficial to use an example of Closure, such as: <i>For Closure to be granted for the Tailings Storage Facility, the tailings must be shown as a whole to consolidate to an appropriate standard, and any remaining cyanide and other contaminants in the effluent derived from tailings as a result of a meteoric and infiltrating water flux will not degrade waters of the State of Idaho under conditions expected to exist at the site.</i>	GEN	Citations to the IDAPA definition of closure have been added to the Final EIS.
Idaho Regulatory Agencies	17718	97	Please see above. Then, a stand-alone definition of Concurrent Closure is needed, and the document should adhere to the definition.	GEN	The definition of closure has been refined per a previous comment. The definition of concurrent closure utilizes that definition for closure and has not been revised.
Idaho Regulatory Agencies	17718	98	Perpetua plans to reclaim lands disturbed by past mining activities. Is this a part of Concurrent Reclamation? If so, it should be added to the definition.	GEN	Reclamation of past mining disturbance is not necessarily a component of concurrent reclamation, depending on the timing of when that reclamation would occur. No revision made.
Idaho Regulatory Agencies	17718	99	Correct citation is IDAPA 58.01.02	GEN	Revision made per comment.

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Idaho Regulatory Agencies	17718	100	Please make this definition identical to the definition for Waste Rock. Then, state: Also called Development Rock. Then, delete See also: waste rock.	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	101	Please consider this definition: <i>A Drill Jumbo is a colloquial miner's term for a rock face drill rig built for blast hole drilling in underground mining and tunneling.</i>	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	102	Please consider a stronger definition for the important term Factor of Safety. For example: <i>In engineering, a Factor of Safety expresses how much stronger a system is than it needs to be for an intended load. Many systems are intentionally built much stronger than needed for normal usage to allow for emergency situations, unexpected loads, misuse, or degradation.</i>	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	103	Financial assurance for Closure of Cyanidation Facilities and Reclamation of surface disturbance must be submitted and approved by the Forest Service and IDL before any mining begins. Historically, some mines in Idaho have been abandoned by operators who were not financially capable of completing reclamation. The financial assurance requirement is designed to protect the environment, and Idaho taxpayers, from the consequences of an operator's financial failure. Financial assurance may be released by the Forest Service and IDL only after the operator demonstrates that the reclamation activities have been successfully completed. Transparency is necessary for the public to trust the financial assurance calculations for estimates of reclamation costs. This can be achieved by using the Standardized Reclamation Cost Estimator (SRCE). The SRCE includes standardized (and frequently updated) costs for all components of reclamation, including labor, fuel, equipment leasing, seed mixtures, etc.	GEN	No further response required. General in nature or position statement. Financial Assurance is a separate process from NEPA.
Idaho Regulatory Agencies	17718	104	The definition lacks clarity, especially since the document also uses "RCM" and rarely "topsoil". Are they one in the same? A growth medium needs a high level of organic matter to support plant growth. How will sterile alluvium and broken rock allow growth? We propose this definition of Growth Medium: <i>Growth Medium at Stibnite will consist of salvaged topsoil (estimated volume) and topsoil substitutes high in organic matter that will all be adequate for promoting and sustaining vegetation growth. Present estimates predict a growth medium deficit of about 800,000 cubic yards. I would then recommend deleting Reclamation Cover Material, or explain why the use of two different terms for the same thing.</i>	GEN	The definition of growth media provided is appropriate per its use in the EIS. No revision/addition made.
Idaho Regulatory Agencies	17718	105	Correct citation is IDAPA 37.03.06	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	106	Should be stated as a <u>Patented Mining Claim</u> - <i>A Patented Mining Claim or mill site is one for which the Federal Government has conveyed title to the claimant, making it private land. Individuals may mine and remove minerals from a mining claim without a mineral patent. However, a mineral patent gives exclusive title to the locatable minerals and, in most cases, also grants title to the surface (BLM, 2021. Mining Claims and Sites on Federal Lands Brochure, 44 pages).</i>	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	107	Those activities that result in neutralization, material stabilization, and decontamination of cyanidation facilities, or the facilities' final reclamation (IDAPA 20.03.02.010.15).	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	108	A document that describes how a mining operation will neutralize, stabilize material, and decontaminate cyanidation facilities in order to meet Permanent Closure. Permanent Closure Plan requirements are described in IDAPA 20.03.02.071.	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	109	36 CFR Part 228 defines Reclamation: Upon exhaustion of the mineral deposit or at the earliest practicable time during operations, or within 1 year of the conclusion of operations, unless a longer time is allowed by the authorized officer, operator shall, where practicable, reclaim the surface disturbed in operations by taking such measures as will prevent or control onsite and off-site damage to the environment and forest surface resources including: (1) Control of erosion and landslides; (2) Control of water runoff; (3) Isolation, removal or control of toxic materials; (4) Reshaping and revegetation of disturbed areas, where reasonably practicable; and (5) Rehabilitation of fisheries and wildlife habitat. The State of Idaho defines Reclamation as the process of restoring an area affected by a mining operation or cyanidation facility to its original or another beneficial use, considering previous uses, possible future uses, and surrounding topography. The objective is to re-establish a diverse, self-	GEN	Additional details regarding reclamation requirements are captured in other locations outside the Glossary.

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			perpetuating plant community, and to minimize erosion, remove hazards, and maintain water quality (IDAPA 20.03.02.010.20). Using another definition will only lead to misunderstandings. If the definition used by Perpetua is from the Forest Service, then it should be referenced as such, but then the State of Idaho definition must also be used.		
Idaho Regulatory Agencies	17718	110	Consider using a more direct quote of 6561.4: <i>Reclamation Bonds are a type of financial assurance to cover the estimated reclamation costs for prospecting, mining, and other mineral operations on National Forest System lands. Bonds guarantee repair of surface resource disturbance, equipment removal, waste disposal, and similar actions. At Stibnite, the federal government and State of Idaho share jurisdiction over the mineral operation, as defined in a cooperative agreement</i> (U.S. Forest Service, 2016. Forest Service Manual 6500, Chapter 6560, 6561.4). Please use a correct reference, and then provide the reference in Section 7.1 References.	GEN	The EIS does not describe the bonding process which is covered under a separate administrative action. The definition is appropriate per the content of the EIS.
Idaho Regulatory Agencies	17718	111	Consider using what will be required by the State of Idaho: The Reclamation Cost Estimate is a financial assurance estimate that defines the reclamation cost that the Forest Service and IDL will incur to perform all the actions documented in an approved Reclamation Plan, if Perpetua abandons the site without implementing reclamation. The estimate is based on the maximum liability that will be incurred, use of third-party equipment and labor rates, and will include significant government-mandated indirect costs (IDAPA 20.03.02.070b and 20.03.120.10). This differs from a life-of-mine reclamation cost estimate, which defines the cost that Perpetua would incur to perform all of the actions required to fulfill the reclamation portion of their current mine plan. A life-of-mine reclamation cost estimate typically uses local operator rates, includes all reclamation costs associated with the current mine plan, and is reported on a cash-flow basis (modified from Jeff Parshley, SRK Consultants).	GEN	The EIS does not describe the bonding process which is covered under a separate administrative action. The definition is appropriate per the content of the EIS. There are separate but parallel federal and state bonding processes.
Idaho Regulatory Agencies	17718	112	A plan using a combination of maps, drawings, and descriptions that describes how a mine is constructed and how reclamation of a mine's affected land is accomplished ((IDAPA 20.03.02.010.21). Reclamation Plan requirements are listed under IDAPA 20.03.02.070, and includes a Reclamation Cost Estimate.	GEN	Revision made per comment with mention of cost estimate not included. The EIS does not describe the cost estimate for a mining project which is covered under a separate administrative action.
Idaho Regulatory Agencies	17718	113	Soil Nail Walls do not always employ a shotcrete face. Please consider this definition from CalTrans (2021): <i>A technique to construct an earth retaining system that requires top-down excavation. In a soil nail wall system, soil nails function as passive reinforcing elements that are installed and grouted in sub-horizontal drilled-holes to form a composite mass.</i>	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	114	Consider a mining definition: <i>Material including surface overburden, rock, or ore, that in the process of mining and beneficiation or treatment has been removed from the earth and stored on the surface. Stockpile does not include materials that are being treated in the production of metallic products and the metallic product that has been produced by that operation.</i>	GEN	The definition of the stockpile that is provided in the EIS is appropriate.
Idaho Regulatory Agencies	17718	115	Till is an unsorted and unstratified accumulation of glacial sediment, deposited directly by glacier ice. Till is a heterogeneous mixture of different sized material deposited by moving ice (lodgment till) or by the melting in-place of stagnant ice (ablation till). After deposition, some tills are reworked by water (Molnia, B.F., 2004. U.S. Geological Survey Glossary of Glacier Terminology, Open-File Report 2004-1216. Accessed on Dec.28, 2022 from: https://pubs.usgs.gov/of/2004/1216/).	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	116	Please make identical to Development Rock. Waste Rock - <i>The rock that must be removed and disposed of to gain access to and excavate ore. Waste Rock typically contains no commercial antimony, gold or silver values. Also referred to as Development Rock.</i>	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	117	A document that describes the results of the water balance and the methods that will be used to ensure that pollutants are not discharged from a cyanidation facility into waters of the State of Idaho, unless permitted by the Idaho Department of Environmental Quality (IDAPA 20.03.02.010.28).	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	118	The treatment of process waters such that discharge or final disposal of those waters does not, or will not, violate any applicable standards and criteria (IDAPA 20.03.02.010.13).	GEN	This context of neutralization has been added to the Glossary in the Final EIS.
Idaho Regulatory Agencies	17718	119	A plan that describes how a mining operation will be constructed and operated to avoid or minimize surface disturbance and potential impacts to waters of the state, and to prepare for final reclamation	GEN	Revision made per comment.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
			(IDAPA 20.03.02.010.14). The Operating Plan by Perpetua is the Modified Mine Plan of Restoration and Operation (2021 Modified Plan: Perpetua, 2021a).		
Idaho Regulatory Agencies	17718	138	The EPA integrated report approval letter is: https://www2.deq.idaho.gov/admin/LEIA/api/document/download/17288	GEN	Revision made per comment.
Idaho Regulatory Agencies	17718	139	The 2022 integrated report document is: https://www2.deq.idaho.gov/admin/LEIA/api/document/download/16619	GEN	Revision made per comment.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	18649	5	As set forth in the SDEIS, the Preferred Alternative (2021 MMP) comfortably fits the Purpose and Need of this NEPA review because it minimizes adverse environmental impacts on Forest Service public lands and includes measures that mitigate environmental impacts and reclaims surface disturbance. As this comment letter is written, the NEPA action alternative endorsed by Perpetua is in its third improved incarnation. As its track record evidences, Perpetua always seeks to improve the Stibnite Gold Project. My Permitting team will welcome public feedback on the SDEIS as it did – and acted upon – from the DEIS.	GEN	No further response required. General in nature or position statement.
Benjamin Davenport, Executive Director, Idaho Mining Association	18777	2	II. Antimony from the SGP is Critical to the U.S. Military and Utility-Scale Storage Batteries The following statements from DoD’s December 19, 2022 DPA award announcement telegraph that the SGP is a nationally-important project and underscore the importance of the SGP to the Nation and the U.S. military: “This investment is essential to ensure the timely development of a domestic source of antimony trisulfide for the manufacture of small arms and medium caliber cartridges, as well as many other missile and munition items.” “This action reinforces the Administration’s goals to increase the resilience of our critical mineral supply chains while deterring adversarial aggression.3” The stated purpose of DoD’s award is to help Perpetua “complete environmental and engineering studies necessary to obtain a Final Environmental Impact Statement, a Final Record of Decision, and other ancillary permits.” IMA interprets this as the DoD sending a strong signal to the Forest Service about the importance of expediting the preparation of the Final EIS and issuing the ROD to approve this project. In addition to the military’s needs for antimony from the SGP, the storage battery manufacturing industry is also a keen user for the antimony to be produced from the SGP. As explained in Perpetua’s August 2021 press release4 announcing its agreement with Ambri Inc. (“Ambri”), antimony is used in utility-scale storage batteries. Under this agreement, Perpetua will supply a portion of the antimony produced from the SGP to Ambri, which is a U.S. company that has developed an antimony-based, low-cost liquid metal battery for the stationary, long-duration, daily cycling energy storage market. Ambri’s antimony-based battery combines technological innovation with commercial applications for low-cost, long lifespan and safe energy storage systems that will increase the overall contribution from renewable sources to help enable the transition to green, carbon-free power grids The clean energy use of antimony is another compelling reason why the SGP is so important to the Nation.	GEN	No further response required. General in nature or position statement.
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	22	Thank you for modifications to the SGP mine plan of operation based on SBT comments on the DEIS.	GEN	No further response required. General in nature or position statement.
Small, Nathan (Chairman, Fort Hall Business Council,	18903	23	Thank you for remediation work planned under the current ASAOC with EPA.	GEN	No further response required. General in nature or position statement.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Shoshone-Bannock Tribes)					
Small, Nathan (Chairman, Fort Hall Business Council, Shoshone-Bannock Tribes)	18903	24	Keep Optional Phases 2 and 3 in the EIS and include as cumulative or connected actions (Chapter 1, Section 1.3, last paragraph).	GEN	The reason for not including Phases 2 and 3 in the EIS is clearly stated in Section 1.3; they are currently not reasonably foreseeable.
Michael Gibson (Trout Unlimited), Aaron Lieberman (Idaho Outfitters & Guides Association), Garret Visser (Idaho Wildlife Federation)	18871	28	Thank you for the opportunity to provide comments. We remain concerned about the impacts of the proposed action on fish wildlife and outdoor recreational opportunities that our groups cherish. We look forward to working with you in the future.	GEN	No further response required. General in nature or position statement.
Leah K. Corrigan	19000	1	<p>Thank you for the opportunity to comment on the Supplemental Draft Environmental Impact Statement (SDEIS) for the Stibnite Gold Project.</p> <p>I am an Idaho resident, and a long-time user of public lands and rivers for recreation, quality of life, and peace of mind. My husband and I have rafted the South Fork of the Salmon on an annual basis for the last several years. It is a wild, beautiful, and remote river that provides excellent opportunities for boating, fishing, and non-motorized recreation, and preserves a large swath of habitat that compliments the adjoining Frank Church River of No Return Wilderness Area. Our family of four, including our two young sons, spend much of our available free time on the Salmon River, including the “Main Salmon” which the South Fork empties into. This beautiful wild area is one of the last places in the West where you can run a clean, un-polluted river, allowing your children to play and swim in the water without any concern for water quality. We have spent much time swimming in the river, sometimes with snorkel gear on to observe what is left of what was once a thriving fishery. The dangers posed to water quality, fish and wildlife habitat, and the wild nature of this entire region by the proposed Stibnite Mine cannot be adequately mitigated.</p> <p>In addition, my business, Recreation Law Group, LLC., provides clients with the legal advice and documents they need to run a professional outdoor company. My clientele includes rafting and angling companies whose businesses depend on maintenance of the quantity and quality of water, the health of fisheries, and the wild and scenic nature of the Salmon River and its tributaries. This project may have substantial negative impacts on these values, and thus the profits and of rafting and angling companies, who use the services that my business provides. I am very concerned about the potential impacts of the proposed Stibnite Gold Project on my business.</p> <p>My specific comments on the SDEIS are detailed below. Please note that the substantive comments below were also made in October, 2020 when the DEIS was first released. My concerns have not been addressed by the analysis in the SDEIS in a meaningful fashion, and my concerns with the project remain the same. I am therefore re-submitting these comments made with respect to the DEIS.</p>	GEN	No further response required. General in nature or position statement.
Michael Spicher (Engineering Manager, Integra Delamar)	19040	2	As a mineral process engineer, I have paid particular attention to Perpetua's development of the overall mine plan and mineral process flow sheet since the 2020 DEIS and associated pre-feasibility study for the project. The permitting process and supporting environmental analysis and engineering, identified a number of impacts which could be better avoided through updated mine plans and process modifications. The USFS and Perpetua should be credited with their identification and implementation in the current 2021 MMP Alternative.	GEN	No further response required. General in nature or position statement.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Joseph Pietri	19062	13	<p>With the violent cutting, scraping and shifting of everything a piece of equipment can chew up. For Investors wherever they may be, they are waiting for their return on investment. We locals have to live with the mess.</p> <p>I apologize for the hostile nature of my remarks, but it is upsetting to me seeing the current state of the SGP from the air and knowing it will be three times the current size if Perpetua gets its way.</p> <p>What price and to whom will bring the affected areas back with safe, clean free flowing water?</p> <p>More valuable than Gold</p> <p>How long to ReWild what was decimated?</p> <p>The human animal should not have any priority over the four leggeds and the winged, and swimming we are all related in God's Creation and need to observe the Rights of Nature. We are all connected.</p>	GEN	No further response required. General in nature or position statement.
Paula Schappachet	19138	2	<p>Environmental - if the EIS shows the project poses a risk to the water quality of the South Fork Salmon drainage system, the project should be denied. If the project traffic shows a risk to the streams and rivers (Johnson Creek, Payette River, etc) along its path, the project should be denied. If the project goes forward, the Forest Service needs to examine alternative ways of storing tailings and waste rock so that spawning habitat is protected. The Forest Service should find ways to assure the public that there are viable ways to restore the site if Midas Gold is unable to fulfill the mission, as has happened in the past.</p>	GEN	The Forest Service will consider reasonable and applicable, specific recommendations for mitigation measures from agencies and the public that are offered in response to the SDEIS and the Project.
Paula Schappachet	19138	7	<p>Our concerns are serious. As a property owner (2 properties) in Valley County, I beseech you to take our concerns to heart and if the approval of the project is inevitable, make modifications to the plan to alleviate those concerns. In speaking to representatives of Midas Gold, they are EXPECTING and WILLING to make modifications if required to do so.</p>	GEN	The Forest Service will consider reasonable and applicable, specific recommendations for mitigation measures from agencies and the public that are offered in response to the SDEIS and the Project.
Mark Stockton (Vice President of Sustainability, Integra Resources)	19145	2	<p>Given my role at Integra and experience within this vital industry, sustainability is of great importance to me. Businesses need to be leaders in taking care of the environment, bettering their communities and operating with integrity and transparency. I've watched Perpetua Resources over the last decade and I am impressed with the track record the company has established. Time and time again, Perpetua has proved its commitment to doing the right thing. In a world increasingly built upon minerals and metals, it is imperative that governments around the world support mining companies that act responsibly.</p>	GEN	No further response required. General in nature or position statement.
Mark Stockton (Vice President of Sustainability, Integra Resources)	19145	4	<p>With how the Stibnite Gold Project is designed, Idahoans will be able to see the benefits of the project well before mining has concluded.</p> <p>Perpetua Resources has also shown it is a good corporate citizen. The company is actively engaged in supporting the community and regularly solicits and responds to input from local residents. According to the company's 2021 sustainability report, Perpetua Resources has held more than 1,000 community presentations and meetings since 2015. Input from these meetings and the previous comment period helped Perpetua refine its plan and reduce its footprint, water temperature on site and improve water quality. Perpetua Resources has also given more than \$160,000 in charitable giving since 2019. This money has gone to help support educational programs, improve infrastructure at local parks and purchase warm clothing for students during the winter.</p> <p>In reviewing the SDEIS, I feel confident Perpetua Resources has outlined a project that will allow the company to safely mine and reduces impacts to the environment and local communities, while also providing critical minerals, family-wage jobs and many other benefits to Idaho.</p>	GEN	No further response required. General in nature or position statement.
Karen Balch (North Fork Veterinary Service)	19228	2	<p>destroyed the existing population of wolves but fortunately were reintroduced after much debate. I anticipate all types of impact on numerous species in the proposed SGP area. Animals could be affected by loss of suitable reproductive habitat in winter like, wolverines. The constant noise, light, and human activity could easily impact relocation or dispersal of animals. I do not believe the impacts of various wildlife is calculable due to the enormity of this project, noise pollution, light pollution, constant human occupation, etc.</p>	GEN	Impacts to wildlife and wildlife habitat are discussed in Section 4.13 of the EIS.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Zack Waterman (Northern Rockies Conservation Director)	19317	3	The SDEIS lacks key information and analysis necessary for an informed review as required by NEPA, including basic engineering specifications and analysis of the tailings storage facility, sediment modeling, and detailed reclamation plans.	GEN	The EIS is based on descriptions of the action alternatives to a level of detail that enable the Forest Service to estimate reasonably foreseeable future effects of these actions. Detailed specifications and engineering analysis of the TSF is under the regulatory authority of the Idaho Department of Water Resources, not the Forest Service.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	603	Please conduct a careful review of the stated CEA against the analysis that is conducted with the cumulative impacts analysis in this chapter, the Chapter 4 analysis, and the resource reports. It appears that several statements of the CEA are incorrect, or the analysis is incomplete. These errors were noticed in Hazardous Materials, Timber, Public Health and Safety, Social and Economic Conditions, Environmental Justice, and Special Designations. For these resources, please verify the accuracy of the CEA with Chapter 4 analysis and the Specialist Reports.	GEN	The CEAs have been reviewed and amended as necessary.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	27	" <i>Closure and reclamation activities under the alternatives could reduce climate change impacts by improving soil quality and implementing best management practices during all phases of the SGP.</i> " Please revise to add "...soil quality, planting trees in riparian areas , and implementing..."	GEN	Edit has been made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	1	Comments in Attachment A specific to each document chapter and section are provided for the Executive Summary; Chapters 1, 2, and 5; and Appendix A. Chapters 3 and 4, and the Specialist Reports are organized by Resource for ease of your review and distribution to resource specialists. Please note that comments on select resources including Surface Water and Groundwater Quantity, Surface Water and Groundwater Quality, and Fish Resources and Fish Habitat are provided in individual comment submittals under separate cover. A supplementary comment letter that addresses Heritage Resources, Environmental Justice, and Tribal Rights and Interests has also been prepared. Below, a brief introduction to each chapter and section of the SDEIS and a preview of comment content is provided and presented in the order the comments appear in Attachment A. Where applicable, additional information relative to the submitted comments is provided for context and explanation.	GEN	No further response required. General in nature or position statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	2	Comments on the Executive Summary include requests and recommendations for clarifying statements and/or data that represent high-level summary statements of effects analysis. Comments and corrections in the Executive Summary are applicable to all appropriate recurrences of similar content throughout the SDEIS. Every effort has been made to identify this related content wherever it occurs in the SDEIS and to provide appropriate and similar comments.	GEN	No further response required. General in nature or position statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	3	Comments on Chapter 1 include requests for clarifying the presentation of Issues and Indicators and consistently applying that approach to all occurrences in the SDEIS. Additional comments requesting citations or additional information to support Chapter 1 content are also included.	GEN	No further response required. General in nature or position statement.
Meg FitzMaurice	19329	3	The question I have asked myself over the last couple years is what is meant to be gained from SMP and more importantly what is lost? I work as a healthcare provider and often when creating a plan with a patient I like to lay out the risk vs. benefits of a plan in order to come to an informed decision with the patient. In utilizing what I know I have taken the same approach when analyzing the SMP. It is in my opinion that the risk and loss associated with SMP far outweigh the gains. The gains largely monetary will benefit few and will be short-term. The losses however will affect innumerable entities and will be extensive, long term and in some cases in "perpetuity." These include detrimental impacts to our local and prestigious watersheds, fish, wildlife, tribal and treaty rights, soil and vegetation, air and water quality to name a few. Not to mention the impacts on recreation, public health as well as transportation and hazardous material risk to our local communities associated with an enormous open pit, cyanide-leaching gold mine.	GEN	No further response required. General in nature or position statement.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Jon Robison	19330	13	<p>The Story Map was also exceedingly disappointing. Instead of tiering to the wording in the SDEIS, the language seemed to be written by a public relations firm. The wording downplayed the environmental impacts and highlighted the restoration aspirations, misleading the public. For example, the Story Map says this regarding bull trout:</p> <ul style="list-style-type: none"> • Habitat reduced during operations and post-closure • Occupancy probability increased during operations and post-closure • Habitat available for occupancy increased during operations and post-closure <p>However, the Specialist Report in the SDEIS says this: "Post-closure, a net decrease in quality and quantity of bull trout habitat would occur despite removal of passage barriers and an increase of lake habitat for bull trout..." (SDEIS Fisheries Specialist Report p. 150). These two conclusions are at direct odds with each other and mislead the reader.</p> <p>The Story Map does describe the link between riparian vegetation recovery and meeting fish habitat requirements:</p> <ul style="list-style-type: none"> • "Stream temperature increase post-closure until riparian shading effects return to baseline conditions." • "Stream Temperatures Sensitivity to Riparian Shading - The effectiveness of stream restoration on restoring fish habitat would depend on the effectiveness of re-establishing riparian shading on the restored stream channels." <p>However, the Story Map fails to convey the 100+ year time lag for this recovery, the fact that half the growth media needed to meet these restoration goals has not yet been identified and that the growth media that is available has high levels of heavy metals.</p> <p>The Story Map also uses the term "affect" several times but without the important positive or negative qualifiers. The wording fails to disclose the predicted environmental degradation to the public.</p> <ul style="list-style-type: none"> • Individuals would be affected by dewatering, salvage, and relocation • Altered stream structures affect occupancy and habitat during operations • Indirect effects would include dust emissions and modification of groundwater levels that potentially affect wetlands water sources. • Access to several over-show vehicle routes would be affected by winter plowing of mine access route <p>It is also not at all clear that "impacts" are negative changes when compared to the existing condition. With respect to understanding the environmental impacts, the public may have been better informed had the Story Map not been produced at all.</p>	GEN	<p>No further response required. General in nature or position statement.</p> <p>The Fisheries and Aquatic Habitat Specialist Report text has been reviewed for consistency regarding the representation of habitat quantity and quality.</p>
Rick Youngblood (Representative, District 4, Seat A)	5747	4	<p>The Stibnite Mining District served a critical role during the WWI & II war efforts. The antimony & tungsten mined at the site was credited for shortening WWII by a year and saving over a million American lives. The mining during this era occurred before the major environmental regulations were passed in the 1970s. As a result, Stibnite is rife with environmental concerns. The Stibnite Gold Project is an opportunity to bring \$1 billion of private investment and economic windfall to Idaho, all while restoring an area damaged by a century of mining.</p>	GEN	No further response required. General in nature or position statement.
Brandon Mitchell (Representative, District 6, Seat B)	7175	3	<p>The Stibnite Gold Project provides a unique opportunity for a private entity to restore a site abandoned after 100 years of mining. The greatest threat to Stibnite is no action. Today, no one is legally responsible for restoring Stibnite. Without Perpetua's proposed Stibnite project, the site might never be restored.</p> <p>Whereas Perpetua Resources has committed to restoring Stibnite as close to natural conditions as possible, which goes far beyond the reclamation measures required by law. As a testament to this commitment, in 2021 the Company signed an agreement with the EPA and other federal agencies to</p>	GEN	No further response required. General in nature or position statement.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
			begin early cleanup activities at Stibnite. And before even one ounce of gold had been poured, these activities began this summer.		
Brooke Green (Representative, District 18)	7183	5	As a testament to their commitment to restoring the site, in 2021, the Company signed an agreement with the EPA and other federal agencies to begin early cleanup activities at Stibnite. And these activities began this summer. The company diverted 2 waterways away from contaminated materials and next summer they will begin picking up and storing 325,000 tons of legacy materials.	GEN	The ASAOC work is separate from the NEPA permitting process and was initiated in direct response to a Citizens Clean Water Act Lawsuit by the Nez Perce Tribe.
Bowen, Mike (Executive Director, New Mexico Mining Association)	16872	1	<p>In October 2020, the New Mexico Mining Association (NMMA) submitted comments on the August 2020 Draft Environmental Impact Statement (DEIS) that the Payette and Boise National Forests (Forest Service) prepared for Midas Gold, Inc.'s (now Perpetua Resources Ltd. 's or Perpetua's) Stibnite Gold Project (SOP) in Valley County, Idaho. Our October 2020 comments focused on New Mexico's experience with the slow progress of the Superfund cleanup at the Questa Mine in Taos County, NM to demonstrate the significant advantages associated with Midas Gold's plan to address the environmental problems at Stibnite compared to waiting decades for a Superfund cleanup.</p> <p>Today, NMMA is submitting comments on the Forest Service's October 2022 Supplemental Draft Environmental Impact Statement (SDEIS). Based on our review of the SDEIS, NMMA continues to believe that Perpetua's plan to redevelop, remine, and remediate the Stibnite mine site as described as the 2021 Modified Mine Plan (MMP) in the SDEIS will expedite cleanup of this site and achieve significant environmental and ecological benefits. Waiting for the federal government to step in makes no sense. There have been no new policy developments that suggest the federal government will make the significant investment required under the Superfund or another federal program that will successfully remediate this site.</p>	GEN	No further response required. General in nature or position statement.
Samuel Penney (Chairman)	19396	139	<p>3.13 Wildlife and Wildlife Habitat (Including Threatened, Endangered, Candidate, and Sensitive Species)</p> <p>Existing conditions of wildlife species and associated habitats impacted by the Project span across three National Forests and lands outside Forest Service jurisdiction. The analysis area covers approximately 613,793 acres of land and includes a description of conditions for ESA-listed and candidate species ("TEPC"), focal species (Forest Sensitive Species and Management Indicator Species), Idaho Species of Greatest Conservation Need ("SGCN"), big game, and migratory birds.</p> <p>ESA-listed species and species proposed for listing include Canada lynx (<i>Lynx canadensis</i>; qéhep) (Threatened), northern Idaho ground squirrel ("NIDGS") (<i>Urocitellus brunneus</i>) (Threatened), wolverine (<i>Gulo gulo</i>; seepin'isécépin) (Proposed Threatened), and monarch butterfly (<i>Danaus plexippus</i>) (Candidate).</p>	GEN	No further response required. General in nature or position statement.
Kathryn Dorn	16771	3	(Also, although this is far from the most important reason to reject this mining proposal: I find it both grimly funny and insulting that the mine-proposing company's current name is "Perpetua Resources" (which implies that there's something eternal or at least sustainable about their operations, and would therefore be a much better name for a metal-recycling company than for a company which can't think of any better way of obtaining gold than to carve yet another giant hole in the ground), and that their former name was apparently "Midas Gold," which...implies that they either have a really weak grasp of the story of King Midas, or they actively *want* to ruin their own lives and those of everyone around them by accidentally turning everything life-sustaining into gold. I suppose that may be a metaphor for the mercury contamination that often goes along with gold-ore processing?)	OOS	No further response required. General in nature or position statement.

Editorial

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Idaho Regulatory Agencies	17718	1	Abbreviations in section headings should be avoided. Please consider: limiting the use of abbreviations; spell out abbreviations when first used in a new section.	EDT	Acronyms are spelled out the first time they are used in the document, then the acronym is used henceforth. No revisions made.
Idaho Regulatory Agencies	17718	2	"PNF," "Forest Service," "BNF," and "NFS" are used in the document to refer to the USDA Forest Service. Please only use "USFS," unless it is necessary to differentiate the two National Forests ("BNF" is also used, but not defined in the document). If it is necessary to denote one National Forest from the other, please spell out.	EDT	BNF is defined in Section 1.1 in the sentence after PNF is defined. It is also included in Section 7.2. NFS is used to denote National Forest System, not the National Forest Service. Forest Service is used in the EIS rather than USFS.
Idaho Regulatory Agencies	17718	9	• Upgrade approximately63 miles A space is needed.	EDT	Added space.
Idaho Regulatory Agencies	17718	10	removal of approximately325,000 tons of development rock and tailings A space is needed.	EDT	Added space.
Idaho Regulatory Agencies	17718	11	You earlier refer to this as the Modified Plan, and I suggest you use: <i>2021 Modified Plan</i> to eliminate confusion instead of using MMP.	EDT	FS prefers 2021 MMP. No revisions made.
Idaho Regulatory Agencies	17718	16	(currently approximately12 feet wide) – A space is needed	EDT	Added space.
Idaho Regulatory Agencies	17718	17	Upgrade approximately59.1. A space is needed.	EDT	Added space.
Idaho Regulatory Agencies	17718	18	approximately5.4 A space is needed.	EDT	Added space.
Idaho Regulatory Agencies	17718	19	Would be approximately300 feet in length. A space is needed.	EDT	Added space.
Idaho Regulatory Agencies	17718	20	and approximately4 A space is needed.	EDT	Added space.
Idaho Regulatory Agencies	17718	22	"...material were suitable ..." should be material <u>was</u> suitable	EDT	Revised.
Idaho Regulatory Agencies	17718	25	Suggest: <i>spill containment based on of the largest vessel.</i>	EDT	Revised.
Idaho Regulatory Agencies	17718	34	last paragraph on page 2-82 is repeated as the first paragraph on page 2-85	EDT	Deleted duplication.
Idaho Regulatory Agencies	17718	55	heading should be: <i>Mining Method Alternatives Examined</i>	EDT	Revised to Mining Method Alternatives Considered
Idaho Regulatory Agencies	17718	56	should be <i>Underground Mining Alternative</i>	EDT	Revised.
Idaho Regulatory Agencies	17718	57	Please consider a rewrite to eliminate the "Under an underground". Suggest: <i>For the underground...</i>	EDT	Revised.

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Idaho Regulatory Agencies	17718	60	should be <i>West End Pit Backfill Alternative</i>	EDT	Revised.
Idaho Regulatory Agencies	17718	61	Backfill of the West End pit This would reduce or eliminate the post-reclamation West End pit lake and reduce the ...	EDT	Revised.
Idaho Regulatory Agencies	17718	63	Should be <i>Electric Mining Equipment Alternative</i>	EDT	Revised.
Idaho Regulatory Agencies	17718	66	Should be <i>Facility Location Alternatives Examined</i>	EDT	Revised to Facility Location Alternatives Considered
Idaho Regulatory Agencies	17718	67	Incorrect underlined heading and information in the paragraph. Correction: <i>Idaho Mined Land Reclamation Act and Rules Governing Mined Land Reclamation: The Idaho Department of Lands (IDL) has the authority to regulate all surface mining in Idaho by: Idaho Mined Land Reclamation Act (Idaho Code, Title 47, Chapter 15, et seq.); and Rules Governing Mined Land Reclamation (Idaho Administrative Procedures Act (IDAPA) 20.03.02). Reclamation is the process of restoring an area affected by a mining operation or cyanidation facility to its original or another beneficial use, considering previous uses, possible future uses, and surrounding topography. The objective is to re-establish a diverse, self-perpetuating plant community, and to minimize erosion, remove hazards, and maintain water quality (IDAPA 20.03.02.010.20). The IDL regulatory oversight includes mining and other activities on private and patented land, as well as on public lands under federal ownership or surface management.</i>	EDT	Revised.
Idaho Regulatory Agencies	17718	93	MMP is missing. I prefer it not be used, but instead, for clarity, it should be referred to as the 2021 Modified Plan (Modified Mine Plan of Operations, 2021). Is this identical to MODPRO2? It is confusing to the reader to use multiple names for the same item.	EDT	2021 MMP is defined at the beginning of the list (sixth entry). However, MMP is added later in the list as well.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	68	"Trees, deadwood, shrubs, and slash would be removed, and any remaining vegetation would be grubbed using a bulldozer. The resulting material would be chipped and stockpiled for use as mulch or blended to create a growth media additive. After vegetation removal, growth media would be salvaged and stockpiled. Stockpiles would be stabilized and seeded. " Suggest replacing these sentences with: "Trees, deadwood, shrubs, and slash not needed to construct windrows at the edge of BLR disturbance (to function as sediment barriers), would be chipped, and suitable soil will be separately salvaged and stockpiled (except for a small portion that will be 'live handled') for use as part of site reclamation and restoration. Portions of the salvaged soil will be blended with the chipped wood to create growth media. All growth media placed in stockpiles would be stabilized, seeded, and mulched to protect the stockpiles from wind and water erosion. "	EDT	Revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	69	In legend: "Warm Lake area OSV connector " and "Warm Lake to Landmark OSV trail " These are not included in the project data and not depicted on the figure. They appear to be duplications of OSV routes labeled appropriately.	EDT	These do appear on Figure 2.4-4. The Warm Lake to Landmark OSV trail is the pink line along Warm Lake Road between Warm Lake and Landmark. The connector is the green line between the pink one and the blue Parking area to the Warm Lake Project Camp OSV trail. No revisions made.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	70	"Approximately 37 percent of the reclamation would be completed concurrent to mining and ore processing; remaining reclamation activities would be completed during closure. " The Soils and Reclamation Cover Material Specialist Report, Table 2-7, row two, includes the statement: "Approximately 46 percent of the SGP reclamation would be done concurrent to mining...". Please reconcile.	EDT	Revised.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	71	"The transmission line ROW and associated access roads would be recontoured to match surrounding topography and revegetated. " Please replace "to match" with "to blend"	EDT	Revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	72	"Perpetua would manufacture growth media material using screened fines from glacial till sources, available mulched vegetation, and off- site composted material from private lands. " Please delete "screened" and replace "mulched" with "chipped" for accuracy.	EDT	Revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	73	"This has led to an internal evaluation of project design features and operational characteristics that may have the effect of reducing and/or eliminating potential environmental impacts of the SGP. " Please add in "and address significant issues identified in Section 1.10.1".	EDT	Rejected. The development of additional mitigation measures by the Forest Service indicates that the 2021 MMP did not fully address all of the significant issues.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	74	"The environmental design features (EDFs) beyond regulatory requirements that have been proposed and committed to by Perpetua are listed in Table 2.4-13. " Please add "to address significant issues identified in Section 1.10.1"	EDT	The EDFs listed in Table 2.4-13 address more resources/issues than just the ones listed in Section 1.10.1; thus, the suggested revision was rejected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	76	"Decompaction: All compacted road surfaces that would be covered with excavated material, for example the inside half of the road surface, shall be decompacted to a depth of 36 inches or to a restrictive layer (bedrock). " The RCP includes deep ripping of recontour surfaces, not the roadbed. There is no Forest Plan Amendment or regulatory requirement listed for this row (original source unclear), so these minor changes should not affect the SDEIS analysis. Please edit.	EDT	This is the Forest Service's table of regulatory and Forest Plan requirements, but as the text states, Table 2.4-12 also lists standard and guidelines, best management practices, and likely permit conditions. The Forest Service reviewed this table in detail prior to publishing the SDEIS. Comment rejected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	77	"Soil-Vegetation Plug Transplanting : Excavate soil-vegetation plugs from adjacent natural and undisturbed ground having a minimum surface area of 9 sq. ft. to a depth beyond the vegetation rooting zone (plug size is dictated by excavator bucket size). " The RCP includes planting of seedlings from commercial and an on- or near-site nurseries, only. There is no Forest Plan Amendment or regulatory requirement listed for this row (original source unclear), so these minor changes should not affect the SDEIS analysis. Please edit.	EDT	This is the Forest Service's table of regulatory and Forest Plan requirements, but as the text states, Table 2.4-12 also lists standard and guidelines, best management practices, and likely permit conditions. The Forest Service reviewed this table in detail prior to publishing the SDEIS. Comment rejected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	78	"Soil-vegetation plug transplanting would be done at a minimum rate of 15 plantings per 100 lineal feet evenly distributed along the width and length of the recontoured surface. " Depending on the width of the recontoured surface, the plant prescription included in the RCP (which are not specific to the MMP) may or may not satisfy this criteria. There is no Forest Plan Amendment or regulatory requirement listed for this row (original source unclear), so these minor changes should not affect the SDEIS analysis. Please remove this bullet.	EDT	This is the Forest Service's table of regulatory and Forest Plan requirements, but as the text states, Table 2.4-12 also lists standard and guidelines, best management practices, and likely permit conditions. The Forest Service reviewed this table in detail prior to publishing the SDEIS. Comment rejected.
Alan Haslam (Vice President, Permitting,	19325	79	"When applying coarse woody debris, use various size classes at levels similar to surrounding undisturbed ground and placed at various orientations. " No such criteria are considered in the RCP as it relates to the commitment to place CWD. There is no Forest Plan Amendment or regulatory requirement	EDT	This is the Forest Service's table of regulatory and Forest Plan requirements, but as the text states, Table 2.4-12 also lists standard and guidelines, best management

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Perpetua Resources Idaho, Inc.)			listed for this row (original source unclear), so these minor changes should not affect the SDEIS analysis. Please remove this bullet.		practices, and likely permit conditions. The Forest Service reviewed this table in detail prior to publishing the SDEIS. Comment rejected.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	80	"Perpetua would manufacture growth media material using screened fines from glacial till sources mined from the Yellow Pine pit, available mulched vegetation, and off-site composted material. " The RCP does not include screening of YPP till as a method to create GM. Please delete "screened".	EDT	Deleted "screened".
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	81	"Merchantable timber on NFS surface lands could be purchased from the USFS. Non-merchantable trees, deadwood, shrubs, and slash would be removed, and any remaining vegetation would be grubbed using a bulldozer. The resulting material would be saved for future use in reclamation activities. Specifically, the organic matter would be chipped and stockpiled for use as mulch or blended to create a growth media additive. After vegetation removal, growth media would be salvaged and stockpiled. Stockpiles would be stabilized, seeded, and mulched to protect the stockpiles from wind and water erosion. " Suggest replacing these sentences with: "Trees and deadwood, shrubs, and slash not needed to construct windrows at the edge of BLR disturbance (to function as sediment barriers), would be chipped, and suitable soil will be separately salvaged and stockpiled (except for a small portion that will be 'live handled') for use as part of site reclamation and restoration. Portions of the salvaged soil will be blended with the chipped wood to create growth media. All growth media placed in stockpiles would be stabilized, seeded, and mulched to protect the stockpiles from wind and water erosion."	EDT	Revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	84	"Changing climatic conditions would be expected to result in decreased soil moisture and quality; air quality; annual streamflow; groundwater recharge; water quality; increased surface water temperatures; increased spread of insects and diseases; changes in the timing, duration, and severity of fire seasons; and habitat loss and fragmentation. " This would be the same in the No Action Alternative. So it's either "Same as Baseline Conditions" or the No Action needs to also say this.	EDT	Updated the No Action Alternative text to say the same thing.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	86	"A total of 1,658,000 BCY of GM and seed bank material (SBM) would be required to meet the specified reclamation areas and GM/SBM thicknesses. " Please replace "1,658,000 BCY" with "1,657,000 BCY" for accuracy.	EDT	Revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	87	"The 797,702 BCY deficit of RCM would be generated from unsuitable unconsolidated till mined from the Yellow Pine Pit plus other cover material at the project site and amended for suitability. " Please replace "797,702 BCY" with "796,873" for accuracy.	EDT	Revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	107	"Water – potentially 1 roundtrip (2 truck trips) daily of antimony. " Please correct to "antimony" to "water".	EDT	Revised.

Author	Comment Letter	Comment Number	Comment	Comment Category	Comment Response
Resources Idaho, Inc.)					
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	109	"South Fork Salmon River Road = 83 miles " According to table 3.16-1. SFSR Rd is appr. 31 miles. Also, Perpetua isn't proposing to use the SFSR Rd. Please delete.	EDT	Deleted.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	111	"These components include the mine and facilities at the SGP, Burntlog Route, upgraded transmission lines, new transmission line to the SGP, Johnson Creek substation, cell tower on Meadow Creek Lookout Road, use of Warm Lake Road, and temporary use of the Johnson Creek Route. " Perpetua has not proposed a cell tower on MC LO Rd. Rather a small repeater at the MC LO (building). Please review and revise.	EDT	Revised to "...a small repeater on Meadow Creek Lookout,..."
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	113	"Landscape is characterized by valley floors surrounded by mountains with steep terrain broken up by narrow gorges and streams. Vegetation includes grass and evergreens. Existing modifications include the existing historical mining disturbances at the SGP, forest roads, transmission lines, and residences in the western portion of the analysis area. " Please add mention of the effect that previous fires have had on the landscape to give the reader an accurate depiction of the site.	EDT	Added statement.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	602	"Past, present, and RFFAs include activities, developments, or events that have the potential to change the physical, social, economic, and/or biological nature of a specified area. " Please replace "events" with "actions".	EDT	Revised.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	115	Mineral Resource tonnage reported in the FS is in metric tonnes, not imperial tons. Please correct.	EDT	According to Table 3-2 in Perpetua's ModPRO2 narrative, this should be "tons". All other tons versus tonnes were checked and are correct.
Alan Haslam (Vice President, Permitting, Perpetua Resources Idaho, Inc.)	19325	116	"The SGP would change the domestic mine production of antimony in the U.S. from the current zero production to 52,319 metric tons of contained antimony over the life of the mine... " should say "recovered" antimony..."contained" is a higher value. Please replace contained with recovered.	EDT	Revised.
Bonnie Gestring (Northwest Program Director, Earthworks) and seven others	17634	269	On page 45 of the Specialists Report, the Forest Service writes that, "care should be taken to avoid impacts to these resources." The Forest Service must amend this language, and all other references, from "should" to "will." The Forest Service and Perpetua Resources are required to either avoid or mitigate potential impacts. The current language presents these mandates as optional, which is wholly unacceptable. There are other references to an optional "should", and we recommend that the Forest Service do a complete word search of the entire SDEIS and related specialist reports and make the	EDT	The use of "should" in Section 7.2.2.1 (Access Roads) of the Heritage Resources Specialist Report denotes a conditional action of a hypothetical situation. However, the sentence was revised. Use of "should" was reviewed in the EIS and the specialist reports and revisions were made if appropriate. Passive language is used in the EIS because it is predecisional.

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			appropriate changes from passive to active language, indicating that proposed actions will take place, rather than aspirationally should take place.		
Samuel Penney (Chairman)	19396	48	In Table 2.4-12 Prominent Regulatory and Forest Plan Requirements, the listed dust control level is incorrect. The text reads: “The Proponent will prepare a dust mitigation plan with appropriate schedule or triggers for control deemed adequate by IDEQ to achieve the level of control of 93 percent of dust (as submitted in the proponent’s draft application for Permit to Construct from IDEQ).”95 The level of control in the IDEQ PTC is 93.3% to achieve necessary controls to protect NAAQS for Particulate Matter (“PM”)10.96	EDT	Revised.
Samuel Penney (Chairman)	19396	334	Table 3.2-1 actually identifies 451 landslides along the Johnson Creek route however this appears to be a typo as the rest of the document has this number at 44. 541	EDT	Number corrected to 45.

General Positive, General Negative, and Request for Extension

Author	Comment Letter	Comment	Comment Category	Comment Response
Numerous	289, 334, 709, 3575, 6652, 7513, 7519, 7728, 7891, 7899, 8911, 9704, 9704, 10178, 10178, 12430, 14113, 15104, 15118, 15145, 15156, 15157, 15158, 15159, 15165, 15165, 15547, 16251, 16266, 16275, 16295, 16338, 16372, 16502, 16502, 16648, 16858, 16883, 16899, 16901, 16901, 16965, 16975, 16990, 17129, 17143, 17146, 17166, 17230, 17405, 17424, 17506, 17616, 17737, 17847, 17863, 18525, 18535, 18551, 18561, 18575, 18826, 18904, 18929, 18933, 18937, 19212, 19216, 19234, 19234, 19239, 19378, 19387	General comments	GEN	No further response required. General in nature or position statement.
Numerous	2, 3, 11, 13, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 126, 127, 127, 128, 128, 129, 129, 130, 130, 131, 131, 132, 132, 133, 133, 134, 134, 135, 135, 136, 136, 137, 137, 138, 138, 139, 139, 140, 140, 141, 141, 142, 142, 143, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 286, 287, 288, 290, 291, 292, 293, 294, 295, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 739, 740, 741, 741, 742, 742, 743, 743, 744, 744, 745, 745, 746, 746, 747, 747, 748, 748, 749, 749, 750, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 825, 826, 827, 828, 829, 830,	General positive comments or position statement.	GEN-P	No further response required. General in nature or position statement. The EIS thoroughly assesses and analyzes the potential impacts on all applicable resources from the action alternatives and the No Action Alternative. During the decision-making process, the Forest Service will strive to identify the most effective and responsible course of action for the Payette and Boise National Forests and the communities it supports.

Author	Comment Letter	Comment	Comment Category	Comment Response
	<p>831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 925, 926, 927, 928, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 999, 1000, 1000, 1001, 1001, 1002, 1002, 1003, 1003, 1004, 1004, 1007, 1007, 1009, 1009, 1010, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 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During the decision-making process, the Forest Service will seek to identify the best possible balance between environmental protection, community needs, and sustainable forest management.</p>

Author	Comment Letter	Comment	Comment Category	Comment Response
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Author	Comment Letter	Comment	Comment Category	Comment Response
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Numerous	<p>334, 924, 1005, 1005, 1006, 1006, 3121, 3583, 3593, 3594, 6650, 7256, 7422, 7896, 7897, 7900, 8007, 8010, 10177, 13131, 13143, 14473, 14474, 14916, 16502, 16858, 17225, 17501, 17520, 17847, 18482, 18574, 18784, 18795, 18855, 18861, 18883, 18894, 18969, 19000, 19026, 19035, 19062, 19140, 19246, 19249, 19250, 19317, 19317, 19336, 19348, 19359, 19386, 19426</p>	Request for public review period extension.	EXT	The 75-day public comment period was deemed adequate for public review of the SDEIS.

Volume II Response to Concerns on the 2020 DEIS

Forest Plan Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Forest Plans	801.0301	Primary	There are concerns amendments to Forest Plans will diminish environmental protections agreed upon between the USFS and the public.	Appendix A of the DEIS presented the Forest Plan amendments and the DEIS described their effect on environmental resources.
Forest Plans	801.0301	A.1	There are concerns that the past mining disturbances which currently do not meet Forest Plan VQOs are not included in the impact analysis.	Past mining disturbance have been incorporated into the impact analysis as part of the baseline condition as described in DEIS Section 3.20.3.
Forest Plans	801.0301	C.1	There are concerns that the suitability studies of affected potential Wild and Scenic Rivers must be conducted prior to approval of any action alternatives associated with the Stibnite Gold Project.	If there would be impacts to an eligible river then a suitability study would be required. The SDEIS analysis of the revised mine plan concluded that suitability studies would not be required because activities did not impact resources associated with river segment eligibilities.
Forest Plans	801.0301	C.2	There are concerns that the Project will damage the wild character and outstandingly remarkable values of Wild and Scenic Rivers and the DEIS does not include sufficient mitigation measures to address these impacts. There are concerns that the DEIS fails to adequately characterize and consider Project impacts (and associated mitigation measures) to Wild and Scenic Rivers Act eligible streams within the vicinity of the Project area. Additionally, there are concerns that the scope of analysis is not sufficient to consider impacts to other eligible and congressionally designated waterways outside of the Project area that may be impacted. Commenters specifically note the following designated, eligible, and suitable waterways that may potentially be impacted: South Fork of the Salmon River, Middle Fork Salmon River, Main Salmon River, Burntlog Creek, Johnson Creek, North Fork Payette River and Main Payette River	As noted in Section 3.23.2 of the DEIS, there are three wild and scenic river segments within the area of analysis: Burntlog Creek (eligible), Johnson Creek (eligible), and South Fork Salmon River (suitable). All have a classification of recreational. If there would be impacts to an eligible river then a suitability study would be required.. Under planned operating and closure conditions, water quality of surface flow departing from the SGP mine site would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (DEIS Section 4.9). The area of analysis is appropriate as it encompasses potential impacts.

Forest Service Directives Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Forest Service Directives	801.0305	Primary	There are differences in opinion regarding the appropriateness of application of 36 CFR 228A to the access road and other ancillary areas proposed in the PRO.	DEIS Section 1.5.1 provides an explanation of the application of 36 CFR 228 Subpart A to the proposed Project. Roads that are constructed and maintained in connection with development and mining of mineral resources are part of the operations of the mining project (36 CFR 228.3(a)).
Forest Service Directives	801.0305	C.1	There are recommendations that the Management Area 13 Management Proscriptions for roads be utilized.	The road proposals within Management Area 13 are consistent with LRMP management direction.
Forest Service Directives	801.0305	C.2	There are opinions that the proposed access road and other ancillary uses in the PRO are reasonable incident to mining as defined in 30 U.S.C. Section 612(a) as utilized by the Forest Service's Surface Use Determination Handbook (2809.15, Chapter 10).	The EIS analyzes the proposed access road and ancillary uses as components of a proposed mining project. No further response required. Already decided by law, regulation, or policy.

Forest Plan Amendments Concerns

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Forest Plan Amendments	801.0301.01	Primary	There are concerns amendments to Forest Plans will diminish environmental protections agreed upon between the USFS and the public.	Appendix A of the DEIS presented the Forest Plan amendments and the DEIS described their effect on environmental resources. The Final EIS presents a revised analysis of Forest Plan Amendments per Forest Service review of its selection of the 2021 MMP as the agency preferred alternative.
Forest Plan Amendments	801.0301.01	A.1	There are concerns that the past mining disturbances which currently do not meet Forest Plan VQOs are not included in the impact analysis.	Past mining disturbance was incorporated into the impact analysis as part of the baseline condition as described in DEIS Section 3.20.3.

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Forest Plan Amendments	801.0301.01	C.1	There are concerns that the proposed fish passage diversion would not meet Forest Plan requirements such as PNF Forest Plan SWST09.	The proposed diversions around the proposed tailings storage facility would constitute barriers to fish passage due to the gradients in those diversions. As described in the DEIS Appendix A, proposed Plan Amendment 4 would be required for the Project to conform with the Forest Plan. The diversion tunnel could limit upstream fish passage and would also require this Forest Plan amendment.
Forest Plan Amendments	801.0301.01	C.2	There is a recommendation that Forest Plan amendments be made at the plan level or alternatively, the EIS could provide specific details on how the amendments will affect the Forest Plans for both the BNF and PNF.	The SDEIS clarifies the Forest Plan amendments and describes their effect on environmental resources. The Forest Service practice is to make Forest Plan Amendments for specific components of mining projects at the project-level rather than the plan-level (36 CFR 219.13(b)(1)).
Forest Plan Amendments	801.0301.01	C.3	There are concerns that the EIS does not state the reasoning behind Forest Plan amendments and does not analyze the impact of the amendments beyond the mine site such as traffic, water quality, air quality, wildlife and aquatic life.	Appendix A of the DEIS presented the Forest Plan amendments and the DEIS described their effect on environmental resources. The Final EIS presents a revised analysis of Forest Plan Amendments per Forest Service review of its selection of the 2021 MMP as the agency preferred alternative.
Forest Plan Amendments	801.0301.01	C.4	There are concerns that the list of proposed amendments is incomplete. Potential examples of other items needing amendment such as PNF Forest Plan – 13 #1302 and BNF Forest Plan -20 #2006 are submitted.	As described in DEIS Section 4.1 and Appendix A, a review of the proposed Project against all standards in the Forest Plans was performed, resulting in the identification of five PNF Forest Plan and nine BNF Forest Plan standards where Project-specific amendments would be required. PNF Forest Plan Standard 13 #1302 and BNF Forest Plan Standard 20 #2006 pertain to the instances where mechanical vegetation treatments may occur. Mechanical vegetation treatments are not part of the Proposed Action.

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Forest Plan Amendments	801.0301.01	C.5	There are concerns that Project specific amendments are not the appropriate mechanisms for proposed Forest Plan amendments.	Please see response to Comment 801.0301 C.2.
Forest Plan Amendments	801.0301.01	C.6	<p>There are concerns that the Stibnite Gold Project and the DEIS fails to comply with all of the requirements of the Payette and Boise National Forest Land and Resource Management Plans (Forest Plans), in violation of the National Forest Management Act (NFMA) and NEPA. Commenters state that the July 2019 draft Forest Plan consistency table identified approximately 175 different Forest Plan provisions that apply to the Stibnite Gold Project, but which either the Forest Service determined would not be met or was unsure whether they would be met. There are concerns that the DEIS fails to acknowledge this and glosses over the Forest Plan consistency issues in Appendix A, in violation of NEPA and NFMA. Commenters provide specific examples of Forest Plan provisions that the Project may violate, but which are not mentioned in the DEIS, including: standards designed to protect riparian areas and streams, specifically Riparian Conservation Areas; standards MIST08 and MIST09; mining provisions (see PNF Forest Plan pp. III-48 - III-51); provisions designed to protect threatened, endangered, proposed, and candidate species; air quality, soil, water, riparian, and aquatic resources; wildlife; vegetation, botanical resources, and non-native plants; and other public land values. Commenters state that the Forest Service must consider the relevant Forest Plan provisions and explain to the public how the Project complies with them; and where it does not comply, make changes to the Project, reject the Project, or amend the Forest Plan.</p>	<p>As described in DEIS Section 4.1 and Appendix A, a review of the proposed Project against all standards in the Forest Plans was performed, resulting in the identification of five PNF Forest Plan and nine BNF Forest Plan standards where Project-specific amendments would be required. This review included detailed inspection of the Forest Plan provisions resulting in the identification of provisions potentially requiring project specific Forest Plan amendments as described in Appendix A.</p> <p>The Final EIS presents a revised analysis of Forest Plan Amendments per Forest Service review of its selection of the 2021 MMP as the agency preferred alternative. Based on that review, there would be five amendments to the PNF Forest Plan and six amendments to the BNF Forest Plan. Consistency with the Forest Plans was addressed in the analysis presented in DEIS Appendix A where differences between the proposed Project and Forest Plan standards were described along with the substantive requirements of planning regulations for the Project-specific amendments to suspend the requirements under the Planning Rule.</p> <p>MIST08 pertains to locating facilities and roads outside of Riparian Conservation Areas unless necessary, and in those instances minimizing the effects on streams and TEPC species.</p> <p>MIST09 prohibits solid and sanitary waste facilities in RCAs. MIST09 also pertains to the location of waste rock and tailings facilities</p>

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				<p>relative to RCAs, including requirements for characterization of materials, predict the release of constituents, monitor facilities, reclaim facilities, and bond facilities.</p> <p>As described in DEIS Section 1.5.1, the Forest Supervisor has the discretion to determine whether to approve the Project as proposed or modified, and whether to amend portions of the Forest Plan.</p>
Forest Plan Amendments	801.0301.01	C.7	There are concerns that there will be additional Management Areas affected by the Project such as MA 12 and MA 14 that were not evaluated in the DEIS.	The geographic extent of the Project impacts was examined in the NEPA analysis and applied to the Management Areas where potential impacts were predicted.
Forest Plan Amendments	801.0301.01	C.8	There are concerns that the four proposed Project-specific amendments to the BNF and PNF Forest Plans violate NEPA and 36 CFR 219 (2012 Planning Rule). Commenters identify the following violations: Failure to analyze and disclose in the DEIS the effects of the proposed amendments. Failure to identify species of conservation concern as required by 36 CFR 219.13(b)(6). Commenters identify several specific species (including both Forest Service Sensitive and non-Forest Service Sensitive species) that occur in the Project area and need to be evaluated as possible species of conservation concern.	Appendix A of the DEIS presented the Forest Plan amendments and the DEIS described their effect on environmental resources. The Final EIS presents a revised analysis of Forest Plan Amendments per Forest Service review of its selection of the 2021 MMP as the agency preferred alternative. The SDEIS and Final EIS analyses for wildlife (Section 4.13) and vegetation (Section 4.10) updated the list of species considered per the current listings and requirements.
Forest Plan Amendments	801.0301.01	C.9	There are concerns that proposed Forest Plan amendment 1 would violate the substantive standards in the 2012 Planning Rule, thus violating NFMA. Additionally, there are concerns that an analysis of the full impacts of the proposed Amendment 1 are not disclosed in the DEIS, in violation of NEPA. Commenters identify the following issues related to this concern: The Project could last into perpetuity (e.g., post-reclamation water treatment); therefore, indefinite and in-perpetuity timeframes should be included in the timeframes for the proposed amendment. Project-	<p>Consistency with the Forest Plans was addressed in the analysis presented in DEIS Appendix A where differences between the proposed Project and Forest Plan standards were described along with the substantive requirements of planning regulations for the Project-specific amendments to suspend the requirements under the Planning Rule.</p> <p>The SDEIS analyzes a revised mine plan that does not require in-perpetuity timeframes for water</p>

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			<p>specific amendments are not appropriate for indefinite amendments to the Forest Plan. The Project will affect aquatic and watershed resources beyond the management areas proposed for amendment; however, the DEIS has failed to evaluate impacts at a larger geographic scale. By failing to include impacts beyond the mine site, the geographic scope of the proposed amendment was unreasonably narrow and the true impacts of this proposed amendment were neither considered nor disclosed to the public. Proposed mitigations do not sufficiently minimize impacts to avoid degradation and the DEIS does not include analysis of specific mitigations. This amendment is not based on the best available science as required by 36 CFR 219.13(5)(I).</p>	<p>treatment. The Forest Service selected this revised mine plan as its agency preferred alternative.</p> <p>The DEIS impact analyses for water chemistry (Section 4.9.2), fisheries (Section 4.12.2), and scenic resources (4.20) did not predict that impacts would extend beyond the area of analyses. Therefore, the geographic scale of the analyses was appropriately applied to management areas proposed for amendment.</p> <p>The SDEIS includes additional analyses regarding the effectiveness of mitigation measures in reducing Project impacts. Impacts, mitigation measures, the effectiveness of mitigation measures, and implications of Forest Plan amendments are described for resources including water quality, fish habitat, air quality, soils, wildlife, and vegetation.</p>
Forest Plan Amendments	801.0301.01	C.10	<p>This amendment is not consistent with the substantive requirements of the 2012 Planning Rule. First, the proposed amendment does not meet the requirement to maintain or restore ecological integrity. Although the DEIS states that the amendment meets this requirement, commenters state that the DEIS instead documents exceedances in water quality and blocked fish habitat and does not describe how ecosystem integrity would be restored during operations and after closure. Commenters cite inadequacy of analyses of potential impacts to fisheries and water quality as demonstrating inconsistency with meeting the 2012 Planning Rule's substantive requirements. Second, the proposed amendment does not meet the requirement for ecosystem integrity for air, soil, and water. Commenters cite adverse impacts to water quality as demonstrating that the amendment is not consistent with the requirement. Third, the proposed amendment does not meet the ecosystem integrity component under the diversity of</p>	<p>Substantive requirements (219.8 through 219.11) that are directly related to plan direction being modified through plan amendments were identified in Appendix A of the DEIS. Determinations can be based on adverse, as well as beneficial, effects (36 CFR 219.13(b) (5)(i)). Plan amendments that apply to a specific project can use the analysis prepared for the project as documentation (36 CFR 219.13 (b)(1)). For each proposed amendment described in Appendix A, the location of the relevant analysis in the DEIS is identified.</p> <p>The analysis area for groundwater and surface water are disclosed in section 3.9.1.1 and fish are disclosed in section 3.12.1 of the DEIS. The DEIS impact analyses for water chemistry (Section 4.9.2) and fisheries (Section 4.12.2) did not predict that impacts would extend beyond the area</p>

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			plant and animal communities requirement. Commenters state that the physical habitat impacts from mining are underestimated and that the DEIS assumes no interactions among impacts, leading to a serious underestimate of impacts to fishes and their habitat, demonstrating inconsistency with the 2012 Planning Rule. Fourth, the proposed amendment fails to be in accordance with substantive provisions on ecosystem diversity. Fifth, there are additional species-specific plan components that are problematic with respect to proposed amendment 1. Commenters cite specific requirements of the 2012 Planning Rule and ways in which the DEIS fails to show consistency. Finally, the proposed amendment is not in accordance with the substantive requirement for integrated resource management for multiple use.	<p>of analyses. Therefore, the geographic scale of the analyses was appropriately applied to management areas proposed for amendment.</p> <p>The SDEIS includes additional analyses regarding the effectiveness of mitigation measures in reducing Project impacts. Impacts, mitigation measures, and the effectiveness of mitigation measures are described for resources including water quality, fish habitat, air quality, soils, wildlife, and vegetation.</p> <p>The SDEIS clarifies the temporal impacts of the proposed SGP; specifically, the length of active post-operation water treatment.</p> <p>It is clarified in the SDEIS that predicted active water treatment would be needed until year 40 (25 years after closure), rather than in perpetuity.</p>
Forest Plan Amendments	801.0301.01	C.12	There are opinions that amendments of standards connected to the Endangered Species Act cannot be amended because they are outside the authority of the USFS.	The authority for the Forest Service for review and approval of the proposed Project along with amendments to the Forest Plan was described in DEIS Section 1.5.
Forest Plan Amendments	801.0301.01	C.13	There are concerns that proposed Forest Plan amendments 2 and 3 do not meet the requirements of NFMA or NEPA. Specifically, commenters state that while the amendments propose to suspend Forest Plan standards related to total soil resource commitment and visual quality objectives, the impacts analysis makes it clear that the degradation of soils and visual quality will be permanent features even after closure and reclamation. Additionally, there is no detail or analysis on how the proposed amendments will be consistent with the 2012 Planning Rule amendments	Consistency with the Forest Plans was addressed in the analysis presented in DEIS Appendix A where differences between the proposed Project and Forest Plan standards were described along with the substantive requirements of planning regulations for the Project-specific amendments to suspend the requirements under the Planning Rule.
Forest Plan Amendments	801.0301.01	C.14	There are concerns that proposed Forest Plan Amendment 4 is not consistent with the requirements of the 2012 Planning Rule. Commenters identify the	The Project would reinstate fish passage during the operating or post-closure period. The permanent barrier associated with the proposed

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			<p>following issues related to this concern: The proposed amendment would suspend requirements that new surface diversion provide upstream and downstream fish passage, implying that the requirement would be reinstated after a period of time. However, the DEIS shows that surface diversions will not provide fish passage during operations or post-closure, effectively resulting the removal of the Forest Plan Standard. Mitigation would not reduce significant impacts to fish. There is no rationale, interpretation, or analysis of the mitigation measures and design features listed in Appendix D. The proposed amendment is not consistent with the requirements for ecosystem integrity found at 36 CFR 219.8(a)(1) and 36 CFR 219.9(a)(1). First, commenters cite issues with fish passage and the proposed "fish tunnel" as demonstrating a degradation of ecological integrity of terrestrial and aquatic ecosystems and watersheds. Second, the DEIS incorrectly states that the substantive requirement at 36 CFR 219.9(a)(1)(2) does not apply to this proposed amendment. Third, the proposed amendment does not comply with additional species-specific plan components found in 36 CFR 219.9(b). The DEIS does not document a determination that the plan components are sufficient to provide the ecological conditions necessary to contribute to the recovery of federally listed threatened and endangered species and conserve proposed and candidate species. Finally, the DEIS incorrectly states that 36 CFR 219.10(a) does not apply to this proposed amendment.</p>	<p>Tailings Storage Facility coincides with an existing barrier to fish passage.</p>

Federal Laws and Regulations – General Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Federal Laws and Regulations	801.0302	Primary	There are concerns that the EIS did not fully account for and/or correctly apply all applicable laws and regulations.	DEIS Section 1.5 described the Federal decision framework for the Project and identified the applicable laws and regulations. The SDEIS clarifies specific items raised in comments on the DEIS.
Federal Laws and Regulations	801.0302	C.1	There are concerns that the purpose and need and no action alternative ignore the fact that the Project site currently violates water quality and other environmental standards. Commenters state that the "agencies must consider the cleanup/remediation of the site as their first obligation under the Clean Water Act, 1897 Organic Act, the NFMA, NEPA, and other applicable laws/regulations (as well as its Treaty obligations), which the DEIS fails to do." (Save the South Fork Salmon letter p. 82). Commenters note that the Forest Service and Midas Gold are under an outstanding obligation to remediate the Project site and therefore, the agency cannot conclude that the no action alternative would result in continuation of the current contaminated conditions. The No Action Alternative should be based on what the area will look like after a mandated cleanup is implemented, not on existing degraded conditions. There is a request that the Forest Service review and consider a cleanup/remediation plan that does not involve additional/new mineral extraction.	The recent ASAOC defines site remediation requirements. The activities under the ASAOC are incorporated into the SDEIS as a reasonably foreseeable future action because its first phase of actions is between 2021 and 2025. Subsequent phases are contingent on the completion of a ROD approving the mining Project.
Federal Laws and Regulations	801.0302	C.2	There is a recommendation that the EIS adhere to U.S. Mining Law and the Mining and Minerals Policy Act of 1970 to encourage private enterprise in economically sound and stable domestic mining.	No further response required. General in nature or position statement.
Federal Laws and Regulations	801.0302	C.3	There are concerns that the DEIS and its supporting documents make numerous unsupported assumptions on issues that are unknown, subject to change, and/or still being decided; these issues could have major implications on the likely environmental effects, feasibility, and other factors related to each alternative, including the proposed	The SDEIS incorporates the recent ASAOC for the mine site as a reasonably foreseeable future action. Pending decisions by Idaho State rulemaking do not impinge on the Forest Service's review of the proposed Project within the decision framework described in DEIS Section 1.5. Collection of

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			action, and for the associated mitigation and monitoring. Commenters provide several examples of issues that have not been adequately disclosed or considered in the DEIS, including 1) a potential Administrative Order on Consent under the Comprehensive Environmental Response, Compensation, and Liability Act, 2) ongoing Idaho legislature and Department of Environmental Quality rulemaking, 3) a pending Burntlog Route Geophysical Investigation proposal that is mentioned in the DEIS as a connected action to the Project, and 4) explorations conducted by Midas Gold for additional mining opportunities at the Project site.	ongoing geotechnical and exploration information to inform Project development also does not preclude the ability of the Forest Service to review the proposed Project and reach a decision based on that proposal. Any modifications to the Project resulting from additional data collection and/or rulemaking would be subject to subsequent NEPA analysis and permitting as necessary. The SDEIS clarifies the assumptions utilized in its analysis per comments received on the DEIS.
Federal Laws and Regulations	801.0302	C.4	There are concerns that the proposed amendments to the Forest Plans violate the Organic Act and NFMA. There are concerns that the rationale in the DEIS inappropriately makes Forest Plan, NFMA, and Organic Act environmental requirements subservient to mining operations/Mining Law. Commenters note that neither Midas Gold nor the Forest Service have made the necessary factual determinations to support any assertion of rights under the Mining Law. Additionally, even if the evidence supported the assumption of rights under the Mining Law, commenters state that "the agency cannot amend the Forest Plan, or disregard its requirements, to allow mining operations to damage the fisheries, wildlife, and other resources under its Part 228A regulations and the Organic Act." (Save the South Fork Salmon letter p. 55).	DEIS Sections 1.4 and 1.5 described the application of laws and regulations to the Project. This decision would balance rights conveyed by mining laws with requirements to minimize adverse environmental impacts. As described in DEIS Section 1.1, the proposed Project meets the requirements for consideration by the Forest Service under 36 CFR 228 subpart A. Under this consideration the Forest Supervisor has discretion to amend the proposed Project, amend the Forest Plan, and require mitigation measures to achieve compliance with laws and regulations applicable to operations on National Forest System lands (DEIS Section 1.5).
Federal Laws and Regulations	801.0302	C.5	There are concerns that the Forest Service has failed to minimize all adverse environmental impacts and protect public resources, in violation of agency regulations (36 CFR 228.8, 36 CFR 228.4(c)(e)), the Organic Administration Act of 1897 (Organic Act), the Clean Water Act, the Executive Order on Wetlands Protection, and other laws. Commenters claim that the DEIS does not show, or properly analyze, that all aspects of the Project will fully protect "fisheries and wildlife habitat."	The SDEIS clarifies the descriptions of Forest Service requirements, best management practices, and environmental design features and their effectiveness in offsetting environmental impacts. Specific clarifications regarding fisheries, wildlife, water quantity, and water quality appear in Chapter 4 of the SDEIS. As described in DEIS Section 1.4.1, Project consideration was conducted within the context of

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			Specifically, there are concerns that the Project will adversely affect/eliminate public waters (e.g., critical wetlands, riparian areas, groundwater dependent ecosystems), in violation of the Organic Act and the Executive Order on Wetlands Protection. Commenters claim that the Forest Service has not considered whether approval of the Project would be consistent with one of the primary purposes of the Payette National Forest, enhancing and preserving water conditions/flow, and that the Project is not consistent with this purpose.	the goals and objectives of the Payette National Forest Land and Resource Management Plan and the Boise National Forest Land and Resource Management Plan.
Federal Laws and Regulations	801.0302	C.6	There are concerns that the DEIS fails to acknowledge the role of the Native American Graves Protection and Repatriation Act.	The role of the Native American Graves Protection and Repatriation Act is acknowledged in the SDEIS. The Native American Graves Protection and Repatriation Act is included in SDEIS Section 3.17 and 3.24 under Relevant Laws, Regulations, Policies, and Plans.
Federal Laws and Regulations	801.0302	C.7	There is an opinion that Federal and State laws and regulations cause modern mines to be designed with numerous safeguards to protect the environment and monitoring systems to verify environmental performance.	Comment noted. The SDEIS clarifies the role of Forest Service requirements, best management practices, and environmental design features in eliminating, reducing, and offsetting environmental impacts of the Project.
Federal Laws and Regulations	801.0302	C.8	There are concerns that the Project will damage the wild character and outstandingly remarkable values of Wild and Scenic Rivers and the DEIS does not include sufficient mitigation measures to address these impacts. There are concerns that the DEIS fails to adequately characterize and consider Project impacts (and associated mitigation measures) to Wild and Scenic Rivers Act eligible streams within the vicinity of the Project area. Additionally, there are concerns that the scope of analysis is not sufficient to consider impacts to other eligible and congressionally designated waterways outside of the Project area that may be impacted. Commenters specifically note the following designated, eligible, and suitable waterways that may potentially be impacted: South Fork of the Salmon River, Middle Fork Salmon River, Main Salmon River, Burntlog	Please see response to comment 802.0800 C.3 (Recreation).

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			Creek, Johnson Creek, North Fork Payette River and Main Payette River.	
Federal Laws and Regulations	801.0302	C.9	There are concerns that the EIS doesn't specifically address the questions outlined in the Payette Forest-wide Travel Analysis Report "Ecosystem Functions and Processes".	<p>The Final EIS describes the application of the Travel Management Rule to the Forest Service decision on the proposed Project.</p> <p>With regard to the five questions posed under the Ecosystem Functions and Processes section of Appendix B of the Travel Analysis Report, DEIS Sections 3.8 through 3.14 described the ecological attributes of the region. The potential for spread and control of exotic plant and animal species was described in DEIS Sections 4.10 (vegetation) and 4.13 (wildlife). The effects of road construction disturbance and subsequent travel use on the ecological regimes was described in DEIS Sections 4.10 (vegetation), 4.11 (wetlands), 4.13 (wildlife), 4.16 (access and transportation), and 4.23 (special designations including wilderness and Idaho roadless areas). The effects of noise were described in DEIS Section 4.6.</p>
Federal Laws and Regulations	801.0302	C.10	Commentors claim that the Project does not comply with FLPMA Title V (specifically section 504).	DEIS Section 1.5 described the Federal decision framework for the Project and identified the applicable laws and regulations. Because this proposed Project involves activities pursuant to mining, it is considered by the Forest Service under 36 CFR 228 subpart A rather than 36 CFR 251/261 where the cited FLPMA regulations would apply.
Federal Laws and Regulations	801.0302	C.11	DEIS Section 3.15 Land Use and Land Management, does not address the validity of the unpatented mining claims as to their intended purpose in terms of whether mining claims will be used to locate waste rock piles and tailings, which is inconsistent with their being claimed for mining purposes, or whether those areas are covered by millsite claims as required by law.	The Forest Service conducted an assessment of the Project's patented and unpatented mining claims and their proposed use by the Project. This assessment would be utilized in the Forest Service's decision on mine plan approval which would be dependent upon unpatented claims meeting legal requirements.

Federal Laws and Regulations – Mining Law Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Federal Laws and Regulations – Mining Law	801.0302.04	Primary	There are differences of opinion on the applicability of 36 CFR 228 Subpart A and the 1872 Mining Law to the Stibnite Gold Project.	The application of 36 CFR 228 Subpart A to the proposed Project is consistent with Forest Service policy and procedure.
Federal Laws and Regulations – Mining Law	801.0302.04	C.1	There are concerns that the Forest Service has improperly applied 36 CFR 228 Subpart A to this project. Commenters state that the Forest Service mistakenly believes that its review and approval of the proposed uses of federal land, and all of the proposed activities, are governed solely by 36 CFR Part 228 Subpart A because there are some unpatented mining claims on some of the lands to be covered by Project facilities (DEIS at 1-6). Commenters state that the record lacks any evidence that the company has statutory rights under federal mining laws, including the 1872 Mining Law, to any of the lands that remain in federal ownership; therefore, review and regulation of the Project is not under 36 CFR 228, but rather the agency's special use and multiple use authorities (36 CFR Parts 251/261), including right-of-ways under the Federal Land Policy and Management Act (FLPMA). Comments cite the court case <i>Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.</i> , 409 F. Supp. 3d 738 (D. Ariz. 2019) as paralleling the situation exhibited in the Midas Gold Project.	Forest Service processing of the mining proposal is not bound by pending litigation regarding a separate mining proposal in a different jurisdiction.
Federal Laws and Regulations – Mining Law	801.0302.04	C.2	Commenters state that the Forest Service must reject the Plan of Operations submitted by Midas Gold as inadequate and incomplete and that Midas Gold should submit a revised Plan of Operations that addresses consistency issues and names Alternative 2 as the company's preferred alternative.	The preferred alternative for a mining project decision is selected by the Forest Service not the project proponent. Therefore, there is no need for the Project proponent to re-submit its Plan of Operations based on its preferred alternative.
Federal Laws and Regulations	801.0302.04	C.3	There is a concern that the Forest Service has not shown that the Project would meet all the requirements in 36 CFR Parts 251/261 to protect the public interest and the	DEIS Section 1.5 described the Project's Federal Decision Framework which is not subject to the requirements of 36 CFR Parts 251/261.

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– Mining Law			natural and cultural resources at/around the site, and thus must deny the proposed uses of public land.	
Federal Laws and Regulations – Mining Law	801.0302.04	C.4	There is an opinion that analysis of mining claim viability is not required.	No further response required. Unrelated to the decision being made.
Federal Laws and Regulations – Mining Law	801.0302.04	C.5	There are comments that the General Mining Law grants the right to access public lands open to mineral entry and to use public lands open to mineral entry for mineral exploration and development. Further, mining rights are not defined by or restricted to lands where mining claims have been located and can be applied to conduct reasonably incident mining use of open land. Further, mining law rights are not unfettered rights because explorationists and miners must comply with surface management regulations for locatable minerals.	DEIS Section 1.4.1 described the purpose and need for Federal action pursuant to Mining Law.
Federal Laws and Regulations – Mining Law	801.0302.04	C.6	There are statements that mining claims are appropriately applied to mine waste disposal facilities. Further, there are statements that the pending Rosemont Copper litigation in Arizona is not binding to the PNF and BNF.	No further response required. Unrelated to the decision being made.
Federal Laws and Regulations – Mining Law	801.0302.04	C.7	There is a statement that neither MUSYA nor NFMA override the Forest Service Organic Act's acknowledgment of statutory rights of mining claimants, and that Forest Service authority mandates that access to preexisting mining claims be granted to the owners of those claims.	DEIS Section 1.4.1 described the purpose and need for Federal action pursuant to Mining Law.
Federal Laws and Regulations – Mining Law	801.0302.04	C.8	There is a statement that the 16 U.S.C Section 478 indicates that the Forest Service may not use roadless management to deny access pursuant to the 1872 Mining Law.	No further response required. Already decided by law, regulation, or policy.

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Federal Laws and Regulations – Mining Law	801.0302.04	C.9	There is also the opinion that when project lands have not been verified to contain, or do not contain, valuable minerals under the 1872 Mining Law, no right exists.	No further response required. Already decided by law, regulation, or policy.

Federal Laws and Regulations – Mining Regulation Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Federal Laws and Regulations – Mining Regulations	801.0302.06	Primary	There are differences of opinion regarding the correctness of processing the Project application under 36 CFR 228A.	The application of 36 CFR 228 Subpart A to the proposed Project is consistent with Forest Service policy and procedure.
Federal Laws and Regulations – Mining Regulations	801.0302.06	C.1	There are statements that regulations related to 36 CFR Subpart 228A require compliance with all other applicable federal and state regulations, indicating that the Stibnite Gold Project must demonstrate compliance with water quality, air quality, ESA, and other environmental protection mandates.	The application of other environmental protection mandates to the Project was described in DEIS Section 1.5.1.
Federal Laws and Regulations – Mining Regulations	801.0302.06	C.2	There are concerns that the DEIS is incorrect in stating that "transportation and utility uses associated with mineral development activities are authorized under 36 CFR 228A as part of an operator's plan of operations and do not require a separate special use permit." (DEIS 3.15-7) and that the Federal Land Policy and Management Act (FLPMA) applies for access/support corridors instead.	The application of 36 CFR 228 Subpart A to the proposed Project is consistent with Forest Service policy and procedure.
Federal Laws and Regulations – Mining Regulations	801.0302.06	C.3	There are concerns that the DEIS and agency review failed to apply the proper discretionary and public interest review applicable to Title V and its implementing regulations. Additionally, there are concerns that the Forest Service failed to comply with the financial requirements of FLPMA regarding right-of-way (ROW)	DEIS Section 1.5 described the Project's Federal Decision Framework which is not subject to the requirements of 36 CFR Parts 251/261.

Resource	Comment Code	Comment Number	Concern Statement	Response
			applications and approvals and the Forest Service must obtain, at a minimum, the fair market value for the use of federal land and resources.	
Federal Laws and Regulations – Mining Regulations	801.0302.06	C.4	Commenters cite three specific substantial requirements in the FLPMA ROW provisions that the Forest Service must adhere to: Impose conditions that "will minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment." Id. § 1765(a).	DEIS Section 1.5 described the Project's Federal Decision Framework which is not subject to the requirements of 36 CFR Parts 251/261. Design features and mitigation measures for impacts to scenic resources (Section 4.20), fisheries (Section 4.12), and wildlife (Section 4.13) were described in the DEIS.
Federal Laws and Regulations – Mining Regulations	801.0302.06	C.5	Commenters emphasize that the Forest Service must impose conditions that protect not just the land that is part of the ROW, but all federal land affected by the approval of the ROW. Determine what conditions are necessary to protect federal property and economic interests, as well as otherwise protecting the public interest in the lands traversed by the ROW or adjacent. Commenters emphasize that this applies not just to the lands traversed by the ROW, but to all lands and resources adjacent to and associated with the ROW. Commenters state that "the Forest Service would be unable to make a legitimate finding that industrial use of the lands served by the ROW, given the massive adverse impacts from the Mine, would 'protect the public interest.'" (Save the South Fork Salmon comment letter p. 19). ROW grants must not cause unnecessary damage to the environment and must be consistent with any other applicable laws. Commenters cite a number of court cases in support of these arguments.	DEIS Section 1.5 described the Project's Federal Decision Framework which is not subject to the requirements of 36 CFR Parts 251/261.
Federal Laws and Regulations – Mining Regulations	801.0302.06	C.6	There are comments opposing the No Action Alternative (Alternative 5) as this alternative would not create jobs, improve fish passage, or resolve the existing environmental issues at the Project site. There are concerns that the DEIS does not fully describe the negative consequences of the No Action Alternative.	Each resource section of the DEIS compared the impacts of the action alternatives and the No Action Alternative to baseline conditions (e.g., socioeconomics in DEIS Section 4.21 and fisheries in DEIS Section 4.12).

Federal Laws and Regulations – NEPA Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Federal Laws and Regulations - NEPA	801.0302.01	Primary	There are concerns that the EIS did not fully disclose available information to the public and did not fully analyze all aspects of the Project such as the implications of amendments of Forest Plan amendments.	<p>The DEIS provided the information available for public review except for information held as confidential per Forest Service procedures such as some cultural resources and proponent proprietary data. The DEIS further disclosed information that was incomplete or unavailable for its analysis. The SDEIS provides information that has become complete or available since distribution of the DEIS.</p> <p>The Forest Plan amendments relevant to the SGP are identified and discussed in Appendix A of the DEIS and refined in the SDEIS, consistent with the 36 CFR 219 planning regulations. The analysis for the impacts of the amendments are disclosed in Chapter 4 of the DEIS and SDEIS (36 CFR 219.13 (b)(1)).</p>
Federal Laws and Regulations - NEPA	801.0302.01	C.1	There are concerns that the Stibnite Gold Project and the DEIS fails to comply with all of the requirements of the Payette and Boise National Forest Land and Resource Management Plans (Forest Plans), in violation of the National Forest Management Act (NFMA) and NEPA. Commenters state that the July 2019 draft Forest Plan consistency table identified approximately 175 different Forest Plan provisions that apply to the Stibnite Gold Project, but which either the Forest Service determined would not be met or was unsure whether they would be met. There are concerns that the DEIS fails to acknowledge this and glosses over the Forest Plan consistency issues in Appendix A, in violation of NEPA and NFMA. Commenters provide specific examples of Forest Plan provisions that the Project may violate, but which are not mentioned in the DEIS, including: standards designed to protect riparian	<p>In evaluating compliance with Forest Plans, the Forest Service reviewed all Forest Plan components to determine if they applied to the proposed Project. Those components that did apply were then reviewed further to determine proposed Project compliance. The standards that the proposed Project were not in compliance with had site-specific amendments developed and were analyzed in DEIS Appendix A.</p> <p>The Forest Plan amendments relevant to the SGP are identified and discussed in Appendix A of the DEIS and refined in the SDEIS, consistent with the 36 CFR 219 planning regulations. The analysis for the impacts of the amendments are disclosed in Chapter 4 of the DEIS and SDEIS (36 CFR 219.13 (b)(1)).</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
			<p>areas and streams, specifically Riparian Conservation Areas; standards MIST08 and MIST09; mining provisions (see PNF Forest Plan pp. III-48 - III-51); provisions designed to protect threatened, endangered, proposed, and candidate species; air quality, soil, water, riparian, and aquatic resources; wildlife; vegetation, botanical resources, and non-native plants; and other public land values. Commenters state that the Forest Service must consider the relevant Forest Plan provisions and explain to the public how the Project complies with them; and where it does not comply, make changes to the Project, reject the Project, or amend the Forest Plan.</p>	<p>A crosswalk of the review of the consistency of BNF and PNF Forest Plan components with the SGP is available in the project record.</p>
Federal Laws and Regulations - NEPA	801.0302.01	C.2	<p>There are concerns that the DEIS and its supporting documents rely upon missing and incomplete information. Additionally, there are concerns that some of the information listed in the DEIS as "incomplete and unavailable" is not truly unavailable but has simply not been provided to the public. Commenters express concerns that the lack of disclosure of this information hinders the public's understanding of adverse impacts, impedes public participation, and violates NEPA.</p>	<p>The DEIS disclosed information that was incomplete or unavailable for its analysis (DEIS Section 4.1). In those instances, the Forest Service was not in possession of information beyond that described in the DEIS and supporting documents. The SDEIS provides information that has become complete or available since distribution of the DEIS.</p>
Federal Laws and Regulations - NEPA	801.0302.01	C.3	<p>There are concerns that proposed Forest Plan amendment 1 would violate the substantive standards in the 2012 Planning Rule, thus violating NFMA. Additionally, there are concerns that an analysis of the full impacts of the proposed amendment 1 are not disclosed in the DEIS, in violation of NEPA. Commenters identify the following issues related to this concern: The Project could last into perpetuity (e.g., post-reclamation water treatment); therefore, indefinite and in-perpetuity timeframes should be included in the timeframes for the proposed amendment. Project-specific amendments are not appropriate for indefinite amendments to the Forest Plan. The Project will affect aquatic and watershed resources beyond the</p>	<p>Substantive requirements (219.8 through 219.11) that are directly related to plan direction being modified through plan amendments were identified in Appendix A of the DEIS. Determinations can be based on adverse, as well as beneficial, effects (36 CFR 219.13(b) (5)(i)). Plan amendments that apply to a specific project can use the analysis prepared for the project as documentation (36 CFR 219.13 (b)(1)). For each proposed amendment described in Appendix A, the location of the relevant analysis in the DEIS is identified.</p> <p>The analysis area for groundwater and surface water are disclosed in section 3.9.1.1 and fish are</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
			<p>management areas proposed for amendment; however, the DEIS has failed to evaluate impacts at a larger geographic scale. By failing to include impacts beyond the mine site, the geographic scope of the proposed amendment was unreasonably narrow and the true impacts of this proposed amendment were neither considered nor disclosed to the public. Proposed mitigations do not sufficiently minimize impacts to avoid degradation and the DEIS does not include analysis of specific mitigations. This amendment is not based on the best available science as required by 36 CFR 219.13(5)(I). This amendment is not consistent with the substantive requirements of the 2012 Planning Rule. First, the proposed amendment does not meet the requirement to maintain or restore ecological integrity. Although the DEIS states that the amendment meets this requirement, commenters state that the DEIS instead documents exceedances in water quality and blocked fish habitat and does not describe how ecosystem integrity would be restored during operations and after closure. Commenters cite inadequacy of analyses of potential impacts to fisheries and water quality as demonstrating inconsistency with meeting the 2012 Planning Rule's substantive requirements. Second, the proposed amendment does not meet the requirement for ecosystem integrity for air, soil, and water. Commenters cite adverse impacts to water quality as demonstrating that the amendment is not consistent with the requirement. Third, the proposed amendment does not meet the ecosystem integrity component under the diversity of plant and animal communities requirement. Commenters state that the physical habitat impacts from mining are underestimated and that the DEIS assumes no interactions among impacts, leading to a serious underestimate of impacts to fishes and their habitat, demonstrating inconsistency with the 2012 Planning Rule. Fourth, the proposed amendment fails to be in accordance with substantive provisions on ecosystem</p>	<p>disclosed in section 3.12.1 of the DEIS. The DEIS impact analyses for water chemistry (Section 4.9.2) and fisheries (Section 4.12.2) did not predict that impacts would extend beyond the area of analyses. Therefore, the geographic scale of the analyses was appropriately applied to management areas proposed for amendment.</p> <p>The SDEIS includes additional analyses regarding the effectiveness of mitigation measures in reducing Project impacts. Impacts, mitigation measures, and the effectiveness of mitigation measures are described for resources including water quality, fish habitat, air quality, soils, wildlife, and vegetation.</p> <p>It is clarified in the SDEIS that predicted active water treatment would be needed until year 40 (25 years after closure), rather than in perpetuity.</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
			diversity. Fifth, there are additional species-specific plan components that are problematic with respect to proposed amendment 1. Commenters cite specific requirements of the 2012 Planning Rule and ways in which the DEIS fails to show consistency. Finally, the proposed amendment is not in accordance with the substantive requirement for integrated resource management for multiple use.	

Federal Laws and Regulations – NFMA Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Federal Laws and Regulations - NFMA	801.0302.02	Primary	There are concerns that the EIS did not comply with NFMA and may violate Forest Plan provisions, standards, and policies.	The SDEIS includes additional information demonstrating NFMA compliance.
Federal Laws and Regulations - NFMA	801.0302.02	C.1	There are concerns that the Stibnite Gold Project and the DEIS fails to comply with all of the requirements of the Payette and Boise National Forest Land and Resource Management Plans (Forest Plans), in violation of the National Forest Management Act (NFMA) and NEPA. Commenters state that the July 2019 draft Forest Plan consistency table identified approximately 175 different Forest Plan provisions that apply to the Stibnite Gold Project, but which either the Forest Service determined would not be met or was unsure whether they would be met. There are concerns that the DEIS fails to acknowledge this and glosses over the Forest Plan consistency issues in Appendix A, in violation of NEPA and NFMA	In evaluating compliance with Forest Plans, the Forest Service reviewed all Forest Plan components to determine if they applied to the proposed Project. Those components that did apply were then reviewed further to determine proposed Project compliance. The standards that the proposed Project were not in compliance with had site-specific amendments developed and were analyzed in DEIS Appendix A. A crosswalk of the review of the consistency of BNF and PNF Forest Plan components with the SGP is available in the project record.
Federal Laws and	801.0302.02	C.2	Commenters provide specific examples of Forest Plan provisions that the Project may violate, but which are not mentioned in the DEIS, including: standards	In evaluating compliance with Forest Plans, the Forest Service reviewed all Forest Plan components to determine if they applied to the

Resource	Comment Code	Comment Number	Concern Statement	Response
Regulations - NFMA			<p>designed to protect riparian areas and streams, specifically Riparian Conservation Areas; standards MIST08 and MIST09; mining provisions (see PNF Forest Plan pp. III-48 - III-51); provisions designed to protect threatened, endangered, proposed, and candidate species; air quality, soil, water, riparian, and aquatic resources; wildlife; vegetation, botanical resources, and non-native plants; and other public land values. Commenters state that the Forest Service must consider the relevant Forest Plan provisions and explain to the public how the Project complies with them; and where it does not comply, make changes to the Project, reject the Project, or amend the Forest Plan</p>	<p>proposed Project. Those components that did apply were then reviewed further to determine proposed Project compliance. The standards that the proposed Project were not in compliance with had site-specific amendments developed and were analyzed in DEIS Appendix A.</p> <p>A spreadsheet documenting the applicability and compliance process is found in the project record.</p>
Federal Laws and Regulations - NFMA	801.0302.02	C.3	<p>There are concerns that proposed Forest Plan amendment 1 would violate the substantive standards in the 2012 Planning Rule, thus violating NFMA. Additionally, there are concerns that an analysis of the full impacts of the proposed amendment 1 are not disclosed in the DEIS, in violation of NEPA. Commenters identify the following issues related to this concern: The Project could last into perpetuity (e.g., post-reclamation water treatment); therefore, indefinite and in-perpetuity timeframes should be included in the timeframes for the proposed amendment. This amendment is not based on the best available science as required by 36 CFR 219.13(5)(I). This amendment is not consistent with the substantive requirements of the 2012 Planning Rule. First, the proposed amendment does not meet the requirement to maintain or restore ecological integrity. Although the DEIS states that the amendment meets this requirement, commenters state that the DEIS instead documents exceedances in water quality and blocked fish habitat and does not describe how ecosystem integrity would be restored during operations and after closure. Commenters cite inadequacy of analyses of potential impacts to fisheries and water quality as demonstrating inconsistency with</p>	<p>Substantive requirements (219.8 through 219.11) that are directly related to plan direction being modified through plan amendments were identified in Appendix A of the DEIS. Determinations can be based on adverse, as well as beneficial, effects (36 CFR 219.13(b) (5)(i)). Plan amendments that apply to a specific project can use the analysis prepared for the project as documentation (36 CFR 219.13 (b)(1)). For each proposed amendment described in Appendix A, the location of the relevant analysis in the DEIS is identified.</p> <p>The analysis area for groundwater and surface water are disclosed in section 3.9.1.1 and fish are disclosed in section 3.12.1 of the DEIS. The DEIS impact analyses for water chemistry (Section 4.9.2) and fisheries (Section 4.12.2) did not predict that impacts would extend beyond the area of analyses. Therefore, the geographic scale of the analyses was appropriately applied to management areas proposed for amendment.</p> <p>The SDEIS includes additional analyses regarding the effectiveness of mitigation</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
			<p>meeting the 2012 Planning Rule's substantive requirements. Second, the proposed amendment does not meet the requirement for ecosystem integrity for air, soil, and water. Commenters cite adverse impacts to water quality as demonstrating that the amendment is not consistent with the requirement. Third, the proposed amendment does not meet the ecosystem integrity component under the diversity of plant and animal communities requirement. Commenters state that the physical habitat impacts from mining are underestimated and that the DEIS assumes no interactions among impacts, leading to a serious underestimate of impacts to fishes and their habitat, demonstrating inconsistency with the 2012 Planning Rule. Fourth, the proposed amendment fails to be in accordance with substantive provisions on ecosystem diversity. Fifth, there are additional species-specific plan components that are problematic with respect to proposed amendment 1. Commenters cite specific requirements of the 2012 Planning Rule and ways in which the DEIS fails to show consistency. Finally, the proposed amendment is not in accordance with the substantive requirement for integrated resource management for multiple use.</p>	<p>measures in reducing Project impacts. Impacts, mitigation measures, and the effectiveness of mitigation measures are described for resources including water quality, fish habitat, air quality, soils, wildlife, and vegetation.</p> <p>The SDEIS clarifies the temporal impacts of the proposed SGP; specifically, the length of active post-operation water treatment.</p> <p>It is clarified in the SDEIS that predicted active water treatment would be needed until year 40 (25 years after closure), rather than in perpetuity.</p>
Federal Laws and Regulations - NFMA	801.0302.02	C.4	<p>There are concerns that the impairment of the productivity of the land such as loss of timber resources have not been adequately assessed including the subsequent effects (of timber resource loss) on aquatics, soils, and wildlife. Further, a permanent conversion from forest to non-forest land use appears to violate NFMA and the policy that lands be reclaimed to a condition consistent with forest land and resource management plans.</p>	<p>The DEIS described impacts of the proposed Project on timber resources in Section 4.14. The implications for timber removal were incorporated into the analyses of soils (Section 4.5) and water quality (Section 4.9). Those effects on soil and water resources were utilized in the affects analyses for fisheries (Section 4.12) and wildlife (Section 4.13).</p> <p>In addition, the proposed Project mine site is located within an area with the management prescription category of "Active Restoration and Maintenance of Aquatic, Terrestrial, and</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				Hydrologic Resources”. As such, the proposed mine reclamation is consistent with the management prescription for the area.
Federal Laws and Regulations - NFMA	801.0302.02	C.5	Project-specific amendments are not appropriate for indefinite amendments to the Forest Plan. The Project will affect aquatic and watershed resources beyond the management areas proposed for amendment; however, the DEIS has failed to evaluate impacts at a larger geographic scale. By failing to include impacts beyond the mine site, the geographic scope of the proposed amendment was unreasonably narrow and the true impacts of this proposed amendment were neither considered nor disclosed to the public. Proposed mitigations do not sufficiently minimize impacts to avoid degradation and the DEIS does not include analysis of specific mitigations	<p>The analysis area for groundwater and surface water are disclosed in section 3.9.1.1 and fish are disclosed in section 3.12.1 of the DEIS. The DEIS impact analyses for water chemistry (Section 4.9.2) and fisheries (Section 4.12.2) did not predict that impacts would extend beyond the area of analyses. Therefore, the geographic scale of the analyses was appropriately applied to management areas proposed for amendment.</p> <p>The SDEIS includes additional analyses regarding the effectiveness of mitigation measures in reducing Project impacts. Impacts, mitigation measures, and the effectiveness of mitigation measures are described for resources including water quality, fish habitat, air quality, soils, wildlife, and vegetation.</p> <p>The SDEIS clarifies the temporal impacts of the proposed SGP; specifically, the length of active post-operation water treatment. It is clarified in the SDEIS that predicted active water treatment would be needed until year 40 (25 years after closure), rather than in perpetuity.</p>

Federal Laws and Regulations – Planning and Administrative Review Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Federal Laws and Regulations – Planning	801.0302.07	Primary	There are concerns regarding the content and impacts associated with the proposed Forest Plan amendments as well as concerns with implementing amendments at a project level.	<p>The Final EIS clarifies the impacts associated with Forest Plan amendments.</p> <p>Implementation of amendments at a project level is consistent with BNF and PNF procedures for</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
and Admin Review				incorporation of mining projects into Forest Plans. Forest plan amendments are evaluated under the 2012 Planning Rule per 36 CFR Part 219.17(b)(2), as amended in 2016, which requires all forest plan amendments initiated after May 9, 2012, to use the 2012 Planning Rule
Federal Laws and Regulations – Planning and Admin Review	801.0302.07	C.1	There are concerns that the DEIS analysis did not determine whether specific species potentially impacted by the Project were species of conservation concern. Further, comments recommend that the Nez Perce Tribe, Idaho Department of Fish and Game, and other stakeholders develop a list of species of conservation concern for the Project area.	Development of a species of conservation concern list specific to a project area is not a requirement for the evaluation of a proposal.
Federal Laws and Regulations – Planning and Admin Review	801.0302.07	C.2	There are concerns that the suitability studies of affected potential Wild and Scenic Rivers must be conducted prior to approval of any action alternatives associated with the Stibnite Gold Project.	As noted in DEIS Section 4.23.2.7, a suitability study would be required for the eligible segment of Johnson Creek under all action alternatives. Under Alternatives 1, 2, or 3, a suitability study would be required for the eligible segment of Burntlog Creek. The Final EIS incorporates suitability assessments of affected streams that are eligible for Scenic River status.

Federal Laws and Regulations – Other Federal Regulations Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	Primary	There are concerns that the Forest Service has inappropriately applied or failed to apply Federal laws and regulations such as requirements of the Idaho Roadless Rule, 36 CFR 228 subpart A, and 36 CFR 251/261. In addition, commenters felt the Forest Service was not timely in response to FOIA requests.	DEIS Section 1.5 describes the regulatory context for the review of the Project application under 36 CFR 228 subpart A. DEIS Section 1.8 identified construction and operation of mine infrastructure in Idaho Roadless Areas (IRAs) as a significant issue for the NEPA process. As such, impacts to resources such as biophysical and social values of

Resource	Comment Code	Comment Number	Concern Statement	Response
				IRAs were described along with project design features, best management practices, and mitigation measures that offset the impacts. The Forest Service believes that it has met its obligations in regard to responses to FOIA requests.
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C.1	There are concerns that the Forest Service has included minimizing road construction and use in areas subject to the Idaho Roadless Rule as one of the criteria used to develop and analyze the configuration of the Project roads in the various Project alternatives. Commenters state that the Idaho Roadless Rule does not apply to roads used and needed to support mineral activities on lands open to mineral entry under the U.S. Mining Law.	DEIS Section 1.8 identified construction and operation of mine infrastructure in Idaho Roadless Areas (IRAs) as a significant issue for the NEPA process. As such, impacts to resources such as biophysical and social values of IRAs were described along with project design features, best management practices, and mitigation measures that offset the impacts.
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C.2	There are concerns that analysis of impacts relevant to the Clean Water Act Section 404(b)(1) Evaluation Framework are focused on direct effects and do not sufficiently cover secondary and cumulative effects.	DEIS Sections 4.11.2 and 4.11.4 discussed indirect and cumulative impacts to wetland resources subject to 404 evaluation, respectively.
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C.3	There is a concern regarding the decision to apply the revised CEQ NEPA regulations (effective September 14, 2020) instead of the original 1978 CEQ NEPA regulations. Commenters state that use of the revised regulations would create legal liability, significant confusion, and uncertainty for the Forest Service and the public, and harm to the public's interest in a stable regulatory environment. Commenters state that the Forest Service should continue to apply the 1978 CEQ NEPA regulations, which have been used since the Project began.	The DEIS was issued for public comment on August 14, 2020 prior to the effective date of the revised CEQ NEPA regulations. Continuation of the NEPA analysis to the SDEIS and ROD will comply with the Forest Service's implementation of CEQ NEPA regulations.
Federal Laws and Regulations – Other	801.0302.08	C.4	There is a statement that the USFS is required to develop resource management plans that comport with the	DEIS Section 1.5 described the Federal decision framework, and put forth the requirements for Project approval.

Resource	Comment Code	Comment Number	Concern Statement	Response
Federal Regulations			principle of multiple use. Further, the USFS cannot prohibit mining activities without a formal withdrawal.	
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C.5	There are concerns that the Forest Service has violated NEPA by failing to issue a timely response to Save the South Fork Salmon's FOIA requests. CEQ regulations require federal agencies to make not only the NEPA analysis itself, but also all incorporated documents and documents underlying the NEPA analysis available pursuant to FOIA requests. To participate effectively in the NEPA process, the public must have such documents before commenting on the NEPA analysis. Commenters state that some documents were provided by the Forest Service too late in the comment period to allow for sufficient time to analyze them. Additionally, commenters were unable to locate the following document: STRATA Inc., Geologic Hazard Assessment. Proposed Burntlog Access Road Alignment Valley County, Idaho (2016).	The Forest Service disagrees with the comment that supporting documents were not made available for review by the public. DEIS reference documents were available via the Project webpage except for information held as confidential per Forest Service procedures such as some cultural resources and proponent proprietary data.
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C.6	There are concerns that the Forest Service has improperly applied 36 CFR 228 Subpart A to this Project. Commenters state that the Forest Service mistakenly believes that its review and approval of the proposed uses of federal land, and all of the proposed activities, are governed solely by 36 CFR Part 228 Subpart A because there are some unpatented mining claims on some of the lands to be covered by Project facilities (DEIS at 1-6). Commenters state that the record lacks any evidence that the company has statutory rights under federal mining laws, including the 1872 Mining Law, to any of the lands that remain in federal ownership; therefore, review and regulation of the Project is not under 36 CFR 228, but rather the agency's special use and multiple use authorities (36 CFR Parts 251/261), including right-of-ways under the Federal Land Policy and Management Act (FLPMA). Comments cite the court case <i>Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.</i> , 409 F.	The application of 36 CFR 228 Subpart A to the proposed Project is consistent with Forest Service policy and procedure.

Resource	Comment Code	Comment Number	Concern Statement	Response
			Supp. 3d 738 (D. Ariz. 2019) as paralleling the situation exhibited in the Midas Gold Project.	
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C.7	Commenters state that the Forest Service must reject the Plan of Operations submitted by Midas Gold as inadequate and incomplete and that Midas Gold should submit a revised Plan of Operations that addresses consistency issues and names Alternative 2 as the company's preferred alternative.	The preferred alternative for a mining project decision is selected by the Forest Service not the Project proponent. Therefore, there is no need for the Project proponent to re-submit its Plan of Operations based on its preferred alternative.
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C.8	There is a concern that the Forest Service has not shown that the Project would meet all the requirements in 36 CFR Parts 251/261 to protect the public interest and the natural and cultural resources at/around the site, and thus must deny the proposed uses of public land.	DEIS Section 1.5 described the Project's Federal Decision Framework which is not subject to the requirements of 36 CFR Parts 251/261.
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C.9	Commentors claim that current discharge of water at the mine site is being done without a NPDES permit.	There are no current operations utilizing a discharge at the site, with current conditions associated with historic mining. The IDEQ administers discharge permits within the State and discharges associated with the proposed Project would be subject to its approval and regulation.
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C10	There is a statement that the proposed action could violate the Migratory Bird Treaty Act.	Project approval would include requirements (i.e., nesting bird surveys, seasonal disturbance restrictions) that would result in compliance with the Migratory Bird Treaty Act.
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C.11	A commentor is unaware of any planned programmatic CERCLA remediation actions.	An ASAOC under CERCLA was completed following the public comment period for the DEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Federal Laws and Regulations – Other Federal Regulations	801.0302.08	C.12	A commentor stated that the Organic Act and the Mining Law provide the statutory authority for mining on Forest Service lands, and that the 228 regulations do not provide for the management of mineral resources, rather they set forth rules and procedures to minimize adverse impacts of mineral location and development.	Comment noted. The regulatory context for the review of the Project application is described in DEIS Section 1.5.

Executive Orders Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Executive Orders	801.0303	Primary	There are differences of opinion as to whether the Executive Order pertaining to High Priority Infrastructure Projects should apply to the Project. Opinions that project approval would reduce U.S. dependence on foreign suppliers for antimony are countered by claims that non-energy mineral projects have not been appropriately added to listed sectors covered by the Executive Order.	EO 13990 revoked EO 13766, EO 13927, and EO 13807.
Executive Orders	801.0303	C.1	There are opinions that in order to comply with the Critical Minerals Executive Order and the CEQ's High Priority Infrastructure Project permitting dashboard, the Forest Service and Army Corps of Engineers should complete the NEPA and permitting process in an expedited manner.	Forest Service complies with the requirements of valid executive orders when completing NEPA and implementing its permitting processes. EO 13990 revoked EO 13766.
Executive Orders	801.0303	C.2	There are opinions that the Project, as a producer of antimony, would reduce domestic reliance on China for the metal in accordance with the Executive Order on “Addressing the Threat to the Domestic Supply Chain from Reliance on Critical Minerals from Foreign Adversaries”.	No further response required. Unrelated to the decision being made.
Executive Orders	801.0303	C.3	There are concerns that the Forest Service is rushing to approve the Project due to a July 27, 2020, CEQ letter designating the Stibnite Gold Project as a High Priority Infrastructure Project under Executive Orders 13766 and 13807. Commenters state that the Forest Service should ignore this designation for the following reasons: This	EO 13990 revoked EO 13766 and EO 13807.

Resource	Comment Code	Comment Number	Concern Statement	Response
			Project is neither high priority nor an infrastructure project. Non-energy mineral projects, like this one, are not among the listed sectors covered by EO 13677 or EO 13807, and they have never been properly added by the Federal Permitting Improvement Steering Council or any other agency.	
Executive Orders	801.0303	C.4	Neither EO 13677 nor EO 13807 are lawful or enforceable as they attempt to override the FAST Act, a law passed by Congress. Even under the terms of the EOs, there is no requirement that the Forest Service rush its review of Midas Gold's proposal. Additionally, commenters express concerns that the Forest Service failed to disclose the designation of the Project as a "high priority infrastructure project" in the DEIS or any of its publicly available supporting documents, and failed to indicate what, if any, affect the designation may have on the Forest Service's ongoing review.	EO 13990 revoked EO 13766 and EO 13807.
Executive Orders	801.0303	C.5	Lastly, commenters state that the Forest Service is trying to expedite the Project under EO 13927, but the Project does not qualify for expedited NEPA review under this EO as it does not meet the criteria specified in the EO.	EO 13927 did not apply to the SGP. However, EO 13990 revoked EO 13927.
Executive Orders	801.0303	C.6	There are concerns that the mitigation plan does not provide adequate details on the mitigation in accordance with the 2015 Presidential Memorandum: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment. Specifically, there are not enough details regarding what "modern mining" techniques would be used or what would be done to avoid or minimize harm.	The Final EIS identifies the design features, best management practices, and mitigation measures applied to offset Project impacts. Clarification on mining designs and techniques applied to reduce environmental impacts are described in Final EIS Chapter 2.
Executive Orders	801.0303	C.7	There are opinions that antimony and the other earth metals that would be mined, are crucial resources and that developing domestic sources of these resources is important to national security.	No further response required. Unrelated to the decision being made.

Resource	Comment Code	Comment Number	Concern Statement	Response
Executive Orders	801.0303	C.8	There are concerns that the DEIS does not adequately describe the importance of the Stibnite deposit as a unique domestic antimony resource. Commenters state that the Final EIS should put the Yellow Pine/Stibnite antimony deposit into the proper context by explaining that development of this deposit is the country's only identified opportunity in the foreseeable future to have a domestic source of mined antimony.	Production of antimony was included in the NEPA analysis as a component of the Project's purpose and need (DEIS Section 1.4), consistent with the Mining and Mineral Policy Act of 1970. Effects of the specific characteristics of the Stibnite ore body and proposed metal production were described in DEIS Section 4.2.
Executive Orders	801.0303	C.9	There are concerns that the DEIS fails to adequately describe the host mineral and byproduct-companion relationship between the gold and antimony mineralization in the Stibnite deposit, which means that gold production is the economic driver that makes it feasible to recover antimony as a byproduct at Stibnite.	<p>The production of antimony and gold by the proposed Project occur in distinct steps in the ore processing that are not interdependent. Therefore, neither metal is a byproduct of the other.</p> <p>Both gold and antimony (plus silver) contribute to the metals that would be produced for sale by the proposed Project. The economic driver(s) for the Project at any given time would be based on market prices for the metals produced. Anticipated relative revenues for each metal are provided in project feasibility studies such as the one referenced in Section 3.2.3 of the DEIS (M3 Engineering and Technology 2019) and financial reporting by mine operators.</p>

Court Decisions Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Court Decisions	801.0309	Primary	There are differences of opinion regarding the appropriate application of 36 CFR 228A, Clean Water Act Section 404(b)(1), NFMA, and the Wilderness Act to the analyses presented in the DEIS. Commenters cite numerous examples of case law in support or refutation of the applications of the Acts.	The U.S. Forest Service disagrees with comments that the Acts have been applied to the Project analysis incorrectly. The application of 36 CFR 228 Subpart A to the proposed Project is consistent with Forest Service policy and procedure.

Resource	Comment Code	Comment Number	Concern Statement	Response
Court Decisions	801.0309	C.1	There are concerns that the DEIS lacks analysis of Clean Water Act Section 404(b)(1) guidelines. Additionally, there are concerns that the proposed mine will violate Section 404(b)(1) requirements and thus a Section 404 permit cannot be issued. Commenters emphasize that the Army Corps of Engineers (Corps) must consider all impacts, including direct, indirect, and cumulative, from construction and operation of the Stibnite Gold Project and all associated facilities. Commenters state that these impacts show the project is not in the public interest and thus the Corps cannot issue a Section 404 permit. Comments cite numerous court cases in support of discussion regarding the requirements of Section 404.	Compliance with CWA 404(b)(1) guidelines is not determined through NEPA. Instead, it is a component of the decision by the Army Corps of Engineers on a completed 404 application.
Court Decisions	801.0309	C.2	There are concerns that the DEIS fails to adequately analyze impacts to the wilderness characteristics of the Frank Church River of No Return Wilderness. Commenters note that the federal Wilderness Act and the Central Idaho Wilderness Act require the Forest Service to consider impacts to the Wilderness from activities outside the Wilderness area boundary and that the Forest Service has a legal duty to avoid activities outside the Wilderness that could degrade the area's wilderness characteristics. Specifically, commenters note concerns about noise, light, visual impacts, and water and dust pollution that are likely to affect the Wilderness through direct impacts and edge effects that will degrade the area's unique ecological values and reduce the solitude sought out by hikers in a wild, trailless area. There are concerns that the DEIS fails to adequately analyze the impacts related to these concerns.	Impacts to wilderness characteristics in the FCRNRW were disclosed for the alternatives under the Untrammelled wilderness character quality subsections in Section 4.23 of the DEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Court Decisions	801.0309	C.3	There is a statement that noise impacts on historic districts should be analyzed in the EIS based on a 2018 California State Appellate Court ruling.	Forest Service analyses are not bound by rulings from state courts in other jurisdictions. Regardless, noise impacts of the Project were described in DEIS Section 4.5. Any impacts on historic districts would be addressed via the Project's Historic Properties Management Plan and/or Historic Properties Treatment Plan that would be incorporated into the Project approval via a Programmatic Agreement between the Project operator, Forest Service, Idaho State Historic Preservation Office, Advisory Council on Historic Properties, and other consulting parties.
Court Decisions	801.0309	C.4	Commentors felt that the Rosemont Copper case was relevant to the Stibnite Gold Project.	The Rosemont Copper decision was pending at the time that the DEIS was drafted. Implications of the decision on the SGP have been incorporated into the SDEIS and would apply to the Forest Service's ROD for the Project.
Court Decisions	801.0309	C.5	Commentors stated that claim validity determination is not required prior to approving a POO based upon a 2005 DOI Solicitor's Opinion.	No further response required. Already decided by law, regulation, or policy.
Court Decisions	801.0309	C.6	Commentor felt that legal precedent had been made regarding "a ROW applicant has a property right that may be adversely affected by the denial of the ROW does not override the agency's duties to protect the "public interest.""	No further response required. Already decided by law, regulation, or policy.
Court Decisions	801.0309	C.7	Commentor voiced the opinion that based upon the public trust principle, substantial impairment to trust resources must be avoided.	No further response required. Already decided by law, regulation, or policy.

Laws, Policies, Court Cases Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Laws, Policies, and Court Cases	801.0300	Primary	There are differences in opinion as to whether the USFS has correctly applied Federal regulations and Executive Orders to its review and regulation of the Project.	The regulatory framework applied to the proposed Project was described in DEIS Section 1.5.
Laws, Policies, and Court Cases	801.0300	A.1	There is a statement the USEPA entered into a CERCLA settlement agreement not to pursue potentially responsible federal agencies involved with historical mining actions for future site remediation.	No further response required. Unrelated to the decision being made.
Laws, Policies, and Court Cases	801.0300	A.2	There are opinions that submittal of informed comments on the DEIS are impaired by ongoing rule making by the Idaho Legislature and IDEQ.	The DEIS analyzed the environmental impacts of a proposed mining project and the mitigation of those impacts. Ongoing Idaho rule making does not materially affect that impact analysis. The rule making is materially applicable to the requirements contained in permits issued by the State of Idaho.
Laws, Policies, and Court Cases	801.0300	C.1	There are opinions that enforcement of applicable environmental laws on mining operations is achievable.	No further response required. General in nature or position statement.
Laws, Policies, and Court Cases	801.0300	C.2	There are concerns that the DEIS is incorrect in stating that "transportation and utility uses associated with mineral development activities are authorized under 36 CFR 228A as part of an operator's plan of operations and do not require a separate special use permit." (DEIS 3.15-7) and that the Federal Land Policy and Management Act (FLPMA) applies for access/support corridors instead.	The application of 36 CFR 228 Subpart A to the proposed Project is consistent with Forest Service policy and procedure.
Laws, Policies, and Court Cases	801.0300	C.3	There are concerns that the DEIS and agency review failed to apply the proper discretionary and public interest review applicable to Title V and its implementing regulations. Additionally, there are concerns that the Forest Service failed to comply with the financial requirements of FLPMA regarding right-of-way (ROW) applications and approvals and the	The cited regulations are not consistent with the applied regulatory framework as described in DEIS Section 1.5.

Resource	Comment Code	Comment Number	Concern Statement	Response
			Forest Service must obtain, at a minimum, the fair market value for the use of federal land and resources.	
Laws, Policies, and Court Cases	801.0300	C.4	Commenters cite three specific substantial requirements in the FLPMA ROW provisions that the Forest Service must adhere to: Impose conditions that "will minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment." Id. § 1765(a). Commenters emphasize that the Forest Service must impose conditions that protect not just the land that is part of the ROW, but all federal land affected by the approval of the ROW. Determine what conditions are necessary to protect federal property and economic interests, as well as otherwise protecting the public interest in the lands traversed by the ROW or adjacent. Commenters emphasize that this applies not just to the lands traversed by the ROW, but to all lands and resources adjacent to and associated with the ROW.	The cited ROW provisions are not consistent with the applied regulatory framework as described in DEIS Section 1.5.
Laws, Policies, and Court Cases	801.0300	C.5	Commenters state that "the Forest Service would be unable to make a legitimate finding that industrial use of the lands served by the ROW, given the massive adverse impacts from the Mine, would 'protect the public interest.'" (Save the South Fork Salmon comment letter p. 19). ROW grants must not cause unnecessary damage to the environment and must be consistent with any other applicable laws. Commenters cite a number of court cases in support of these arguments.	The regulatory framework for the Forest Service decision on the Project is described in the SDEIS Section 1.7. That framework applies the no unnecessary and undue degradation criterion and accounts for other applicable laws in the Forest Service decision.
Laws, Policies, and Court Cases	801.0300	C.6	There are concerns that the Forest Service is rushing to approve the Project due to a July 27, 2020, CEQ letter designating the Stibnite Gold Project as a high priority infrastructure project under Executive Orders 13766 and 13807. Commenters state that the Forest Service should ignore this designation for the following reasons: This project is neither high priority nor an infrastructure project. Non-energy mineral projects, like	The Forest Service does not have the discretion to ignore CEQ designations and Executive Orders.

Resource	Comment Code	Comment Number	Concern Statement	Response
			this one, are not among the listed sectors covered by EO 13677 or EO 13807, and they have never been properly added by the Federal Permitting Improvement Steering Council or any other agency.	
Laws, Policies, and Court Cases	801.0300	C.7	Neither EO 13677 nor EO 13807 are lawful or enforceable as they attempt to override the FAST Act, a law passed by Congress. Even under the terms of the Executive Orders, there is no requirement that the Forest Service rush its review of Midas Gold's proposal. Additionally, commenters express concerns that the Forest Service failed to disclose the designation of the Project as a "high priority infrastructure project" in the DEIS or any of its publicly available supporting documents, and failed to indicate what, if any, affect the designation may have on the Forest Service's ongoing review.	Designation of a project as a HPIP does not affect the scope of the NEPA analysis and has not affected the scope of the Forest Service's ongoing review. HPIP designation obligates the Forest Service to a set of project management reporting requirements that establish a timeline for project review.
Laws, Policies, and Court Cases	801.0300	C.8	Lastly, commenters state that the Forest Service is trying to expedite the Project under EO 13927, but the Project does not qualify for expedited NEPA review under this EO as it does not meet the criteria specified in the EO.	Application or non-application of EO 13927 to the Project is not within the purview of the Forest Service. The Forest Service does not have the discretion to ignore CEQ designations and Executive Orders.
Laws, Policies, and Court Cases	801.0300	C.9	There are concerns that the Forest Service has improperly applied 36 CFR 228 Subpart A to this project. Commenters state that the Forest Service mistakenly believes that its review and approval of the proposed uses of federal land, and all of the proposed activities, are governed solely by 36 CFR Part 228 Subpart A because there are some unpatented mining claims on some of the lands to be covered by project facilities (DEIS at 1-6)	The application of 36 CFR 228 Subpart A to the proposed Project is consistent with Forest Service policy and procedure.
Laws, Policies, and Court Cases	801.0300	C.10	Commenters state that the record lacks any evidence that the company has statutory rights under federal mining laws, including the 1872 Mining Law, to any of the lands that remain in federal ownership; therefore, review and regulation of the Project is not under 36	The application of 36 CFR 228 Subpart A to the proposed Project is consistent with Forest Service policy and procedure.

Resource	Comment Code	Comment Number	Concern Statement	Response
			CFR 228, but rather the agency's special use and multiple use authorities (36 CFR Parts 251/261), including ROWs under the Federal Land Policy and Management Act (FLPMA). Comments cite the court case <i>Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.</i> , 409 F. Supp. 3d 738 (D. Ariz. 2019) as paralleling the situation exhibited in the Midas Gold Project. Commenters state that the Forest Service must reject the Plan of Operations submitted by Midas Gold as inadequate and incomplete and that Midas Gold should submit a revised Plan of Operations that addresses consistency issues and names Alternative 2 as the company's preferred alternative. There is a concern that the Forest Service has not shown that the Project would meet all the requirements in 36 CFR Parts 251/261 to protect the public interest and the natural and cultural resources at/around the site, and thus must deny the proposed uses of public land.	There is no cause for a revision to the Plan of Operations to reflect requirements of 36 CFR 251/261 or the re-naming of Alternative 2 based on pending litigation in other jurisdictions.

Adjacent Lands Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Adjacent Lands	802.1005	C.1	Midas Gold proposes to upgrade microwave relay towers and install radio repeaters and cell phone towers at existing communication sites on public and private lands.	Upgrades to telecommunications were described in Chapter 2 of the DEIS and associated impacts were presented in Chapter 4.

Bonding Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Bonding	801.1504	Primary	There are concerns that the DEIS does not include an adequate discussion about financial assurance for restoration/reclamation, particularly for perpetual water treatment.	Financial assurance for Project reclamation was described in Section 2.3.7 of the DEIS. The SDEIS clarifies post-closure water treatment for approximately 40 years; this will be included in the financial assurance.
Bonding	801.1504	C.1	There are concerns over who would be responsible for reclamation should Midas Gold go out of business, and that financial bonds will not be adequate to cover the true costs of reclamation.	As described in DEIS Section 2.3.7, the reclamation financial assurance would be determined by the U.S. Forest Service to address all Forest Service costs that would be incurred in taking over closure activities because of operator default. Provisions for future adjustment of the value of bond instruments utilized for financial assurance would be incorporated into a final plan approval.
Bonding	801.1504	C.2	There are additional concerns and questions about whether a cash bond will be required.	The U.S. Forest Service allows utilization of different types of financial assurance that include, but do not require, cash bonds.
Bonding	801.1504	C.3	There are comments stating that Midas Gold will be required to bond for reclamation costs prior to starting any mining activity and opinions that Midas Gold has the capability to successfully reclaim the site.	Bonding requirements for reclamation are described in DEIS Section 2.3.7.
Bonding	801.1504	C.4	There is a recommendation that specific reclamation items such as in-perpetuity water treatment be included in the initial reclamation cost estimate.	The SDEIS clarifies post-closure water treatment for approximately 40 years; this will be included in the reclamation cost estimate as noted in Section 2.4.7.14 of the SDEIS.

Funding Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Funding	801.0600	Primary	Commentors either expressed opinions that the mining company could cover all costs involved with the project or were concerned	Financial assurance for Project reclamation was described in Section 2.3.7 of the DEIS. The Project operator has the financial responsibility for execution of the reclamation plan

Resource	Comment Code	Comment Number	Concern Statement	Response
			that taxpayers would be responsible for associated costs.	and is required to establish a financial surety in the event that it is unable to meet that responsibility.
Funding	801.0600	C.1	There are statements supporting the use of the Standard Reclamation Cost Estimator to inform the reclamation cost estimate for the project.	The Forest Service recognizes the applicability of the Standardized Reclamation Cost Estimator to mine reclamation cost estimates.
Funding	801.0600	C.2	There are questions regarding the funding source for U.S. Forest Service personnel required for monitoring and oversight of project activities.	The Forest Service assumes oversight responsibilities for activities approved by its Decisions. These responsibilities are assigned to Forest Service personnel qualified to perform the oversight. Forest Service personnel are funded by a cost recovery process.
Funding	801.0600	C.3	Comments that the taxpayers should not be responsible for funding reclamation.	Funding for reclamation is the responsibility of the Project operator. In the event that the operator is unable to meet this responsibility, the Forest Service has access to a financial surety valued at the cost associated with the Forest Service's execution of the reclamation plan.

Implementation Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Implementation	801.1500	Primary	There are differences in opinion regarding the ability to implement the mining and restoration activities proposed. Supporters state that modern mining practices, conservation standards and regulatory practices lead to attainment of the highest level of environmental protection. Others raise detailed questions regarding the efficacy of proposed management of legacy materials, water treatment, temporary closure, material shipments, and financial assurance in protecting the environment.	The implementation of the proposed Project and its financial assurance were described in Chapter 2 of the DEIS. The Project impacts and the outcomes of environmental protection measures were assessed in Chapter 4. The SDEIS (Section 2.4.9) clarifies the application of Forest Service requirements, best management practices, and environmental design features to potential impacts of the proposed Project.
Implementation	801.1500	C.1	There are concerns that the DEIS does not include a plan for any temporary closure periods, which are a	Temporary closure would not reduce or modify an operator's obligations related to

Resource	Comment Code	Comment Number	Concern Statement	Response
			<p>common occurrence. In particular, there are concerns that temporary closures would have impacts on water treatment needs, and this should be described in an Interim Emergency Water Management Plan.</p> <p>Additionally, there are concerns that the project does not provide a buffer to the typical boom and bust cycle of a mine, caused by temporary closures and the eventual permanent closure.</p>	<p>environmental protection measures (such as water treatment) and site monitoring. Non-performance of these obligations would lead to regulatory enforcement action.</p> <p>Closure scenarios that do not follow the planned Project timeframe are addressed via the financial assurance for closure. Financial assurance amounts are determined to allow for reclamation of Project disturbance and activity at the time that a project goes into permanent or temporary closure.</p>
Implementation	801.1500	C.2	<p>There are concerns that the DEIS fails to address the possibility of early mine closure and associated impacts. There are opinions that the DEIS should include an early closure action alternative. There are concerns that the DEIS does not address how long a temporary closure could last before becoming a permanent closure.</p>	<p>Closure scenarios that do not follow the planned Project timeframe are addressed via the financial assurance for closure. Financial assurance amounts are determined to allow for reclamation of Project disturbance and activity at the time that a project goes into permanent or temporary closure. The duration of temporary closure would be based on the operator's intention to re-start authorized activity, as limited by the time requirements of specific operating permits. Specific conditions that result in early closure are not reasonably foreseeable and therefore, are addressed via financial surety for closure rather than an alternative analysis.</p>
Implementation	801.1500	C.3	<p>There is a request that the analysis include information on accountability for Midas' mining practices.</p>	<p>As a publicly traded company in good standing, Perpetua Resources is eligible to apply for the permits necessary to construct and operate the proposed Project. Any permits granted would contain obligations for Perpetua Resources to fulfill subject to compliance enforcement by the granting regulatory agencies.</p>
Implementation	801.1500	C.4	<p>There are statements that modern mining practices and conservation standards adhere to the highest level of environmental protection.</p>	<p>Mining practices for the proposed Project were described in the DEIS Chapter 2.</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
Implementation	801.1500	C.5	There are statements that removal of legacy materials will improve site environmental conditions.	The effects of legacy material removal were analyzed by the DEIS in Chapter 4.
Implementation	801.1500	C.6	There are concerns over who would be responsible for reclamation should Midas Gold go out of business, and that financial bonds will not be adequate to cover the true costs of reclamation. There are additional concerns and questions about whether a cash bond will be required. There are concerns that the DEIS does not include an adequate discussion about financial assurance for restoration/reclamation, particularly for perpetual water treatment	As described in DEIS Section 2.3.7, the reclamation financial assurance would be determined by the U.S. Forest Service to address all Forest Service costs that would be incurred in taking over operations in the case of operator default. Costs associated with water treatment would be included in the financial assurance for the projected duration of that treatment requirement. Provisions for future adjustment of the value of bond instruments utilized for financial assurance would be incorporated into a final plan approval. The U.S. Forest Service allows utilization of different types of financial assurance that include, but do not require, cash bonds.
Implementation	801.1500	C.7	There are concerns that the timeframe for closure and restoration activities has been understated in the DEIS	The timeframes for Project mining, restoration, and closure activities are described in Chapter 2 of the DEIS. These timeframes represent the pre-construction estimate for duration of these activities. The operator's obligations for closure would be tied to actual performance rather the estimated timeframe. Provisions for adjustment of the timeframe and associated financial assurance for closure would be incorporated into a final plan approval.
Implementation	801.1500	C.8	There are concerns that the details around legacy material processing are not sufficiently described by the EIS analysis.	The SDEIS includes a description and analysis of the Environmental Legacy Management Plan for the proposed Project.
Implementation	801.1500	C.9	There are comments voicing general support for the project and Midas Gold.	No further response required. General in nature of position statement.

Resource	Comment Code	Comment Number	Concern Statement	Response
Implementation	801.1500	C.10	There are recommendations that project approval include compliance items such as monitoring and inspections.	The permits required for construction and operation of the Project would include provisions for compliance and environmental monitoring including reporting and inspections.
Implementation	801.1500	C.11	There is a recommendation that the mine be operated as a zero discharge facility.	Chapter 2 of the DEIS describes operations for no discharge of process waters or collected waters without prior treatment to meet required discharge standards. Site climatic conditions where annual precipitation exceeds annual potential evaporation preclude long-term closure of the Project as a zero-discharge facility. Any discharges would be regulated with discharge water chemistry, monitoring, and reporting obligations.
Implementation	801.1500	C.12	There are concerns that Alternative 2 appears to be the Proposed Action but there is no corresponding Plan of Operations submittal to review for project details, mining practices and environmental management commitments.	DEIS Chapter 2 describes the Project details, mining practices, and environmental design features for Alternative 2. The SDEIS describes the updated plan of operations (ModPro2) for what was Alternative 2 in the DEIS. Environmental management obligations would be determined during the permitting process and would be listed in the Project's ROD. A finalized Plan of Operations incorporating the Project details, mining process, and environmental management commitments as amended or modified by the NEPA process would be completed as a permitting step prior to issuance of a ROD.
Implementation	801.1500	C.13	There are concerns that details regarding the destination of the proposed antimony concentrate are not provided in the EIS.	As described in DEIS Section 2.3.5.6, antimony concentrate would be produced for sale to off-site processing facilities. These purchasing facilities would be subject to change based on the international demands for antimony concentrate.

Objections and Litigation Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Objections, Litigation	801.0400	Primary	There are concerns that the DEIS and its supporting documents rely upon missing and incomplete information that impedes public participation and violates NEPA.	The DEIS acknowledged the occurrence of incomplete and unavailable data in its analyses (e.g., DEIS Table 4.1-1) and discussed the uncertainty in its analyses pertaining to the representativeness of the information it utilized (e.g., DEIS Section 4.8.8). The SDEIS incorporates information that has become available or been developed since publication of the DEIS.
Objections, Litigation	801.0400	C.1	There was a recommendation that a compromise be sought to resolve the Nez Perce litigation against Midas. Compliance with the compromise can be monitored and enforceable via a court approved agreement.	Site-related litigation resolution and court approved enforcement are outside the scope of the NEPA analysis of the proposed Project. No further response required. Beyond the scope of the proposal.
Objections, Litigation	801.0400	C.2	There are concerns that the DEIS and its supporting documents rely upon missing and incomplete information. Additionally, there are concerns that some of the information listed in the DEIS as "incomplete and unavailable" is not truly unavailable but has simply not been provided to the public. Commenters express concerns that the lack of disclosure of this information hinders the public's understanding of adverse impacts, impedes public participation, and violates NEPA.	The DEIS acknowledged incomplete and unavailable information in its analyses (e.g., DEIS Table 4.1-1). The SDEIS incorporates information that has become available or been developed since publication of the DEIS. The DEIS provided the information available for public review except for information held as confidential per Forest Service procedures such as some cultural resources and proponent proprietary data.

Other Federal Agency Policies Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Other Federal Agency Policies	801.0306	Primary	There is interest around the specific details and status of mining claims held by the Project proponent and whether the Forest Service is required to assess the	Mining claim information appears in Appendix C of the Plan of Restoration and Operations submitted by the Project proponent. Federal land

Resource	Comment Code	Comment Number	Concern Statement	Response
			validity of the claims as part of its consideration of the PRO.	<p>records regarding these claims are accessible by the public via the on-line LR2000 records system.</p> <p>The U.S. Forest Service does not perform validity examinations of unpatented mining claims except where a Plan of Operations has been located on segregated or withdrawn lands, or an examination is necessary to determine whether the minerals are uncommon varieties.</p>
Other Federal Agency Policies	801.0306		<p>There is a request for information regarding the types of mining claims held by Midas Gold on Forest Service lands and the acreages of each type of claim along with the lengths, widths, and boundaries of load claims. Further, there is a request for information regarding claim fees paid by Midas to the Secretary of Interior and any deferments or waivers of those fees.</p>	<p>Mining claim information appears in Appendix C of the Plan of Restoration and Operations submitted by the Project proponent. Federal land records regarding these claims are accessible by the public via the on-line LR2000 records system.</p>
Other Federal Agency Policies	801.0306		<p>There are statements that a 2005 Solicitor's Opinion indicates that the Forest Service is not required to inquire into claim validity before processing and approving proposed plans of operation. Further, there are opinions that the Project's proposed mining and ancillary facilities are incident to mining and mineral processing.</p>	<p>The U.S. Forest Service is not required to perform validity examinations of unpatented mining claims except where a Plan of Operations has been located on segregated or withdrawn lands, or an examination is necessary to determine whether the minerals are uncommon varieties.</p> <p>The DEIS analyzed the proposed access road and ancillary uses as components of the proposed mining project.</p>

State Laws and Policies Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
State Laws, Policies	801.0307	Primary	There are concerns that the DEIS includes assumptions regarding elements of the Project that are subject to change during Idaho State permitting processes.	The Plan of Operation cannot be approved until the Final EIS is completed (36 CFR 228.5(a)(5)). Forest Service approval via a ROD for the Plan of Operation would be necessary for the Project to proceed, but additional federal and Idaho State approvals would also be necessary. If other permit approvals result in an activity not included in the ROD and subject to Forest Service jurisdiction, the Forest Service decision would need to be amended to incorporate that additional activity.
State Laws, Policies	801.0307	C.1	There are concerns that the EIS does not clearly specify what types of runoff/stormwater discharge and wastewater treatment permits will be needed and which agencies will issue these permits. Additionally, there are requests that the Forest Service carefully review at a programmatic level all permits, including Clean Water Act section 404 permits, issued for construction and operation of the mine.	The Final EIS includes a summary of authorizations required from other regulatory agencies for water-related permits. Through the NEPA analysis, the Forest Service makes an independent evaluation of the proposed mine project and its environmental impacts including the implementation of environmental protection and mitigation measures. This evaluation considers permits issued by other regulatory agencies to the extent that they affect activity on Forest Service Lands.
State Laws, Policies	801.0307	C.2	There are concerns that the DEIS and its supporting documents make numerous unsupported assumptions on issues that are unknown, subject to change, and/or still being decided; these issues could have major implications on the likely environmental effects, feasibility, and other factors related to each alternative, including the Proposed Action, and for the associated mitigation and monitoring. Commenters provide several examples of issues that have not been adequately disclosed or considered in the DEIS, including ongoing Idaho legislature and Department of Environmental Quality rulemaking, and a complete list of state	Via the NEPA process, the Forest Service analyzes the mining project as proposed in the Plan of Operation. The Plan of Operation cannot be approved until the Final EIS is completed (36 CFR 228.5(a)(5)). Approval of the Plan of Operation would provide authorization for activities described in the Plan of Operation. Forest Service approval via a ROD for the Plan of Operation PRO would be necessary for the Project to proceed, but additional federal and Idaho State approvals would also be necessary. If other permit approvals result in an activity not included in the ROD and subject to Forest Service jurisdiction, the Forest Service decision would need to be amended to incorporate that additional activity.

Resource	Comment Code	Comment Number	Concern Statement	Response
			required permits (e.g. IPDES, Stream Channel Alteration).	

Roles and Authorities Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Roles and Authority	801.0100	Primary	There are differing opinions on the appropriate role of proponent environmental professionals in providing data and analyses for use in the EIS.	The Forest Service considers information provided from a number of sources in its analysis of the Project effects. Incorporation of information into the EIS analysis is subject to Forest Service review and concurrence to utilize that specific information.
Roles and Authority	801.0100	B.1	There are statements that Midas Gold Corp. is accountable for ESG performance as a public company.	No further response required. Unrelated to the decision being made.
Roles and Authority	801.0100	B.2	There are statements that Midas Gold utilized local employees and a local Board of Directors based in Idaho to enable governance of the Project in Idaho.	No further response required. Unrelated to the decision being made.
Roles and Authority	801.0100	B.3	There are concerns that the use of experts and scientists in the analysis are biased toward the project proponent. There are comments expressing a lack of trust in Midas Gold and the validity/accuracy of their environmental analysis. There are concerns regarding bias in the NEPA process and that Midas Gold has put inappropriate pressure on the Forest Service and elected officials. There are commenters who express general distrust of Midas Gold, the Forest Service, and the process as a whole.	The Forest Service considers information provided from a number of sources in its analysis of the Project effects. Incorporation of information into the EIS analysis is subject to Forest Service review and concurrence to utilize that specific information. Concurrence is based on technical review and acceptance of the information by Forest Service personnel.

Resource	Comment Code	Comment Number	Concern Statement	Response
Roles and Authority	801.0100	B.4	There is a statement that the use of proponent environmental professionals should not be considered biased.	The use of information and opinions provided by any source are subject to Forest Service review and concurrence prior to its consideration in the EIS analysis.
Roles and Authority	801.0100	B.5	There is a request that consideration be given to protocols for future approval of Valley County projects.	Comment noted. Valley County served as a Cooperating Agency for this NEPA analysis.
Roles and Authority	801.0100	B.6	There are concerns regarding the U.S. Forest Service application of its authority to protect environmental resources. Further, a supplemental DEIS is recommended to provide further detail.	The application of the Forest Service's authority to evaluate this Project and its effected environmental resources was described in Chapter 1 of the DEIS.
Roles and Authority	801.0100	B.7	There are statements regarding NGO solicitation of technical reviews of the DEIS and supporting documents.	The Forest Service received these reviews during the DEIS public comment period and has incorporated them into these comment responses and/or the SDEIS document as appropriate.
Roles and Authority	801.0100	C.1	There are concerns that opinions expressed in the DEIS that taxpayer funding for site restoration is not forthcoming are not correct. Commenters note that there has been a taxpayer funded effort in the past.	Comment noted. Past public restoration activities are included in the CERCLA background narrative in Section 1.3 of the SDEIS.
Roles and Authority	801.0100	C.2	There is an expression of confidence in the U.S. Forest Service's ability to require mitigation measures for environmental impacts.	Comment noted. Mitigation measures will be identified in the Final EIS and the Project ROD
Roles and Authority	801.0100	C.3	There are concerns that Midas Gold will be acquired by a larger company that will not adhere to the PRO.	Forest Service authorization for mining activity would be granted via a ROD for the specific proposed mining plan of operations. This authorization may be transferred to a different project owner with Forest Service consent. However, that transfer would not modify the approval conditions incorporated in the ROD.

Trust and Credibility Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Trust and Credibility	801.0200	Primary	There are opinions regarding whether Midas Gold has been and will be a trustworthy environmental steward for the Project. Some commenters provided examples of positive practices and others provided recommendations for monitoring compliance should the Project be approved.	Approval of a mining project is conducted via a ROD that adopts a plan of operations. The mining plan and ROD will include compliance requirements along with associated monitoring and reporting for compliance assurance.
Trust and Credibility	801.0200	A.1	There are recommendations that safe public site access be allowed during construction and operations for the purposes of informing the public on environmental performance.	Allowances for public access during operations were analyzed in Alternative 2 of the DEIS and included in the SDEIS.
Trust and Credibility	801.0200	A.2	There are opinions that the operator has been and will be a good environmental steward. For example, they have recycled scrap metal left on site from previous mining.	The Forest Service appreciates voluntary environmental protection activities that are within usage authorizations. No further response required. Unrelated to the decision being made.
Trust and Credibility	801.0200	A.3	There are opinions that the USFS has executed its duties in consulting with stakeholders and preparing the DEIS.	No further response required. General in nature or position statement.
Trust and Credibility	801.0200	A.4	There are recommendations that the USFS post project documentation on the project webpage to inform the public on the project and its environmental analysis. Further, there are opinions that this posting will reduce the scope of FOIA requests.	Project documentation that is part of the public record is available from the Forest Service via established request processes.
Trust and Credibility	801.0200	A.5	There are comments stating that Midas Gold will be required to bond for reclamation costs prior to starting any mining activity and opinions that Midas Gold has the capability to successfully reclaim the site.	Prior to approval of a Plan of Operations, the operator is required to furnish a bond sufficient to stabilize, rehabilitate, and reclaim the area of operations (36 CFR 228.13 (a)(b)).
Trust and Credibility	801.0200	B.1	There is an opinion that the DEIS was rushed due to investor pressure, and as a	The Forest Service considers information provided from a number of sources in its analysis of the Project effects.

Resource	Comment Code	Comment Number	Concern Statement	Response
			result the technical information in the analysis does not match the restoration represented in the PRO.	Incorporation of information into the EIS analysis is subject to Forest Service review and concurrence to utilize that specific information. Concurrence is based on technical review and acceptance of the information by Forest Service personnel.
Trust and Credibility	801.0200	B.2	There are comments voicing general support for the project and Midas Gold.	No further response required. General in nature or position statement.
Trust and Credibility	801.0200	B.3	There are statements that Midas Gold Corp. is accountable for ESG performance as a public company.	No further response required. Unrelated to the decision being made.
Trust and Credibility	801.0200	B.4	There are concerns regarding bias in the NEPA process and that Midas Gold has put inappropriate pressure on the Forest Service and elected officials. There are commenters who express general distrust of Midas Gold, the Forest Service, and the process as a whole. There are concerns that the Forest Service has not prepared project documents such as the DEIS and biological assessment, and that having Midas Gold and/or their contractors prepare these documents is a conflict of interest. Additionally, there are concerns regarding potential Federal Advisory Committee Act violations.	<p>The Forest Service considers information provided from a number of sources in its analysis of the Project effects. Incorporation of information into the EIS analysis is subject to Forest Service review and concurrence to utilize that specific information. Concurrence is based on technical review and acceptance of the information by Forest Service personnel.</p> <p>The DEIS and SDEIS were prepared by the Forest Service and its third part NEPA contractors.</p> <p>Preparation of the Project biological assessment by the Project proponent was conducted under a standard agreement between the Forest Service and the Project proponent. Review, acceptance, and utilization of the biological assessment is conducted solely by Forest Service personnel and contractors.</p> <p>This Project did not utilize Federal Advisory Committees.</p>
Trust and Credibility	801.0200	C.1	There are general comments expressing trust in Midas Gold.	No further response required. Unrelated to the decision being made.
Trust and Credibility	801.0200	C.2	There are comments expressing a lack of trust in Midas Gold and the validity/ accuracy of their environmental analysis.	Please see response to Comments 801.0200 B.1 and B.4. No further response required. Unrelated to the decision being made.

Purpose and Need Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Purpose and Need	801.0800.00	C.1	The Forest Service should consider if the proposed project mineral production is required for national or global needs.	This matter is already decided by law, regulation or policy as described in Sections 1.4.1 and 1.5.1 of the DEIS. The applicant has certain statutory rights to develop minerals on National Forest System (NFS) lands per the U.S. Mining Laws and the Forest Service is responsible to review plans for such mineral development to minimize adverse environmental effects to NFS surface resources.
		C.2	There are concerns that the Forest Service has violated NEPA by defining the purpose and need in unreasonably narrow terms, resulting in a failure to consider all reasonable alternatives and leading to a preordained conclusion. Commenters state that the general need to support mineral development under the 1970 Mining and Mineral Policy Act is misplaced as this Act does not create controlling a statutory mandate on the Forest Service. Commenters assert that the Forest Service's primary mandate is to protect the forest from destruction and deprecations under the 1897 Organic Act. Commenters request that the purpose and need be "rewritten following determinations of the legal status of Midas Gold's claims and other asserted rights." (Save the South Fork Salmon letter p. 82).	Refer to response to 801.0800.00 Comment C.1.

Alternative 1 Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternative 1	801.1005	Primary	There are statements that Alternative 1 represents the initial Project proposal and has been superseded by alternatives that are net environmental improvements, and therefore, recommendations do not support approval of Alternative 1.	No further response required. General in nature or position statement.

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternative 1	801.1005	C.1	There are concerns that the Plan of Restoration and Operations has been re-written and included in the DEIS as an alternative (Alternative 2), while the original Plan of Restoration and Operations is still included in the DEIS as Alternative 1. Commenters state that the DEIS should be revised to eliminate Alternative 1 and include Alternative 2 as the Proposed Action.	Alternatives 1 and 2 represent projects that satisfy the purpose and need for the analysis and therefore were analyzed in the DEIS. The agency preferred alternative selected for approval via the ROD could consist of one of the alternatives analyzed in the SDEIS or could be a compilation of plan components selected from the alternatives.
Alternative 1	801.1005	C.2	There are statements that Alternative 1 represents the original proposal submitted, and that Alternative 2 is a net environmental improvement on Alternative 1, suggesting there is no reason to select Alternative 1.	No further response required. General in nature or position statement.
Alternative 1	801.1005	C.3	There are concerns that descriptions of water treatment for Alternative 1 are inconsistent to the point that they affect the supportability of the water quality predictions and impact analysis.	Water treatment of mine dewatering production, post-closure facility seepage, and other sources of water is not a component of Alternative 1. Therefore, water quality predictions for Alternative 1 do not incorporate water treatment for these sources. The effects of water treatment on predicted water quality and impacts can be ascertained from the comparison of Alternative 1 to Alternative 2, a modified plan including water treatment.
Alternative 1	801.1005	C.4	There are general supportive statements for Alternative 2.	No further response required. General in nature or position statement.
Alternative 1	801.1005	C.5	There are concerns regarding the water quality associated with tailings leachate.	Tailings leachate would predominantly be contained by an engineered liner and seepage collection system. Water quality impacts associated with management of tailings leachate were described in DEIS Section 4.9.2.
Alternative 1	801.1005	C.6	There are concerns that the DEIS does not include adequate information regarding the borrow materials that would be used for mine closure and reclamation. There are concerns that the DEIS downplays the challenges and concerns related to the suitability and availability of borrow materials. There are concerns that inadequate characterization of borrow materials can lead to environmental impacts as a result of using unsuitable	The characterization of borrow materials was described in three documents. Where legacy mined materials were incorporated into the Project construction, that physical and chemical characterization was described in the Project's Environmental Legacy Management Plan. Where borrow materials would be utilized for road construction, that assessment was described in the

Resource	Comment Code	Comment Number	Concern Statement	Response
			material for foundations and other needs and thus the DEIS should identify, physically and chemically characterize, and analyze borrow sources.	SDEIS per the analysis set forth by SRK (2021). Where borrow materials are utilized for reclamation and closure covers, their chemical requirements are described in SDEIS Section 4.5.2 and the Reclamation Closure Plan.

Alternative 2 Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternative 2	801.1006	Primary	There are differences of opinion regarding the selection of Alternative 2 as the Preferred Alternative and approving it. Supporters favor the environmental restoration work and socioeconomic benefits associated with the alternative. Opponents indicate concerns regarding new disturbance, impacts to the ecosystem, and uncertainty around the environmental performance of the tailings storage facility. Further, there are recommendations that the analysis of Alternative 1 be removed from the Final EIS and that Alternative 2 be represented as the Proposed Action.	Alternatives 1 and 2 represent alternatives that satisfy the purpose and need for the analysis and therefore are retained. The agency preferred alternative selected for approval is described in the SDEIS.
Alternative 2	801.1006	C.1	There are general supportive statements for Alternative 2.	No further response required. General in nature or position statement.
Alternative 2	801.1006	C.2	There are comments voicing opposition to Alternative 2 because it includes land disturbance in the form of open pits, development rock, and tailings storage facilities at the conclusion of operations.	No further response required. General in nature or position statement.
Alternative 2	801.1006	C.3	There are comments voicing opposition to Alternative 2 because it includes impacts to the ecosystem. Further, commenters opine that the impacts identified in the DEIS are not exhaustive or fully accurate.	No response required for position statement. The SDEIS revises the impact analysis per comments received on the DEIS.
Alternative 2	801.1006	C.4	There are concerns that the MicroDrain leak detection layer may not be sufficiently environmentally protective.	Compliance with Idaho State requirements for cyanide usage is incorporated into the SDEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternative 2	801.1006	C.5	There are opinions that the tailings storage facility presents a low risk to water quality and that there is a low risk of impoundment dam failure, breaching, or leakage.	No response required for position statement. The NEPA analysis of the tailings storage facility does not consider facility failure to be reasonably foreseeable.
Alternative 2	801.1006	C.6	There are concerns that the Modified Plan of Restoration and Operations has been re-written and included in the DEIS as an alternative (Alternative 2), while the original Plan of Restoration and Operations is still included in the DEIS as Alternative 1. Commenters state that the DEIS should be revised to eliminate Alternative 1 and include Alternative 2 as the Proposed Action.	Alternatives 1 and 2 represent alternatives that satisfy the purpose and need for the analysis and therefore are retained. Screening criteria for alternatives was presented in DEIS Section 2.8. The agency preferred alternative selected for approval is described in the SDEIS.
Alternative 2	801.1006	C.7	There are concerns that a detailed reclamation and closure plan is only provided for Alternative 1, and that the revised DEIS (eliminating Alternative 1 as previously described) should include a detailed reclamation and closure plan for Alternative 2.	A detailed reclamation plan for the agency preferred alternative was used to inform the SDEIS and Final EIS. The Reclamation Closure Plan will be incorporated into the Project via the ROD.

Alternative 3 Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternative 3	801.1007	Primary	There is not support for Alternative 3 because it would not result in the removal of hazardous materials via reprocessing of legacy tailings, it would cover the Thunder Mountain Road, and there are questions regarding the sourcing of tailings dam material for the alternate storage facility location.	No further response required. General in nature or position statement.
Alternative 3	801.1007	C.1	There is opposition to Alternative 3 because it would locate the tailings storage facility in pristine habitat and would not reprocess the existing legacy tailings to remove hazardous materials.	No further response required. General in nature or position statement.

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternative 3	801.1007	C.2	There is opposition to Alternative 3 because it would remove the Thunder Mountain Road.	No further response required. General in nature or position statement.
Alternative 3	801.1007	C.3	There is a question regarding the sourcing of TSF construction materials under Alternative 3.	The analysis of Alternative 3 will not be carried forward in the SDEIS analysis because it does not represent a reduction in impacts compared to the Proposed Action. Therefore, analysis of the TSF construction materials under Alternative 3 will not be required for the analysis.

Alternative 4 Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternative 4	801.1008	Primary	There was varying support for Alternative 4 due to increased risk of traffic related spills along Johnson Creek and potential impacts to waters, fisheries, and the environment compared to reduced impacts to wetlands and wildlife.	No further response required. General in nature or position statement.
Alternative 4	801.1008	C.1	There is opposition to Alternative 4 because this alternative would increase risks to the environment and safety.	No further response required. General in nature or position statement.
Alternative 4	801.1008	C.2	There is a statement of conditional support for Alternative 4 provided that the Thunder Mountain Estates Transmission Line Bypass is constructed and other environmental measures are put in place.	No further response required. General in nature or position statement.
Alternative 4	802.01	C.3	There is support for Alternative 4 because it has the least acres of wetland impacts.	No further response required. General in nature or position statement.
Alternative 4	802.05	C.4	There is support for Alternative 4 because of reduced impacts to wildlife because the Burntlog Route would not be constructed.	No further response required. General in nature or position statement.

Alternative 5 Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternative 5	801.1010	Primary	There are differences of opinion expressed regarding selection of the No Action alternative (Alternative 5). Support for Alternative 5 is based on environmental impact concerns to the watershed, recreation, and fisheries. Opposition to Alternative 5 is based on environmental impact concerns related to the legacy condition of the site which would not benefit from restoration activities that or part of the action alternatives, and would not yield the socioeconomic benefits of the action alternatives.	No further response required. General in nature or position statement.
Alternative 5	801.1010	C.1	There are concerns about the risk of hazardous materials spills should the Project move forward and the hazardous material spill emergency response capacity of local communities. Additionally, there are questions about who would be responsible for treatment of the hazardous waste produced by the mine and how and where this waste would be transported for treatment. There are concerns that the DEIS contains inconsistencies and incomplete descriptions regarding the transport of hazardous materials, making it impossible to understand the risk of hazardous materials spills from Project related traffic.	The risks associated with hazardous materials were presented in Section 4.7 of the DEIS. As the Project operator, Perpetua would be responsible for transport and disposal of hazardous wastes generated by the Project utilizing transporters and disposal sites licensed for the specific types of hazardous waste generated. Descriptions of hazardous waste handling and associated transportation are included in Section 4.7 of the SDEIS. Further, a Transportation Management Plan for the agency preferred alternative is available as a supporting reference for the SDEIS.
Alternative 5	801.1010	C.2	There are general concerns regarding negative impacts of mining on fish populations, including species that are federally listed under the Endangered Species Act.	Impacts of the Project on fish populations were described in Section 4.12 of the DEIS, including analysis of three species listed as threatened under the Endangered Species Act (Chinook salmon, steelhead trout, bull trout) and one U.S. Forest Service sensitive species (westslope cutthroat trout).
Alternative 5	801.1010	C.3	There are concerns that the Project will result in surface water contamination with heavy metals that could negatively affect fish and wildlife populations as well as recreation.	Impact of the Project on metal concentrations in surface water were described in Section 4.9.2 of the DEIS. The effects of surface water chemistry on fish and wildlife populations plus recreation were described in Sections 4.12.2, 4.13.2, and 4.19.2 of the DEIS, respectively. Because of environmental controls, water treatment, and

Resource	Comment Code	Comment Number	Concern Statement	Response
				reclamation/restoration activities, metal concentrations in surface water remain near baseline conditions for the site, limiting impacts associated with surface water chemistry. Predicted Project impacts to fish and wildlife are primarily associated with changes in habitat and water temperatures. Predicted Project impacts to recreation are primarily associated with changes to access routes and setting.

Alternatives Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternatives	801.1000	Primary	There are preferences expressed in favor of selection of Alternative 2 or in favor of selection of the No Action Alternative. Specific differentiators between alternatives mentioned included water quality, disturbance acreages, tailings management, and socioeconomics. There were concerns that the alternatives selected for analysis were not comprehensive or responsive to scoping recommendations. Suggestions for additional alternatives were provided. In addition, there were opinions that the No Action Alternative was not appropriately characterized and should include the environmental benefits of future remedial activities. Finally, there were concerns that the analyses applied to different alternatives were inconsistent.	Comments noted regarding recommendation of either Alternative 2 or the No Action Alternative. Other alternatives recommended for consideration in comments did not meet the Project purpose and need or did not meet the metrics described in DEIS Section 2.8 for inclusion as fully analyzed alternatives. Effects of future remedial activities are incorporated into the SDEIS as current and reasonably foreseeable future actions. The environmental benefits associated with those activities would be equivalent for all action alternatives and the No Action Alternative. The SDEIS clarifies and updates the analyses for the different alternatives.
Alternatives	801.1000	C.1	There are opinions that the length and density of the DEIS, combined with errors and inconsistencies, are deterrents to public engagement in the comment process. Additionally, there are concerns that the structure and terminology used in the DEIS are misleading to the reader. Commenters cite the term "development rock storage facilities" as an example of misleading terminology that should be	The SDEIS contains revisions that address errors and inconsistencies identified from reviews of the DEIS text. The EIS document is organized by environmental resource so that readers can locate information related to their specific interests. Terminology used in the EIS document was defined and described within the body of the document at first use but also in DEIS Section 7.2 so that the

Resource	Comment Code	Comment Number	Concern Statement	Response
			replaced by the more transparent and accurate term "waste rock dumps".	reader could inspect the meaning of the terms used in the Project description.
Alternatives	801.1000	C.2	Commenters note that typical EISs include the No Action Alternative as Alternative 1, but the Stibnite Gold Project DEIS has developed the No Action Alternative as Alternative 5. This has led to the DEIS comparing the impacts of all the alternatives to Alternative 1 (an action alternative), rather than the No Action Alternative, which is misleading to the reader. For example, page 16 of the Technical Memorandum for the Stibnite Gold Project Chinook Salmon Flow-productivity Analysis only compares Alternatives 1, 2, and 3, and does not even include the No Action Alternative in the comparison, in violation of NEPA.	Every EIS document includes evaluation of a No Action Alternative. The order that alternatives were presented is not standardized but the descriptions of each alternative were provided in the EIS text (DEIS Sections 2.3 through 2.7). The DEIS document compared all alternatives to baseline conditions as summarized in the DEIS Executive Summary, Table ES4-1.
Alternatives	801.1000	C.3	There is an opinion that valley bottom TSF locations provide for improved geotechnical stability compared to ring dike impoundments.	Comment noted. The stability analysis for the TSF was described in DEIS Sections 3.2 and 4.2 of the EIS.
Alternatives	801.1000	C.4	There were general comments regarding the benefits and drawbacks of various tailings management methods.	Options for tailings management were described in DEIS Section 2.8. Analysis of conventional tailings management at two alternative locations was presented in DEIS Section 4.2.2.
Alternatives	801.1000	C.5	There are concerns that the DEIS fails to address the possibility of early mine closure and associated impacts. There are opinions that the DEIS should include an early closure action alternative. There are concerns that the DEIS does not address how long a temporary closure could last before becoming a permanent closure.	Closure scenarios that do not follow the planned Project timeframe are addressed via the financial assurance for closure. Financial assurance amounts are determined to allow for reclamation of Project disturbance and activity at the time that a project goes into permanent or temporary closure. The duration of temporary closure is based on the operator's intention to re-start authorized activity, as limited by the time requirements of specific operating permits. Specific conditions that result in early closure are not reasonably foreseeable and therefore, are addressed via financial surety for closure rather than an alternative analysis.

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternatives	801.1000	C.6	There are concerns that the DEIS failed to consider a reasonable range of alternatives and improperly dismissed feasible alternatives, thus violating NEPA. There are concerns that the DEIS does not define the terms "technically feasible" and "economically feasible", which were used as the basis for eliminating alternatives and that the DEIS relies entirely on Midas Gold to determine feasibility.	Terminology for metrics used in the consideration of alternatives will be defined in the SDEIS. The DEIS analyzed five alternatives, including the No Action Alternative. The DEIS evaluated other potential alternatives but eliminated them from detailed analysis as described in DEIS Section 2.8. Further description is found in a document entitled "Alternatives Considered, Carried Forward, or Eliminated from Further Study (AECOM 2020b), which is found in the publicly available Pinyon references site._
Alternatives	801.1000	C.7	There are comments that the eliminated potential alternatives were eliminated due to technical and/or economic infeasibility along with an absence of meaningful environmental advantage.	Comment noted. The factors associated with retention or elimination of potential alternatives from detailed analyses were described in DEIS Section 2.8. Further description is found in a document entitled "Alternatives Considered, Carried Forward, or Eliminated from Further Study (AECOM 2020b), which is found in the publicly available Pinyon references site._
Alternatives	801.1000	C.8	There are concerns that during scoping the public submitted comments recommending the development of additional alternatives, but the Forest Service failed to do so and did not adequately respond to those comments. Commenters request that the Forest Service develop all reasonable alternatives to address concerns the public raises.	More than 600 scoping comments were received that provided input on potential alternatives for inclusion in the EIS. These comments described potential alternatives relating to mine production, ore process, transportation, site access, tailings management, development rock storage, power transmission lines, surface water management, pit water management, stormwater management, facilities, and reclamation. These potential alternatives were evaluated in the DEIS as described in Section 2.8. Further description is found in a document entitled "Alternatives Considered, Carried Forward, or Eliminated from Further Study (AECOM 2020b), which is found in the publicly available Pinyon references site._
Alternatives	801.1000	C.9	There are concerns that due to the lack of domestic antimony processing facilities, the antimony produced at	The value of the mineral resources at Stibnite satisfies the purpose and need requirement for

Resource	Comment Code	Comment Number	Concern Statement	Response
			Stibnite would need to be processed outside of the United States. There are opinions that this undercuts the argument that the Project is important for national security. There are concerns that the antimony deposits at Stibnite are not economical to mine. Additionally, there are concerns that antimony could be mined from numerous other locations in the United States and the Stibnite antimony deposits are not strategically important.	analysis of the proposed Project and its alternatives, consistent with the Mining and Mineral Policy Act of 1970.
Alternatives	801.1000	C.10	There are concerns that the Project will damage the wild character and outstandingly remarkable values of Wild and Scenic Rivers and the DEIS does not include sufficient mitigation measures to address these impacts. There are concerns that the DEIS fails to adequately characterize and consider Project impacts (and associated mitigation measures) to Wild and Scenic Rivers Act eligible streams within the vicinity of the Project area. Additionally, there are concerns that the scope of analysis is not sufficient to consider impacts to other eligible and congressionally designated waterways outside of the Project area that may be impacted. Commenters specifically note the following designated, eligible, and suitable waterways that may potentially be impacted: South Fork of the Salmon River, Middle Fork Salmon River, Main Salmon River, Burntlog Creek, Johnson Creek, North Fork Payette River and Main Payette River.	As stated in Section 3.23.2 of the DEIS, there are three wild and scenic river segments within the area of analysis. Impacts to these segments resulting from implementation of the project are disclosed in Section 4.23.2. Aa suitability study for the Johnson Creek eligible river corridor would likely need to be conducted under any of the action alternatives prior to project implementation. Under planned operating and closure conditions, water quality of surface flow departing from the Stibnite Gold Project site would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (DEIS Section 4.9). The area of analysis is appropriate as it encompasses potential impacts. See also response to comment 802.0800 C.3 (Recreation).
Alternatives	801.1000	C.11	There are concerns that the suitability studies of affected potential Wild and Scenic Rivers must be conducted prior to approval of any action alternatives associated with the Stibnite Gold Project	As noted in Section 3.23.2 of the DEIS, there are three wild and scenic river segments within the area of analysis: Burntlog Creek (eligible), Johnson Creek (eligible), and South Fork Salmon River (suitable). All have a classification of recreational. As noted in Appendix D of the DEIS, a suitability study for the Johnson Creek eligible river corridor would be conducted under any of the action alternatives prior to Project implementation. Further, a fish passage design feature would provide upstream and downstream fish passage in the East

Resource	Comment Code	Comment Number	Concern Statement	Response
				Fork South Fork Salmon River under Alternatives 1, 2, and 3 to promote recreation opportunities such as fishing. Under planned operating and closure conditions, water quality of surface flow departing from the SGP mine site would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (DEIS Section 4.9). The area of analysis is appropriate as it encompasses potential impacts.
Alternatives	801.1000	C.12	There are opinions that the exclusion of underground mining as an alternative mining method was addressed sufficiently in Appendix G of the DEIS.	Underground mining as an alternative mining method is included in the alternatives considered by eliminated from further analysis section in the SDEIS.
Alternatives	801.1000	C.13	There are opinions that all alternatives that include open pit mining will have a negative impact on water quality.	Impacts to water quality were evaluated in Section 4.9 of the DEIS.
Alternatives	801.1000	C.14	There are recommendations that the time for implementation of analyzed alternatives be examined in the EIS to account for the negative socioeconomic implications of Project delays.	Socioeconomic effects of the Project under all alternatives were analyzed in Section 4.21 of the DEIS. The timeframe for phases of each alternative is disclosed in the DEIS (Section 2.2.4).
Alternatives	801.1000	C.15	There is a recommendation to compare analyzed alternatives on the basis of the development rock storage facility footprint acreage. Further, all the alternatives should involve covers for the development rock storage facilities and associated water treatment plants for seepage from those facilities.	The DEIS analysis compared alternative impacts on multiple bases including the disturbance areas associated with Project facilities. Much of this was all summarized in the Executive Summary in Table ES4-1 and the acreages for DRSFs by alternative are disclosed in Table 2.2-1. Covers for closed facilities were included in the analysis of site reclamation. In the SDEIS analysis, water treatment plants are analyzed as design features included in the proposed Project activities or as mitigation measures required by regulatory agencies to address water quality impacts.
Alternatives	801.1000	C.16	There is a recommendation to compare analyzed alternatives on the basis of the development total disturbance area.	The DEIS analysis compared alternative impacts on multiple bases including the disturbance areas associated with Project facilities, rights-of-way, and ancillary support areas. Much of this was all

Resource	Comment Code	Comment Number	Concern Statement	Response
				summarized in the Executive Summary in Table ES4-1 and total disturbance areas by alternative are disclosed in Table 2.2-1.
Alternatives	801.1000	C.17	There are concerns that all action alternatives would have impacts on rivers their ESA species and recreationalists.	Impacts to ESA species were analyzed in Sections 4.12 and 4.13 of the DEIS. Impacts to recreationalists were analyzed in Section 4.19 of the DEIS.
Alternatives	801.1000	C.18	There are concerns that the Forest Service dismissed scoping comment requests to develop underground mining alternatives with no substantive explanation. Commenters cite AECOM 2020b, Table 1, as showing that an underground mining alternative was not considered. Commenters provide analysis to support their assertion that an underground mining alternative should be carried forward: An underground mining alternative would meet the purpose and need. Underground mining, when paired with the backfilling of underground workings, would reduce environmental effects to multiple resources (including wildlife, surface water, groundwater, visual resources, recreation, etc.). Underground mining is technically feasible. The Forest Service has a mandate to study in detail the question of whether the alternative is economically feasible. Commenters assert that it is insufficient to disregard underground mining simply because it is more expensive. Commenters state that a detailed study of several provided points must be carried out to determine whether or not underground mining would be economically feasible.	Per comments received on the DEIS, underground mining as an alternative mining method is included in the alternatives considered but eliminated from further analysis section in the SDEIS.
Alternatives	801.1000	C.19	There are comments supporting the selection of Alternative 2 over the other action and No Action alternatives.	No further response required. General in nature or position statement.
Alternatives	801.1000	C.20	There are comments that the other action alternatives are inferior to Alternative 2.	No further response required. General in nature or position statement.

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternatives	801.1000	C.21	There are comments opposing the selection of Alternative 3.	No further response required. General in nature or position statement.
Alternatives	801.1000	C.22	There are comments supporting the selection of the No Action Alternative.	No further response required. General in nature or position statement.
Alternatives	801.1000	C.23	There is general support for the No Action Alternative (Alternative 5) due to general environmental concerns such as negative impacts to the watershed, recreation, and fisheries.	No further response required to position statement. Impacts to fisheries were described in Section 4.12 of the DEIS. Impacts to recreation were described in Section 4.19 of the DEIS.
Alternatives	801.1000	C.24	There is a recommendation that the selected alternative protect existing anadromous fish species and provide for a rehabilitation bonding.	The EIS analysis compared alternative impacts on multiple bases including impacts to anadromous fish species. Reduced impacts to fish species would be a consideration in the selection of the Preferred Alternative. Prior to approval of a Plan of Operations, the operator is required to furnish a bond sufficient to stabilize, rehabilitate and reclaim the area of operations (36 CFR 228.13 (a)(b)).
Alternatives	801.1000	C.25	There are comments voicing support for the Project due to the restoration work proposed by Midas Gold. Commenters state that the Project site is currently degraded due to past mining activities and that private investment is needed to restore the site. Specifically, commenters state that the restoration activities included in the Project will improve fish passage, improve water quality by reducing erosion and sediment input into waterways, and reprocess old tailings. Commenters cite tree planting already completed by Midas Gold as a demonstration of the company's commitment to restoration.	No further response required to position statement. Restoration activities included in the proposed Project were described in Chapter 2 of the DEIS. The analyses of restoration activities effects on water quality and fish were described in DEIS Sections 4.9 and 4.12, respectively. These analyses recognized the current baseline condition as degraded due to past mining activity.
Alternatives	801.1000	C.26	There are comments voicing general opposition to the Project.	No further response required. General in nature or position statement.
Alternatives	801.1000	C.27	Commenters state that the EIS does not present conceptual models for water chemistry for all alternatives.	The description of the conceptual models for the water chemistry analysis are contained within the EIS reference document on water chemistry modeling (SRK 2018). The conceptual models

Resource	Comment Code	Comment Number	Concern Statement	Response
				accounted for water chemistry contributions from components of the alternatives, specifically, development rock storage facilities, tailings storage facilities, pit lakes, and backfilled pits. An overall conceptual model that integrated these components with site surface water chemistry analyses was utilized to assess the impacts to water chemistry described in Section 4.9.2 of the DEIS.
Alternatives	801.1000	C.28	There are concerns that impacts analyses for all alternatives are inconsistent.	The SDEIS text clarifies the consistent application of analyses to the alternatives.
Alternatives	801.1000	C.29	There are comments voicing general support for the Project and Midas Gold.	No further response required. General in nature or position statement.
Alternatives	801.1000	C.30	There are concerns that there are no alternatives that emphasize restoration when Midas Gold submitted a Plan of Restoration and Operations to the Forest Service as opposed to a standard Plan of Operations. There are comments that recommend development and analysis of a restoration emphasis alternative.	A restoration emphasis alternative does not meet the purpose and need for the Project and therefore was not included in the detailed analysis. DEIS Section 2.8 presented the criteria used to screen alternatives that were carried forward in the analysis.
Alternatives	801.1000	C.31	There is an opinion that no true alternatives for tailings management were evaluated, as all tailings alternatives involved conventional tailings management in valley-fill impoundments.	The DEIS evaluated tailings management options such as dry stack tailings and separated embankment fills as described in DEIS Section 2.8.3.
Alternatives	801.1000	C.32	There is an opinion that additional alternatives involving access to backcountry recreational opportunities should be analyzed.	The DEIS evaluated eight alternatives related to backcountry recreational access as described in DEIS Section 2.8.2.
Alternatives	801.1000	C.33	There are concerns that the Fiddle Development Rock Storage Facility is unnecessary and the DEIS failed to consider an alternative that eliminates this facility.	The removal of the Fiddle Creek Development Rock Storage Facility from the Project facilities is analyzed in the SDEIS.
Alternatives	801.1000	C.34	There are concerns that the Forest Service has violated NEPA by defining the purpose and need in unreasonably narrow terms, resulting in a failure to consider all reasonable alternatives and leading to a preordained conclusion. Commenters state that the general need to support mineral development under the 1970 Mining and	This matter is already decided by law, regulation or policy as described in Sections 1.4.1 and 1.5.1 of the DEIS. The applicant has certain statutory rights to develop minerals on National Forest System (NFS) lands per the U.S. Mining Laws and the Forest Service is responsible to review plans for

Resource	Comment Code	Comment Number	Concern Statement	Response
			Mineral Policy Act is misplaced as this Act does not create controlling statutory mandate on the Forest Service. Commenters assert that the Forest Service's primary mandate is to protect the forest from destruction and depredations under the 1897 Organic Act. Commenters request that the purpose and need be rewritten following determinations of the legal status of Midas Gold's claims and other asserted rights. There are concerns that the DEIS does not consider nor demonstrate a global purpose and need for the Project.	such mineral development to minimize adverse environmental effects to NFS surface resources. The Forest Service's mandate is to manage National Forest System lands per Federal legislation, regulations and policies.

Alternatives Comparison Range Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternatives comparison range	801.1002	Primary	There are differences in opinion regarding the effectiveness of the alternatives analysis in comparing a range of alternatives. Detracting comments suggest that a mitigated no action alternative should be utilized and that the treatment of action alternatives was not equal. Supporting comments point to the analysis presented in DEIS Appendix G that examined the technical and economic feasibility of a range of potential alternatives along with examination of the alternatives for meaningful environmental advantages.	The range of alternatives were described in DEIS Section 2.8... Further description is found in a document entitled "Alternatives Considered, Carried Forward, or Eliminated from Further Study (AECOM 2020b), which is found in the publicly available Pinyon references site. The SDEIS clarifies the equivalent treatment and comparison of the analyzed alternatives. A recent ASAOC for site remediation scheduled between 2021 and 2025 is incorporated into the SDEIS analysis as a reasonably foreseeable future action.
Alternatives comparison range	801.1002	C.1	There is an opinion that the rugged terrain of the Project Area limits the number of reasonable alternatives. Further, the practice of locating facilities on existing disturbance when possible places additional limitations on alternatives.	Technical feasibility and reduction of environmental impacts were considered in the selection of alternatives for analysis as described in DEIS Section 2.8.

Resource	Comment Code	Comment Number	Concern Statement	Response
Alternatives comparison range	801.1002	C.2	There are comments that the eliminated potential alternatives were eliminated due to technical and/or economic infeasibility along with an absence of meaningful environmental advantage.	Technical feasibility, economic feasibility, reduction of environmental impacts, and Project purpose and need were considered in the selection of alternatives for analysis as described in DEIS Section 2.8.
Alternatives comparison range	801.1002	C.3	There are concerns that the DEIS failed to consider a reasonable range of alternatives and improperly dismissed feasible alternatives, thus violating NEPA. There are concerns that the DEIS does not define the terms "technically feasible" and "economically feasible", which were used as the basis for eliminating alternatives and that the DEIS relies entirely on Midas Gold to determine feasibility. Additionally, there are concerns that during scoping the public submitted comments recommending the development of additional alternatives, but the Forest Service failed to do so and did not adequately respond to those comments. Commenters request that the Forest Service develop all reasonable alternatives to address concerns the public raises.	The analysis and elimination of alternatives were described in DEIS Section 2.8. Further description is found in a document entitled "Alternatives Considered, Carried Forward, or Eliminated from Further Study (AECOM 2020b), which is found in the publicly available Pinyon references site. In its analysis, the Forest Service accepted information from numerous sources and incorporated the information it deemed accurate and relevant into the analysis. The alternatives analysis utilized information provided by the Project proponent, but did not base its analysis entirely on that information. Approximately 600 scoping comments received pertained to the alternatives analysis and were incorporated therein.
Alternatives comparison range	801.1002	C.4	There are concerns that the Project will damage the wild character and outstandingly remarkable values of Wild and Scenic Rivers and the DEIS does not include sufficient mitigation measures to address these impacts. There are concerns that the DEIS fails to adequately characterize and consider Project impacts (and associated mitigation measures) to Wild and Scenic Rivers Act eligible streams within the vicinity of the Project area. Additionally, there are concerns that the scope of analysis is not sufficient to consider impacts to other eligible and congressionally designated waterways outside of the Project area that may be impacted. Commenters specifically note the following designated, eligible, and suitable waterways that may potentially be impacted: South Fork of the Salmon River,	As noted in Section 3.23.2 of the DEIS, there are three wild and scenic river segments within the area of analysis: Burntlog Creek (eligible), Johnson Creek (eligible), and South Fork Salmon River (suitable). All have a classification of recreational. As noted in Appendix D of the DEIS, a suitability study for the Johnson Creek eligible river corridor would be conducted under any of the action alternatives prior to Project implementation. Further, a fish passage design feature would provide upstream and downstream fish passage in the East Fork South Fork Salmon River under Alternatives 1, 2, and 3 to promote recreation opportunities such as fishing. Under planned operating and closure

Resource	Comment Code	Comment Number	Concern Statement	Response
			Middle Fork Salmon River, Main Salmon River, Burntlog Creek, Johnson Creek, North Fork Payette River and Main Payette River.	conditions, water quality of surface flow departing from the Stibnite Gold Project site would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (DEIS Section 4.9). The area of analysis is appropriate as it encompasses potential impacts.
Alternatives comparison range	801.1002	C.5	There are general comments of support for the alternatives analysis.	No further response required. General in nature or position statement.
Alternatives comparison range	801.1002	C.6	There are general comments of opposition for the alternatives analysis, suggesting that it did not consider a reasonable range of alternatives.	The analysis and elimination of alternatives were described in DEIS Section 2.8. Further description is found in a document entitled “Alternatives Considered, Carried Forward, or Eliminated from Further Study (AECOM 2020b), which is found in the publicly available Pinyon references site. In its analysis, the Forest Service accepted information from numerous sources and incorporated the information it deemed accurate and relevant into the analysis. The alternatives analysis utilized information provided by the Project proponent, but did not base its analysis entirely on that information. Approximately 600 scoping comments received pertained to the alternatives analysis and were incorporated therein.
Alternatives comparison range	801.1002	C.7	There is a statement that alternative underground mining method was considered in DEIS Appendix G.	The DEIS does not contain an analysis of an underground alternative mining method because that alternative would be economically infeasible. The SDEIS clarifies the rationale for exclusion of underground mining from detailed analysis.
Alternatives comparison range	801.1002	C.8	There is a recommendation to use photographs of historical site disturbance as a metric for assessing the impacts and effects of alternatives.	Historical site disturbance is incorporated into the NEPA analysis via surveyed mapping of the areas of disturbance and characterization of environmental resources in their current baseline condition. Photographs inform the baseline

Resource	Comment Code	Comment Number	Concern Statement	Response
				characterization, but numerous other forms of quantitative data (e.g., water chemistry analyses) constitute the basis for the impact analysis of the Project as compared to baseline conditions.
Alternatives comparison range	801.1002	C.9	There are concerns that the treatment of alternatives is not equal.	The SDEIS clarifies the equivalent treatment of alternatives for comparison analysis.
Alternatives comparison range	801.1002	C.10	There are concerns that there are no alternatives that emphasize restoration when Midas Gold submitted a Plan of Restoration and Operations to the Forest Service as opposed to a standard Plan of Operations. There are comments that recommend development and analysis of a restoration emphasis alternative.	A restoration emphasis alternative does not meet the purpose and need for the Project and therefore was not included in the detailed analysis.
Alternatives comparison range	801.1002	C.11	Commentor said that alternatives that utilized “deep” mining rather than open pit mining and where pits were completely backfilled were not considered.	See response to comment 801.1002 C.7 regarding underground mining. Backfills of the Yellow Pine and Hangar Flats pits are analyzed in the SDEIS.
Alternatives comparison range	801.1002	C.12	Alternatives should include limiting the footprint to existing disturbance, an alternative that does not require plan amendments, and an alternative that avoids road building.	Footprint limitations that are restricted to existing disturbance or limitations on road building do not satisfy the purpose and need of the Project to access and mine the site’s mineral resource. Alternatives that do not require site specific plan amendments also do not meet the purpose and need of the Project because aspects of all alternatives of the Project would require modifications to plan components.
Alternatives comparison range	801.1002	C.13	A commentor states that the claim that dry stacking is “technically infeasible” is not credible.	The technical feasibility of dry stacking tailings was examined as part of an engineering study (AECOM 2020c in Chapter 2 of DEIS). That study deemed dry stacking infeasible because the fine grind specifications for ore processing result in tailings product that is not amenable to filtration. This issue is exacerbated by the tons per day (tpd) processing rate (22,000 to 25,000 tpd) that exceeds rates of

Resource	Comment Code	Comment Number	Concern Statement	Response
				existing dry stacking implementations (700 to 6,480 tpd).

New Suggested Alternatives Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
New Suggested Alternatives	801.1009	Primary	<p>There were specific suggestions for full analysis of alternatives involving underground mining as the mining method, removal of the Fiddle Development Rock Storage Facility, dry stacking tailings for tailings management, cyanide-free processing, a different OHV route, non-closure of the Johnson Creek bridge snowmobile turnaround, and an alternative that involved only restoration without further mining. Further, there were concerns that alternatives raised during scoping were not addressed and that the purpose and need for the Project was so narrowly defined that it excluded otherwise reasonable alternatives.</p>	<p>The evaluation of potential alternatives was described in Section 2.8 of the DEIS. The DEIS analyzed five alternatives, including the No Action Alternative. The DEIS evaluated other potential alternatives but eliminated them from detailed analysis because they did not meet the purpose and need for the Project, did not result in a reduction in environmental impact, lacked technical feasibility, and/or lacked economic feasibility.</p> <p>More than 600 scoping comments were received that provided input on potential alternatives for inclusion in the DEIS. These comments described potential alternatives relating to mine production, ore process, transportation, site access, tailings management, development rock storage, power transmission lines, surface water management, pit water management, stormwater management, facilities, and reclamation. These potential alternatives were evaluated among those described in DEIS Section 2.8.</p> <p>Further description is found in a document entitled “Alternatives Considered, Carried Forward, or Eliminated from Further Study (AECOM 2020b), which is found in the publicly available Pinyon references site. Underground mining as an alternative mining method is</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>included in the alternatives evaluation in the SDEIS.</p> <p>As described in DEIS Section 1.4.1, the definition of Project purpose and need is consistent with the U.S. Forest Service's application of regulations to a proposed mining project on National Forest System lands.</p>
New Suggested Alternatives	801.1009	C.1	There are opinions that underground mining would be an alternative mining method to open pit mining.	<p>Two of the three proposed mining areas for the Project involve expansion of existing open pit mines. The overlap of an orebody with an existing open pit makes orebody access exclusively via underground mining technically infeasible due to the existing exposure of ore in the pit surface.</p> <p>Underground mining requires a higher grade of contained metal than open pit mining to be economically feasible. Higher grade materials in the three proposed mining areas were largely removed by historic mining activity, leaving lower grade materials in place. These residual materials exhibit a grade economically feasible for open pit mining, but lower than the economic cutoff grade for underground mining.</p> <p>Underground mining as an alternative mining method is included in the alternatives evaluation in Section 2.6 of the SDEIS.</p>
New Suggested Alternatives	801.1009	C.2	There are opinions that an alternative that removes the Fiddle development rock storage facility should be considered.	The Fiddle Development Rock Storage Facility was eliminated from the SGP proposal.
New Suggested Alternatives	801.1009	C.3	There are opinions that an alternative that utilizes dry stacking of tailings should be considered.	A dry stacking of tailings alternative was considered but eliminated in Section 2.8.3 of the DEIS on the basis of technical and economical infeasibility.

Resource	Comment Code	Comment Number	Concern Statement	Response
				Further description is found in a document entitled “Alternatives Considered, Carried Forward, or Eliminated from Further Study (AECOM 2020b), which is found in the publicly available Pinyon references site.
New Suggested Alternatives	801.1009	C.4	There are opinions that an alternative that utilizes cyanide-free dry mining should be considered.	Cyanide-free processing options such as gravity separation are not applicable to the Project orebodies where metals occur primarily as microscopic particles associated with sulfide minerals. Use of other leaching chemicals such as ammonia-thiosulfate would not reduce the environmental impact of the Project.
New Suggested Alternatives	801.1009	C.5	There are opinions that an alternative OHV trail route should be considered.	DEIS Section 2.8.2 considered OHV trail alternatives but did not carry them forward because they had similar impacts to routes considered and analyzed in Alternatives 1 through 4 or involved alteration of local traffic patterns and private land crossings. The OHV trail was dropped from consideration in the SDEIS.
New Suggested Alternatives	801.1009	C.6	There are opinions that an alternative to closing the snowmobile turn around up to Johnson Creek bridge should be considered.	DEIS Section 2.8.2 considered snowmobile route alternatives but did not carry them forward because they had similar impacts to routes considered and analyzed in Alternatives 1 through 4 or involved alteration of local traffic patterns and private land crossings.
New Suggested Alternatives	801.1009	C.7	There are concerns that there are no alternatives that emphasize restoration when Midas Gold submitted a Plan of Restoration and Operations to the Forest Service as opposed to a standard Plan of Operations. There are comments recommending development and analysis of a restoration emphasis alternative.	An alternative emphasizing restoration without the operational component of the Project would not meet the purpose and need of the Project to develop mineral resources (DEIS Section 2.8).

Resource	Comment Code	Comment Number	Concern Statement	Response
New Suggested Alternatives	801.1009	C.8	There are concerns that the DEIS failed to address several concerns raised by the public during the scoping process. Commenters provide examples of issues raised during the scoping process that have not been addressed by the DEIS.	The analysis and elimination of alternatives were described in DEIS Section 2.8. Approximately 600 scoping comments received pertained to the alternatives analysis and were incorporated therein.
New Suggested Alternatives	801.1009	C.9	There are comments requesting that the Forest Service develop an alternative that "limits tailings production to the volume that can be safely stored without inundating riparian conservation areas, wetlands, streams, or critical habitat for listed fish species." (Save the South Fork Salmon letter p. 83).	Alternative tailings storage locations were evaluated in Section 2.8.3 of the DEIS. These evaluations included different locations and sizes of tailings impoundments. One alternative was selected for detailed analysis as Alternative 3 in the DEIS. The others were eliminated from further consideration on the basis of potential for adverse environmental effects (i.e., increased dam heights) and economic infeasibility.
New Suggested Alternatives	801.1009	C.10	Commenters also recommend development of an alternative in which the tailings and/or waste rock are relocated back into the main pits or another geologically stable area. These alternatives would address impacts and issues related to placing the tailings storage facility in the Upper Meadow Creek stream, wetlands, and riparian conservation area.	<p>In general, mining and processing bedrock results in tailings and waste rock that have more than 30% larger volume than the native bedrock prior to mining. This increase in volume precludes placement of the entire volume of material back in the open pits.</p> <p>The stability of Project facilities was analyzed in DEIS Section 4.2.2. The proposed facilities meet or exceed the Factors of Safety required for physical stability under static and seismic conditions.</p> <p>Alternative storage locations were evaluated in DEIS Sections 2.8.3 and 2.8.4, and two alternatives were selected for detailed analysis as components of Alternative 2 and Alternative 3. The others were eliminated from further consideration on the basis of potential for adverse environmental effects (i.e., increased dam heights) and economic infeasibility, or were</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				reserved to potentially act as mitigation measures for Project impacts.
New Suggested Alternatives	801.1009	C.11	Commenters recommend development of alternatives that would minimize the quantity of water contacting mine waste and needing treatment.	Stormwater controls that minimize run-on to mine waste storage facilities have been incorporated into the designs for those facilities.
New Suggested Alternatives	801.1009	C.12	There are concerns that due to the lack of domestic antimony processing facilities, the antimony produced at Stibnite would need to be processed outside of the United States. There are opinions that this undercuts the argument that the Project is important for national security. There are concerns that the antimony deposits at Stibnite are not economical to mine. Additionally, there are concerns that antimony could be mined from numerous other locations in the United States and the Stibnite antimony deposits are not strategically important.	The value of the mineral resources at Stibnite satisfies the purpose and need requirement for analysis of the proposed Project and its alternatives, consistent with the Mining and Mineral Policy Act of 1970.
New Suggested Alternatives	801.1009	C.13	There is an opinion that additional alternatives involving re-routing water and re-locating habitat should be analyzed.	Re-routing of surface water away from mining activities is a design feature for the Project. Additional re-routing for water and habitat re-location were included in the SDEIS and Final EIS as a mitigation for stream temperature effects (Section 4.9.2) and effects on vegetation (Section 4.10.2).

No Action Alternative Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
No Action Alternative	801.1004	Primary	Support for the No Action Alternative is based on predicted impacts of action alternatives to the watershed, recreation, and fisheries. Opposition to the No Action is based on its removal of the restoration benefits associated with the action alternatives and its denial of a proposed PRO that would meet 36 CFR 228A	Impacts of action alternatives were described in the DEIS for the watershed (Sections 4.8 and 4.9), recreation (Section 4.19), fisheries (Section 4.12), and restoration (Sections 4.5, 4.9, and 4.12). These descriptions include comparison to baseline

Resource	Comment Code	Comment Number	Concern Statement	Response
			requirements. There are differing opinions regarding the representativeness of the No Action as conceptualized. Some comments opine that the No Action Alternative should consist of the site following CERCLA remediation while others opine that the negative environmental effects of the current condition are not adequately captured for comparison to action alternatives.	<p>conditions that reflect the negative environmental effects of current conditions.</p> <p>A No Action Alternative that emphasizes restoration of baseline conditions without the operational component of the Project would not meet the purpose and need of the Project (DEIS Section 2.8).</p> <p>A recent ASAOC developed the scope of CERCLA remediation of legacy environmental conditions on site. The ASAOC is analyzed in the Final EIS as a reasonably foreseeable future action that would be applied to all alternatives.</p>
No Action Alternative	801.1004	C.1	There are comments supporting the No Action Alternative (Alternative 5) due to general environmental concerns such as negative impacts to the watershed, recreation, and fisheries.	Impacts of action alternatives were described in the DEIS for the watershed (Sections 4.8 and 4.9), recreation (Section 4.19), and fisheries (Section 4.12). No further response required. General in nature or position statement.
No Action Alternative	801.1004	C.2	There are comments opposing the No Action Alternative (Alternative 5) as this alternative would not create jobs, improve fish passage, or resolve the existing environmental issues at the Project site.	Impacts of action alternatives were described in the DEIS for socioeconomics (Section 4.21), fisheries (Section 4.12), and restoration (Sections 4.5, 4.9, and 4.12). No further response required. General in nature or position statement.
No Action Alternative	801.1004	C.3	There are concerns that the No Action Alternative (Alternative 5) does not comply with the 1872 Mining Law. Further, selection of Alternative 5 as the Preferred Alternative would result in a loss of the socioeconomic benefits of the action alternatives.	As described in DEIS Section 1.5, selection of the No Action Alternative is within the purview of the Forest Supervisor. Further, as noted in DEIS Section 2.2.3, the No Action Alternative would not preclude Perpetua from subsequently submitting another plan of operations pursuant to the General Mining Law of 1872. Impacts of action alternatives were described in the DEIS for socioeconomics (Section 4.21).
No Action Alternative	801.1004	C.4	There are concerns that the DEIS does not fully describe the negative consequences of the No Action Alternative.	The DEIS compared the impacts of the No Action Alternative to the action alternatives for all evaluated resources. The relative impacts of the

Resource	Comment Code	Comment Number	Concern Statement	Response
				No Action Alternative – positive and negative – were described through this comparison. DEIS Table 2.9-1 provided a summary comparison of impacts between the No Action Alternative and the action alternatives.
No Action Alternative	801.1004	C.5	There are concerns that the Purpose and Need and No Action Alternative ignore the fact that the Project site currently violates water quality and other environmental standards. Commenters state that the "agencies must consider the cleanup/remediation of the site as their first obligation under the Clean Water Act, 1897 Organic Act, the NFMA, NEPA, and other applicable laws/regulations (as well as its Treaty obligations), which the DEIS fails to do." (Save the South Fork Salmon letter p. 82). Commenters note that the Forest Service and Midas Gold are under an outstanding obligation to remediate the project site and therefore, the agency cannot conclude that the No Action Alternative would result in continuation of the current contaminated conditions	The recent ASAOC defines site remediation requirements. The activities under the ASAOC are incorporated into the Final EIS analysis as a reasonably foreseeable future action because its first phase of actions is scheduled for the period between 2021 and 2025. Subsequent phases are contingent on the completion of a ROD approving the mining project.
No Action Alternative	801.1004	C.6	The No Action Alternative should be based on what the area will look like after a mandated cleanup is implemented, not on existing degraded conditions.	The recent ASAOC defines site remediation requirements. The activities under the ASAOC are incorporated into the Final EIS analysis as a reasonably foreseeable future action because its first phase of actions is scheduled for the period between 2021 and 2025. Subsequent phases are contingent on the completion of a ROD approving the mining project.
No Action Alternative	801.1004	C.7	There is a request that the Forest Service review and consider a cleanup/remediation plan that does not involve additional/new mineral extraction.	A restoration emphasis alternative does not meet the purpose and need for the Project and therefore was not included in the detailed analysis. DEIS Section 2.8 provided the criteria that alternatives needed to meet in order to be carried forward in the analysis.

Resource	Comment Code	Comment Number	Concern Statement	Response
No Action Alternative	801.1004	C.8	There are concerns that the No Action Alternative does not fully characterize the negative environmental consequences of the current site condition.	The DEIS compared the impacts of the No Action Alternative to the action alternatives for all evaluated resources. The relative impacts of the No Action Alternative – positive and negative – were described through this comparison. DEIS Table 2.9-1 provided a summary comparison of impacts between the No Action Alternative and the action alternatives.
No Action Alternative	801.1004	C.9	There are concerns that the suitability studies of affected potential Wild and Scenic Rivers must be conducted prior to approval of any action alternatives associated with the Stibnite Gold Project.	As noted in DEIS Section 4.23.2.7, a suitability study would be required for the eligible segment of Johnson Creek under all action alternatives. Under Alternatives 1, 2, or 3, a suitability study would be required for the eligible segment of Burntlog Creek. See also response to comment 802.1003 C.2 (W&SR).
No Action Alternative	801.1004	C.10	There is a statement that the USFS cannot select the No Action Alternative for a proposed Plan of Operations that complies with 36 CFR 228A.	As described in DEIS Section 1.5, selection of the No Action Alternative is within the purview of the Forest Supervisor.
No Action Alternative	801.1004	C.11	There are comments voicing general opposition to the project.	No further response required. General in nature or position statement.

Reclamation Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Reclamation	801.1505	Primary	There are concerns that the Reclamation Closure Plan is not adequately described in the DEIS along with the associated closure costs and closure effectiveness. Further, there are concerns that the restored site will not have a better environmental condition than the current conditions.	Closure and reclamation are described in Section 2.3.7 of the DEIS. The SDEIS clarifies the description and incorporates the Reclamation Closure Plan into the analyses per comments received on the DEIS. As described in DEIS Section 2.3.7, the reclamation financial assurance would be

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>determined by the U.S. Forest Service to address all Forest Service costs that would be incurred in taking over operations in the case of operator default. Provisions for future adjustment of the value of bond instruments utilized for financial assurance would be incorporated into a final plan approval (36 CFR 228.13 (a)(b)).</p> <p>The impact analyses presented in Chapter 4 of the DEIS compared current conditions to predicted conditions for the Project and allowed for inspection of the conditions of restored site to current conditions.</p>
Reclamation	801.1505	C.1	There are concerns that the proposed cover depths for revegetating closed mine facilities are too shallow to achieve stated revegetation goals.	<p>The DEIS described soil covers in Section 4.5.2.1.3. Soil cover design would be a minimum of six to 12 inches deep and placed in addition to other materials, seed bank material mulches, and woody debris to meet the reclamation objectives for specific mine disturbance.</p> <p>As discussed in DEIS 4.5.2.1, principal concerns regarding revegetation goals were associated with the baseline soil quality and climatic conditions that would be expected to pose challenges to revegetation. However, reclamation designs would be consistent with designs that have achieved closure objectives previously on site and at other reclaimed mining areas.</p>
Reclamation	801.1505	C.2	There are concerns that a detailed reclamation and closure plan is only provided for Alternative 1, and that the EIS should include a detailed reclamation and closure plan for Alternative 2.	DEIS Section 4.5.2.2.3 described that reclamation plans for Alternative 2 would resemble Alternative 1 with the exception that the new transmission line would not be reclaimed due to the need for power for long-term water treatment purposes.

Resource	Comment Code	Comment Number	Concern Statement	Response
				The disturbed acreages and material requirements for reclamation of each alternative analyzed were described in Section 4.5.2 of the DEIS.
Reclamation	801.1505	C.3	There are concerns that the description of reclamation timing, contouring, grading, growth medium placement and seeding is too minimalistic.	The SDEIS incorporates the Project Reclamation Closure Plan into the analysis to clarify the descriptions of reclamation contouring, grading, growth medium placement, and seeding.
Reclamation	801.1505	C.4	There are concerns that the Reclamation Closure Plan is not adequately described in the DEIS along with the associated closure costs and closure effectiveness.	<p>The SDEIS incorporates the Project Reclamation Closure Plan into the analysis to clarify the descriptions of closure cost estimate inputs and closure effectiveness.</p> <p>Closure cost estimates are not reported in the EIS document. As described in DEIS Section 2.3.7, the reclamation financial assurance would be determined by the Forest Service to address all Forest Service costs that would be incurred in taking over closer in the case of operator default. Provisions for future adjustment of the value of bond instruments utilized for financial assurance would be incorporated into a final plan approval (36 CFR 228.13 (a)(b)).</p>
Reclamation	801.1505	C.5	There are concerns that elements of the Reclamation Closure Plan are insufficient such as the wetlands restoration along the Burntlog Route, pit lake water chemistry, and revegetation seed mixes.	<p>Post-closure pit lake water chemistry would be managed under the Project's Water Resources Monitoring Plan and wetlands restoration would be managed under the Compensatory Mitigation Plan.</p> <p>Planned revegetation seed mixes for Project facilities, access roads, and temporary roads are described in the Reclamation Closure Plan but would be subject to subsequent Forest Service approvals when the site moves into closure as described in DEIS Section 2.3.7.14.</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
Reclamation	801.1505	C.6	There are concerns that the restored site will not have a better environmental condition than the current conditions.	<p>The impact analyses presented in DEIS Chapter 4 compared current conditions to predicted conditions for the Project and allowed for inspection of the conditions of the reclaimed site to current conditions.</p> <p>Following closure, expected conditions would represent improvements in surface water chemistry (Section 4.9.2), vegetation (Section 4.10.2), fish habitat access (Section 4.12.2), and other environmental aspects.</p>
Reclamation	801.1505	C.7	There are recommendations that passive water treatment process not be utilized, and that development rock seepage should be conveyed for active water treatment.	The SDEIS clarifies the description of site water treatment and the design effectiveness of active and passive treatment systems. For alternatives where perpetual active water treatment would not be required for other sources, seepage from development rock could be treated via appropriately sized passive systems in lieu of maintaining an active system in perpetuity.
Reclamation	801.1505	C.8	There are concerns that the sources and locations of the necessary amount of cover material have not been identified and that excavation for additional materials will result in additional impacts that have not been evaluated in the EIS.	The SDEIS clarifies the source locations and volumes for cover materials and accounts for the impacts of material sourcing.
Reclamation	801.1505	C.9	There is a statement that the DEIS uses the terminology “reclamation” and “restoration” interchangeably when they in fact mean different things.	The SDEIS standardizes the uses of the reclamation terminology.
Reclamation	801.1505	C.10	There are concerns that the DEIS does not include adequate information regarding the borrow materials that would be used for mine closure and reclamation. There are concerns that the DEIS downplays the challenges and concerns related to the suitability and availability of borrow materials. There are concerns that inadequate characterization of borrow materials can lead to environmental impacts as a result of using unsuitable material for foundations and other needs and thus the	<p>As discussed in DEIS 4.5.2.1, principal concerns regarding revegetation goals were associated with the baseline soil quality and climatic conditions that would be expected to pose challenges to revegetation.</p> <p>The SDEIS clarifies the planned chemical characterization of borrow materials as part of the</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
			DEIS should identify, physically and chemically characterize, and analyze borrow sources.	project's Reclamation Closure Plan to address concerns around the stability of closed facilities.
Reclamation	801.1505	C.11	There is a recommendation to harvest wood into compost for use in reclamation cover material.	DEIS Section 2.3.4.1 describes the use of non-merchantable wood removal as growth media additive.
Reclamation	801.1505	C.12	There is a recommendation that permit applications for Idaho State permits should be submitted concurrently with the Forest Service submittal.	The application, processing, and decisions on Idaho State permits are outside the scope of the Forest Service decision on the proposed Project. Should a State permit require use of Forest Service lands not authorized under the Forest Service's ROD, that activity would be subject to additional NEPA analysis and permitting.
Reclamation	801.1505	C.13	Some commentors expressed that reclamation would be sufficient to restore past mining and the proposed project impacts.	The Final EIS includes mitigation measures to address uncertainty in the effectiveness and durability of reclamation.
Reclamation	801.1505	C.14	There was a concern if an incident outside of the company's control occurs (e.g. earthquake), or the company goes bankrupt, there would be no one held financially accountable for reclamation.	As described in DEIS Section 2.3.7, the reclamation financial assurance would be determined by the U.S. Forest Service to address all Forest Service costs that would be incurred in taking over closure in the case of operator default. Provisions for future adjustment of the value of bond instruments utilized for financial assurance would be incorporated into a final plan approval (36 CFR 228.13 (a)(b)).
Reclamation	801.1505	C.15	Backfilling of all open pits should be evaluated as an alternative.	Backfilling of the Yellow Pine Pit and Hangar Flats Pit were analyzed as part of the Proposed Action in the SDEIS analysis.

Restoration Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Restoration	801.1300	Primary	There are differences of opinion in the value of the proposed restoration via the mining project. Supporters cite the current and future private investment in environmental improvement projects as an effective restoration approach. Detractors question the value of active restoration compared to natural recovery and pose specific questions regarding the proposed restoration methodologies such as the fish diversion tunnel and stream channel reconstruction over tailings and development rock.	The SDEIS clarifies the relationships between Project activities, the affected environment, and predicted impacts – both positive and negative. The extent to which project design features, best management practices, and mitigation measures result in a net effect on current conditions is also examined in the SDEIS along with uncertainties associated with the implementation of environmental features, practices, and measures.
Restoration	801.1300	C.1	There are comments voicing support for the project due to the restoration work proposed by Midas Gold. Commenters state that the project site is currently degraded due to past mining activities and that private investment is needed to restore the site. Specifically, commenters state that the restoration activities included in the project will improve fish passage, improve water quality by reducing erosion and sediment input into waterways, and reprocess old tailings. Commenters cite tree planting already completed by Midas Gold as a demonstration of the company's commitment to restoration.	Comment noted. The proposed environmental design features of the Project are incorporated into the NEPA analysis.
Restoration	801.1300	C.2	There are opinions that natural recovery of the site is underway, and this recovery would be disrupted by proposed activities.	Natural recovery for the site is not considered to be an effective remedy for environmental resources including water quality and wildlife habitat. In January 2021, the site became subject to an ASAOC under CERCLA that includes some time-critical actions to address site conditions.
Restoration	801.1300	C.3	There are concerns that Midas Gold is not focused on restoration and that more mining is not the solution for an area already degraded due to past mining activities. There are concerns that Midas Gold is not able to provide relevant or comparable examples of successful stream mitigation or restoration over tailings or waste	Under the proposed Project, mining and restoration activities would be conjoined for predominantly economic reasons where the mining activity funds the restoration activity.

Resource	Comment Code	Comment Number	Concern Statement	Response
			rock storage areas. There are concerns that the DEIS does not adequately disclose the complexities associated with stream reconstruction/creation of this large spatial extent and does not provide the performance standards that would be used to determine success.	The SDEIS describes the uncertainty associated with stream restoration and the effectiveness of the associated design features, best management practices, and mitigation measures.
Restoration	801.1300	C.4	There are concerns that the proposed mitigation measures are not adequate to offset the negative impacts of the project. Additionally, there are concerns that the DEIS assumes that mitigation and restoration efforts are possible and effective, while experience shows that habitat restoration and mitigation are difficult, expensive, and often ineffective. There are concerns that the DEIS violates NEPA by failing to provide analytical data and discussion about the effectiveness of the mitigation measures.	The SDEIS clarifies the relationships between Project activities, the affected environment, and predicted impacts – both positive and negative. The extent to which FS regulatory requirements, best management practices, and environmental design features would result in a net effect on current conditions is also examined along with uncertainties associated with the implementation of environmental features, practices, and measures. Additional mitigation measures are identified after analysis of impacts.
Restoration	801.1300	C.5	There are concerns that the development of previously undisturbed ground will offset any benefits of the proposed restoration.	The SDEIS clarifies the analysis of net effects of Project impacts and benefits.
Restoration	801.1300	C.6	There is a statement that there are quicker ways to achieve site restoration than inclusion of restoration activities in a mining project.	Comment noted. As presented in DEIS Section 1.4, the Forest Service's purpose and need is to review and decide on the current mining and restoration proposal.
Restoration	801.1300	C.7	There are concerns that the DEIS lacks detailed analysis on how the proposed fish diversion tunnel would impact the surrounding landscape and vegetation. Additionally, there are concerns that the description of the diversion tunnel inadequately characterized impacts and improvements and that the DEIS presents little rationale to support the success of a diversion tunnel.	The SDEIS clarifies the impacts of the diversion tunnel on other resources and describes the uncertainty in its successful use as a fish passage.
Restoration	801.1300	C.8	There is a statement that the United States is a party that bears responsibility for the present site condition.	Comment noted. DEIS Section 3.7.3 summarized the history of mining operations at the site and included citations to primary historical source documentation. Section 1.2 of the SDEIS includes

Resource	Comment Code	Comment Number	Concern Statement	Response
				a more complete history of mining in the Stibnite Mining District.
Restoration	801.1300	C.9	There are concerns around the timing of the functional credits for the stream reconstruction on the TSF, in that, should the project time frame be extended by exploration activities, the ecological uplift of the reconstruction would be delayed, and the negative effects of the operating TSF would continue and potentially increase.	The SDEIS describes the timing of stream impacts and restoration associated with the proposed Project. Mining and restoration activity would be subject to the Project approval as described in the Project ROD. Project expansion resulting from additional exploration would be subject to additional NEPA analysis and a separate approval that would account for expansion effects on approved stream restoration.

Geological Resources Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Geological Resources	802.1300.00	Primary	<p>Commenters note that domestic primary antimony production resulting from the project would be beneficial to the United States and the proposed gold and antimony mineral production would be good for the local economy. Other commenters oppose more gold mining or are concerned the antimony production benefit is reduced somewhat by the fact that smelting of the antimony concentrates would have to be done in Asia. Some commenters suggest that additional information on geochemistry, development rock management, and structural controls on groundwater occurrence and flow be included in the EIS.</p> <p>There are recommendations that analysis of a TSF failure be evaluated in the EIS while other commenters have expressed confidence in the ability of the TSF to function properly. There are concerns that some documents related to seismic analysis of the TSF stability were not available for review during the DEIS review period and that a seismic risk analysis was dated. There are comments that the geochemical testing of development rock was insufficient, and the geochemical modeling includes some inaccuracies. A commenter suggests that the potential impacts from future underground mining activities at the site be evaluated in the EIS.</p>	
Geological Resources	802.1300.00	A.1	A Development Rock Management Plan should be included and discussed in the EIS.	Since the DEIS was released, a Development Rock Management Plan has been prepared. It is discussed in the SDEIS in Section 2.4.5.5.
Geological Resources	802.1300.00	A.2	A material balance for the borrow sites should be included in the EIS to demonstrate that sufficient borrow quantities are available from the sites analyzed in the EIS.	Information on the availability of construction borrow materials was included in the DEIS in Sections 2.3.5.4, 2.3.5.5, 2.3.5.13, and 2.3.5.14. Information related to the sufficiency of construction borrow quantities has been added to Section 2.4.5.13 of the SDEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Geological Resources	802.1300.00	A.3	Construction borrow sources should be identified and chemically characterized in the EIS.	The major sources of on-site construction material, development rock, and SODA materials were discussed in Sections 2.3.5.4, 2.3.5.5, 2.3.5.13, and 2.3.5.14 of the DEIS. Off-site borrow pits and their locations were discussed in Section 2.3.4.3 of the DEIS and shown in Figure 2.3-1. Off-site borrow locations would be developed in unmineralized areas so there is no need for chemical characterization of these materials. The chemical characterization for the on-site construction materials was included in Section 4.9.2.1.1 of the DEIS.
Geological Resources	802.1300.00	A.4	There is a statement that current smelting facilities for antimony are located in Asia.	As noted in Section 2.4.5.7 of the SDEIS, it is assumed that the antimony concentrate would be shipped to facilities outside of the U.S.
Geological Resources	802.1300.00	A.5	Include a figure showing underground mine workings that are below and near proposed Project features.	The location of underground mine workings has been added to Figure 3.7-1 of the SDEIS.
Geological Resources	802.1300.00	A.6	Include a table comparing the FS, earthquake return periods, MCE, and other key design criteria to both Idaho and FEMA NDSP guidelines.	Comparison of the geotechnical designs for site facilities (i.e., open pits and the TSF) to key design criteria requirements are described in the SDEIS Section 4.2.2 (e.g., Table 4.2-1).
Geological Resources	802.1300.00	A.7	The geotechnical analysis performed by the Tierra Group in 2018 was not available to reviewers of the DEIS.	The Tierra Group 2018 report has been maintained as confidential in the Project record. However, the results of stability analyses and comparison of facility designs to key design criteria requirements are described in the SDEIS Section 4.2.2 (e.g., Table 4.2-1). These analyses were updated for the 2021 modified mine plan and are available in the cited reference Perpetua 2021f.
Geological Resources	802.1300.00	A.8	The URS (2013) seismic risk report was dated and did not include USGS updates from 2014 and 2018.	The seismic risk report for the Project was updated since the DEIS. The updated report is discussed in Section 3.2.4.6 of the SDEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Geological Resources	802.1300.00	A.9	The URS (2013) seismic risk report was not available to reviewers of the DEIS.	The URS 2013 report has been maintained as confidential in the Project record. However, the results of seismic assessment are described in the SDEIS Section 3,2,4,6.
Geological Resources	802.1300.00	A.10	There are concerns that the seismic analysis (URS 2013) uses outdated information and models and does not place enough weight on the potential for an earthquake on the Deadwood - Reeves Creek Fault.	The seismic risk report for the Project was updated since the DEIS. The updated report is discussed in Section 3.2.4.6 of the SDEIS.
Geological Resources	802.1300.00	B.1	Any planning for underground exploration should require a separate environmental impact analysis.	A scope of work for underground exploration was included in Section 2.3.6.2 of the DEIS and is being evaluated in this EIS. Section 2.3.6 of the DEIS affirmatively stated that additional future expansion of mining activities would require supplemental permitting including additional impact analysis under NEPA where applicable.
Geological Resources	802.1300.00	B.2	The geochemical characterization of the different lithologies should identify separate geoenvironmental units based on mineralogy and/or geochemical testing.	The geochemical characterization that has been conducted and is discussed in Section 3.2.4.7 of the SDEIS, is sufficient to inform the environmental impact analysis required under NEPA. Correlating geochemistry with lithologies to identify separate geoenvironmental units is outside the scope of this NEPA analysis.
Geological Resources	802.1300.00	B.3	The proposed volume of ore mined from each pit should be compared to the measured and indicated mineral resources described in the PFS to demonstrate how the proposed Project would impact the overall mineral resources.	Information on the tonnage of ore historically removed from the deposits on site was included in Section 3.2 of the DEIS. Information on the tonnage of ore and development rock proposed to be mined for the Proposed Action and action alternatives was included in Section 4.2 of the DEIS. Mineral resource estimates for the Project, as included in the January 2021 Stibnite Gold Project Feasibility Study, have been added to Section 3.2 of the SDEIS. A summary comparison of total estimated production to total estimated contained metal resources has been added to Section 4.2 of the SDEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Geological Resources	802.1300.00	B.4	There is a recommendation that the EIS analyze earthquake damage to Project facilities. Further, operations should include contingency planning for earthquakes.	The stability of the major Project mining and waste disposal facilities in the event of a potential earthquake were discussed in Sections 4.2.2.1.1.3 and 4.2.2.1.2.1 of the DEIS. Project structures would be designed to comply with the applicable Uniform Building Code for resistance to earthquake damage. The Project operations would include emergency response plans for various types of emergencies, including earthquakes.
Geological Resources	802.1300.00	C.1	There is a request to discuss how the proposed Project may cause instability of existing underground mine openings that, in turn, could result in stability concerns for the proposed mining facilities. Describe any proposed mitigation for these concerns.	A map view of the legacy underground openings has been incorporated in Figure 3.7-1 of the SDEIS. This demonstrates that none of the critical mining facilities would be underlain by the underground mine openings that could cause stability concerns for these facilities.
Geological Resources	802.1300.00	C.2	It appears that the antimony flotation circuit could be bypassed if antimony production would not be economic.	No further response is required because the comment is beyond the scope of the proposal.
Geological Resources	802.1300.00	C.3	There is a statement that off-site antimony processing with caustic leach and electrowinning could be competitive with shipping concentrate to Asia.	No further response is required because the comment is beyond the scope of the proposal.
Geological Resources	802.1300.00	C.4	The DEIS should address the potential for the mineral resources excluded from the mining plan to become part of the mine ore and waste that will need to be accommodated by the mine facilities.	The reasonably foreseeable mining operations being proposed by Perpetua have been included in the Proposed Action and Alternative 2 of the DEIS. Mining operations must adapt to the economic conditions of the commodity markets they serve, which means they may expand their operations, or possibly curtail their operations. To predict such future economic conditions is beyond the scope of this analysis and evaluating assumed potential changes to the proposed mining operations would be speculative. Section 2.3.6 of the DEIS affirmatively stated that any additional future expansion of mining activities beyond what is proposed at this time would be subject to additional evaluation under NEPA.

Resource	Comment Code	Comment Number	Concern Statement	Response
Geological Resources	802.1300.00	C.5	The DEIS should also recognize and address future mining expansion as a reasonably foreseeable effect of permitting the initial mine proposal, and therefore analyze it in the DEIS, rather than only defer that consideration if/when such a proposal is made.	Please see response to comment 802.1300.00 C.4.
Geological Resources	802.1300.00	C.6	The EIS should consider the potential impacts if antimony production is discontinued in the future.	The Proposed Action evaluated in the EIS includes antimony production, which also influences the chemistry of the mill tailings. It would be speculative at this time to assume antimony production would be eliminated from ongoing mill operations. Because doing so would significantly change the chemistry of the mill tailings, additional environmental impact analysis would be required before this change in operations would be permitted.
Geological Resources	802.1300.00	C.7	The health of our national forests is more important than producing gold from them.	No further response is required. This is already decided by law, regulation, or policy.
Geological Resources	802.1300.00	C.8	The primary purpose of the Project is gold production and the U.S. is a net exporter of gold.	No further response is required. The comment is general in nature or a position statement.
Geological Resources	802.1300.00	C.9	The proposed primary source of antimony at the Project would be beneficial to our country.	No further response is required. The comment is general in nature or a position statement.

Resource	Comment Code	Comment Number	Concern Statement	Response
Geological Resources	802.1300.00	C.10	There are concerns regarding the physical and chemical stability of mine facilities.	The extent of potentially acid generating rock exposed in pit walls was described to be minimal in Section 4.9.2.1.1.1 of the DEIS. The potential generation of acid rock drainage from the proposed DRSFs was described in Section 4.9.2.1.1.4 of the DEIS and measures to prevent release of leachates from the DRSFs to the environment were described in Section 2.3.5.9 of the DEIS. The use and control over cyanide to prevent releases of this reagent to the environment was addressed in Sections 2.3.5.6 and 2.3.5.7 of the DEIS. The design, construction, and operation of the TSF to prevent releases of tailings was described in Sections 2.3.5.7 and 4.2.2.1.2.1 of the DEIS.
Geological Resources	802.1300.00	C.11	There are concerns that bedrock faults were not accurately represented in the groundwater flow model and in the water chemistry predictions. Further, these faults could affect the hydraulic properties of engineered liners over time.	The groundwater flow model has been improved since the DEIS was written and is discussed in Section 4.8.2 of the SDEIS. This modeling includes analysis of bedrock faults in the groundwater flow and inclusion of the Meadow Creek Fault Zone into the model. The mapped bedrock faults at the Project site were discussed in Section 3.2.3.1.3.2 of the DEIS and were described as not being active. Thus, they would have no effects to the engineered liners constructed over them.

Resource	Comment Code	Comment Number	Concern Statement	Response
Geological Resources	802.1300.00	C.12	There are concerns that designed channels will lose integrity due to geomorphology over time.	Section 2.3.5.9 of the DEIS described the design of surface drainage channels to be excavated in rock or constructed in erodible materials to be protected with rock armoring. Where there is a need to reduce seepage out of the channels, an impermeable liner would be included in the base of the channel beneath a layer of sand/gravel followed by riprap. These channel liners are not required to maintain surface water quality but to maintain flows. Geomorphic changes to the Project area via mass wasting were discussed in Section 3.2.3.7 of the DEIS and depicted on Figure 3.2-5. Section 2.3.7 of the DEIS discussed that the reclamation bond would be sufficient for the Forest Service to provide monitoring and maintenance activities for the reclaimed site, for as long as required to return the site to a stable and acceptable condition. This would include monitoring and maintenance of stream channels.
Geological Resources	802.1300.00	C.13	There are concerns that geologic hazards could impact mine access roads.	Potential geologic hazards along mine access roads were discussed in Section 3.2.3.7.2 of the DEIS. Potential geologic hazard impacts to access roads, and engineering design considerations to address these, were discussed in Section 4.2.2.1.6.3 of the DEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Geological Resources	802.1300.00	C.14	There are concerns that the area around the Project site is geologically active, with many recent earthquakes, and that an earthquake could cause failure of the tailing retention dams. Additionally, there are concerns regarding the lack of a seismic evaluation.	Seismicity was discussed in Section 3.2.3.6.1 of the DEIS. A seismic hazard analysis that was conducted to evaluate the risk of earthquake damage to the tailings dam and ore processing plant was discussed in Section 3.2.3.6.2 of the DEIS. The information in these sections has been updated since the DEIS was written and this updated narrative is included in Section 3.2.4.6 of the SDEIS. Section 4.2.2.1.2.1 of the DEIS discussed the potential effects of an earthquake on the tailings dam and demonstrates that the tailings dam would have a higher factor of safety under earthquake loading than is required by Idaho code.
Geological Resources	802.1300.00	C.15	There are indications that there is potential for future underground mining at the mine site.	The Proposed Action includes development of an underground decline for exploration purposes only (DEIS Section 2.3.6.2). There has not been any proposal to date for underground mining at the site.
Geological Resources	802.1300.00	C.16	There are opinions that antimony and the other earth metals that would be mined, are crucial resources and that developing domestic sources of these resources is important to national security.	No further response is required. The comment is general in nature or a position statement.
Geological Resources	802.1300.00	C.17	There are opinions that the primary purpose of the proposed Project is the production of gold and economic benefit for Midas Gold. There are concerns that gold is not a critical mineral and, as the U.S. is a net exporter of gold, there is no critical need for another gold mine in the country.	No further response is required. The comment is general in nature or a position statement.
Geological Resources	802.1300.00	C.18	There is concern that the antimony concentrate produced at the Project would need to be smelted outside the U.S.	No further response required. The comment is beyond the scope of the proposal.
Geological Resources	802.1300.00	C.19	We do not need more gold. Gold demand has declined slightly in the last 8 years. Increasing mining capacity of gold will decrease pressure on developing technologies to effectively recycle gold from electronics.	No further response is required. The comment is general in nature or a position statement.

Resource	Comment Code	Comment Number	Concern Statement	Response
Geological Resources	802.1300.00	C.20	The DEIS fails to provide information on how development waste rock will be handled.	Development rock production and handling was discussed in Sections 2.3.5.3 and 2.3.5.4 of the DEIS. Since the DEIS was written, Perpetua has provided additional detail in a "Development Rock Management Plan". This additional information is discussed in Section 2.4.5.5 of the SDEIS.
Geological Resources	802.1300.00	C.21	An analysis of failure of the tailings dam and its impacts should be included in the EIS.	The tailings dam would be designed to comply with all applicable requirements of the Dam Safety Program of the Idaho Department of Water Resources. These require a showing of long-term stability to avoid failure and release of the contents of the TSF. In this case, the tailings dam itself would be further supported by a buttress of millions of tons of development rock. There is no reasonably foreseeable situation where this TSF would fail and evaluating such a scenario would be a worst-case situation which is not required to be evaluated in an EIS.
Geological Resources	802.1300.00	C.22	There are concerns that the liner designs do not meet IDEQ requirements.	The narrative of Section 2.3.5.7 of the DEIS described that, at the time the DEIS was written, the IDEQ rules prescribing the required liner system were not yet completed. It also affirmatively stated that the TSF liner design proposed in the DEIS would be modified as needed at the time of permitting the facility to comply with the IDAPA regulatory requirement.
Geological Resources	802.1300.00	C.23	There are opinions that the tailings storage facility presents a low risk to water quality and that there is a low risk of impoundment dam failure, breaching, or leakage.	Section 2.3.5.7 of the DEIS described that the TSF is designed to be built and operated to prevent uncontrolled discharges of tailings solids or liquids to the environment.
Geological Resources	802.1300.00	C.24	There is a question if drains proposed for the liner of the TSF and DRSFs clog, and is there a way to restore them.	The overdrains for the proposed liner systems would be extensive and unlikely to completely clog. Because of their length, it would be impossible to physically clean them.

Air Quality and Climate Change Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
AQ	802.0200	Primary	There are concerns with regard to fugitive dust emissions along with other potential air pollutants such as mercury and their effects on human health, wildlife and visual resources. Further, there are questions regarding the dispersion modeling and methodology for incorporation and/or exclusion of potential emission sources such emissions from access road traffic in the analysis. Lastly, there are questions as to whether the Project will be a significant source of air pollution and how mitigation measures may offset the impact.	Air quality impacts were described in DEIS Section 4.3 and included analyses and methodologies associated with emissions inventory development, near field modeling, far-field modeling, visibility screening, mercury/ nitrogen deposition and ozone assessments. These analyses were included for both Alternative 1 and Alternative 2. The SDEIS updates and incorporates appropriate elements of the air quality analysis as described in the following comment response. Updates include more information regarding Forest Service requirements, best management practices, environmental design features, clarity about emission calculations, and modeling methodology.
AQ	802.0200	A.1	There are concerns that modeling analysis is lacking analysis of all air quality impacts.	The modeling was revisited in the SDEIS and Final EIS to include metals (e.g., arsenic) among the hazardous air pollutants evaluated. Model updates for critical air pollutants and mercury were applied to the modified mine plan analyzed in the SDEIS and Final EIS.
AQ	802.0200	A.2	There are concerns that VOC emissions are not fully accounted for from construction.	VOC emissions from constructions were established via ModPro2 emissions calculation. All powerline construction emissions are from tailpipes from mobile equipment. These equipment include various types such as heavy duty trucks, graders and dozers. Some emissions are calculated using EPA MOVES 2014a and others based on EPA Tier 4 Nonroad engine standards. Additionally, mine construction VOC emissions are determined from propane and diesel generators from expected fuel consumption of each. The values vary from LOM Year 1 through 3.
AQ	802.0200	A.3	There are concerns regarding the definition of "ambient air" regarding the controlled public access road.	Access to any road within the mine area would be controlled by the mine thus limiting exposure to operation within the area. This restriction to public

Resource	Comment Code	Comment Number	Concern Statement	Response
				access qualifies as private and not considered as ambient air.
AQ	802.0200	A.4	There are concerns about fugitive emissions from the TSF.	The TSF would be covered with only 1/3 available for fugitive emissions escape per Appendix F calculations. Controls and monitoring were added to the SDEIS and Final EIS.
AQ	802.0200	A.5	There are concerns that baseline deposition trends are increasing.	While the nitrogen deposition from 2015-2017 does slightly increase per DEIS Table 4.3-16 it is far below the DAT threshold issued by the NPS. The Calpuff modeling evaluated Alternative 1 emissions for comparison against the DAT.
AQ	802.0200	A.6	There are questions regarding the selection of August 2014 to August 2015 meteorological data for use in the analysis. Further, there is the recommendation that multiple sensor data should be gathered for use.	The 2014-2015 data was applied consistently for wind erosion emission calculations for both the DEIS and draft state PTC. The modeling for both the DEIS and draft PTC used CY 2014. Therefore, the two methods are consistent between the two documents. Perpetua currently collects meteorological data on site near the Hangar Flats location. It is currently operated by Perpetua with assistance from Trinity Consultants out of their Boise Office.
AQ	802.0200	A.7	There are concerns that the mercury inventory used in the HAP analysis is not consistent with the whole rock analyses on mine materials.	The mercury emissions were compared to other HAP calculations. It was determined that the mercury ore/waste and limestone ppm values were established using a different source than all other HAPs. However, the source (Midas Gold 2018i) provided the correct values used in the emission calculations. It should be noted that the median values were applied, and the median mercury value is 0.5 ppm per source Midas Gold 2017c; the value used from Midas Gold 2018i is 0.6 ppm.
AQ	802.0200	B.1	There is an opinion that the methods used in the N/S screening was overly conservative.	The methods used were consistent with Level 2 procedures from their FLAG guidance documentation. This assumes 100 percent conversion. It is very conservative like the comment

Resource	Comment Code	Comment Number	Concern Statement	Response
				suggests. However, the current modeling report and DEIS (Section 4.3.1.3.5) state as such notifying the reader that these values are high.
AQ	802.0200	B.2	There are concerns the visibility study is not comprehensive.	The modeling performed was consistent with approved methods and was previously accepted by the Forest Service with comments by EPA that were incorporated into an update that was included in the DEIS (Section 4.3.2.1.2.4). Also, note that an update was conducted in 2020 and is incorporated into the SDEIS.
AQ	802.0200	B.3	There are concerns that the modeling does not account for blasting variability between the years.	The modeling was conducted under mine year 4 which was deemed to be the highest overall emissions. It was also the second highest amount of ANFO tons. Only LOM 8 was slightly higher (9311 to 9302). The minimal difference would not overcome the total emissions from LOM 4, which was modeled. For comparison, the total NOx emissions from LOM 4 was 329.3 tons to LOM 8 which was 288.2 tons. The differential in blasting NOx emissions from LOM 4 to LOM 8 was 8.37 to 8.38 tons or ~ 0.01 tpy
AQ	802.0200	B.4	There are concerns that dust emissions outside property boundary emissions are not accounted for adequately.	Numerous fugitive sources were modeled for both Alternative 1 and Alternative 2. The associated modeling report (Stibnite Gold Project, Air Quality Analysis, October 10, 2018) demonstrates that the Far Field analysis meets both Class I and Class II SIL levels for PM _{2.5/10} .
AQ	802.0200	B.5	There are concerns that fugitive dust emissions are not adequately characterized.	Current emissions inventories address all fugitive dust sources appropriately. Most of the dust is derived from haul truck traffic on unpaved roads and dust from handling ore/waste rock. The composition of the ore waste rock is based on recent studies conducted by Perpetua. The dust control measures are assumed to be 93.3 percent with the inclusion of chemical suppressant and water. The IDEQ air

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				quality permit will require comprehensive monitoring and recordkeeping throughout the day to minimize fugitive dust concerns and to ensure adequate control measures.
AQ	802.0200	B.6	There are concerns that the linear model used to predict impacts associated with the Burntlog Road are not representative and do not characterize visibility and deposition.	Each model and corresponding methodology was accepted by the Forest Service and other agencies during the draft process. The Visibility model was updated to reflect Forest Service and EPA comments related to PM impacts and deposition methods used are consistent with current approaches.
AQ	802.0200	B.8	There are concerns that there could be greater impacts from years other than LOM 7 that was used for the modeling.	LOM 7 (equivalent to LOM 4 in emissions inventory) has the greatest potential emissions. Based on DEIS Figure 4.3-1 and Table 4.3-4 LOM 7 would be the year of highest emissions. The assumption is that the layout of sources would be consistent amongst the years.
AQ	802.0200	B.9	There is a recommendation to model impacts with and without the proposed controls.	There is no need to model without controls because the Idaho DEQ AQ permit will require all required controls. Additionally, Midas has committed to more controls and mitigation which has been added into the SDEIS.
AQ	802.0200	B.10	There are concerns that the NAAQS primary and secondary standards have not been appropriately identified.	While the DEIS does not explicitly call out the secondary standards, by complying with the primary standards, the Project would meet the secondary standards. Language to this effect is added into SDEIS.
AQ	802.0200	B.11	There are concerns that the Forest Service is relying on the IDEQ requirements rather than its own requirements.	While there are elements from IDEQ that will be required, the Forest Service and Perpetua have agreed to more mitigation and controls where necessary.
AQ	802.0200	B.12	There is a recommendation that the Forest Service update its fugitive dust emissions calculation methodology.	The fugitive dust calculations accepted by the Forest Service are appropriate and based on representative emission factors also accepted by IDEQ. The calculations included fugitive emissions from

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				activity like material loading, construction, truck travel, and wind erosion.
AQ	802.0200	B.13	There is a recommendation that the IDEQ potential to emit rates be used by the EIS.	The IDEQ inventory differs from the DEIS emission rates for two reasons. The DEIS looked at the actual planned throughputs/ operations while the DEQ permit is based on potential to emit maximums. Also, the configurations within the DEIS and the DEQ permit differ. The DEIS rates were based on the proposed operations while the rates in the DEQ permit are hypothetical worst case values sending all ore/waste rock to certain pile locations.
AQ	802.0200	B.14	There is question why fugitive dust containing mercury is listed in the EIS HAP inventory.	Mercury was included in the HAP inventory because mercury compounds are considered a HAP per CAA section 112b.
AQ	802.0200	C.1	There are concerns that mitigation measures of fugitive dust isn't accounted for as much as possible.	The mitigation measures are consistent with DEQ permitting. Additionally, more mitigation measures have been added since the DEIS.
AQ	802.0200	C.2	There are concerns with accepting of the 90%+ control commitment.	The fugitive control management compliance requirements would be rigorous due to the high dust control proposed by Perpetua. ID DEQ has accepted the 93.3 percent control per the draft AIR QUALITY permit. Monitoring and recordkeeping will be required, and corrective action must be taken swiftly to remedy any potential issues. Additionally, language has been added to the SDEIS to account for these monitoring measures.
AQ	802.0200	C.3	There is a recommendation to draft a fugitive dust plan to ensure the 90%+ control with monitoring and recordkeeping procedures	The SDEIS further discusses the fugitive dust plan in more detail. The plan is being drafted.
AQ	802.0200	C.4	There are concerns that the 93.3% control of fugitive dust emissions is not achievable	Please see response to Comment 802.0200 C.2.
AQ	802.0200	C.5	There are concerns that the listed mitigation measures do not explicitly show the control effectiveness.	The SDEIS design features and mitigation measures have been updated and control efficiencies added.

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AQ	802.0200	C.6	There are concerns regarding mercury mitigation from uncontrolled fugitive sources and how those sources will be mitigated.	Mercury emissions were accounted for within the ore/waste rock. The DEIS also accounted for potential mercury emissions with modeling the Project impact relative to REMSAD regional mercury impacts. Therefore, the mercury impact would be expected to be minimal.
AQ	802.0200	C.7	There are concerns that the explicit exceedance locations for PM10 are not shown with identification of the primary contributing sources and potential mitigation measures	Exceedances discussed in the DEIS are no longer applicable for a couple of reasons. First, the alternative discussed in the DEIS was abandoned in favor of ModPro2 (2021 MMP) which generates lower emissions. The updated modeling analysis demonstrates that there are no exceedances. Secondly, the access road where those initial exceedances were seen are excluded from ambient air. However, a feasibility assessment was conducted that placed 25-m spacing along the route. NAAQS compliance was also demonstrated and discussed in the SDEIS.
AQ	802.0200	C.8	There are concerns that potential air impacts for each category in Section 3.3 is not included and should be added.	The comment is more related to the requirements of HAP emissions and the corresponding rules associated with those emissions. While the comment specifically references DEIS Section 3.3; appropriate HAP regulations are discussed in DEIS Section 3.3.2.4
AQ	802.0200	C.9	This is a concern relating to mine worker wellbeing. They are asking for specifics relating health safety during the winter	The mine is required to meet all applicable MSHA and OSHA standards. Additionally, workers will have housing onsite to minimize winter road travel.
AQ	802.0200	C.10	There is a concern that the DEIS doesn't address air quality impacts as fully as it should	See response to 802.0200 C.7. Additionally, DEQ stated that the access road can be excluded from ambient air. Also, the EPA acknowledged DEQ's stance via their November 18, 2020 comment letter. The SDEIS will also address the 2019 Revised Policy on Exclusions from Ambient Air. The SDEIS includes a Transportation Management Plan. The

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				Forest Service has concurred with the access road exclusion.
AQ	802.0200	C.11	There is a statement that the mine will comply with Subpart EEEEEEE. The state permit mandates compliance.	DEIS Section 3.3.2.4 references compliance with subpart 7E. No further response required. Comment general in nature.
AQ	802.0200	C.12	There are concerns that fugitive dust emissions exceed NAAQS	Please see response to Comment 802.0200 C.10
AQ	802.0200	C.13	There are concerns that air quality emissions will adversely affect water quality.	Current air quality modeling meets the primary NAAQS; therefore, by default the secondary NAAQS are also met. The secondary NAAQS are designed to ensure the wellbeing of plants, animals, and the environment. Also, deposition modeling in the DEIS has shown that standards are met. The potential effects of mercury deposition on water quality were evaluated in the Water Quality section (Section 4.9.2) of the SDEIS and Final EIS. Deposition of other constituents is unlikely to result in a measurable effect on analyte concentrations in water.
AQ	802.0200	C.14	There are concerns that mercury uptake by vegetation is not accounted for in the analysis.	Please see response to Comment 802.0200 C.6. An analysis of mercury deposition was included in the Water Resources Section ((Section 4.9.2) of the SDEIS and EIS. The project contributes incremental mercury to the environment compared to baseline deposition rates.
AQ	802.0200	C.15	There is a concern all HAP emissions are not disclosed.	All HAPs were accounted for in both Alternative 1 and Alternative 2. Explicit details of the emissions inventory for each alternative were provided in DEIS Section 4.3.
AQ	802.0200	C.16	There are concerns that the mercury emissions analyzed are too low.	Mercury maximum annual emissions are 13.3 lb/yr from LOM Year 10. These emissions are established through processing and mine activities. Processing Hg emissions include: propane/diesel combustion, ore processing, the autoclave system, retorts and the

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				lime kiln; mining dust mercury and flux emissions (stockpiles, tailings, pits) are also included. These emissions are also speciated with Hg ⁰ , Hg ²⁺ and HgP. The SDEIS outlines these as does the associated specialist report.
AQ	802.0200	C.17	There are concerns that the mercury emissions from the lime kiln are not quantified.	In the DEIS, the lime kiln emissions were addressed in Alternative 2, but not Alternative 1 as the lime kiln is not included in Alternative 1.
AQ	802.0200	C.18	There are concerns that metals are not addressed in fugitive dust.	For metal concentrations in fugitive dust, the 2018 emissions inventory references ore, waste rock, and limestone dust HAPs concentrations from a 2017 Midas analysis. The potential emissions include numerous metals such as arsenic, nickel, and antimony along others.
AQ	802.0200	C.19	There are concerns that the 93.3 percent control of fugitive dust emissions is not achievable.	The method for establishing the control efficiency is chemical suppressant at 90 percent plus addition of water assumed to be an additional 33 percent of the remaining 10 percent (3.3 percent). This approach was accepted by DEQ/EPA.
AQ	802.0200	C.20	There are concerns that the modeling was not applied to Alternative 2.	Modeling was not explicitly applied for Alternative 2; but a ratio method was applied to compare with modeling in Alternative 1. The estimated Alternative 2 emissions are lower than Alternative 1; so it is concluded that the Alternative 2 impacts would be less based on the ratios.
AQ	802.0200	C.21	There are concerns that nitrogen deposition is near the threshold for Class 1 Wilderness.	Table 4.3-16 of DEIS illustrated that the deposition estimates would be well below the Class I threshold. For example, the Selway-Bitterroot Wilderness was the highest at 22.6 percent.
AQ	802.0200	C.22	There are concerns that fugitive dust emissions are not adequately characterized.	Please see response to Comment 802.0200 C.12.

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AQ	802.0200	C.23	There are concerns that the post-mining conditions are not analyzed.	Any air quality emissions or impacts in the post-mining period would be far less than during mining. Clarifying language is added to the SDEIS.
AQ	802.0200	C.24	There are concerns that the visibility analysis shows effects to FCRNRW and NAAQS exceedances	The visibility concerns/effects of FCRNRW were reassessed based on EPA/Forest Service comments. Methodologies were updated and new results illustrated a lower visibility impact and are discussed in the SDEIS.
AQ	802.0200	C.25	There are concerns that mercury and HAP emission from the kiln are not quantified.	Please see response to Comment 802.0200 C.17. The kiln emissions were quantified in Alternative 2.
AQ	802.0200	C.26	There are concerns that the "no injury" conclusion from localized air quality impacts to public health is incorrect.	Per DEIS Table 3.18-1, the findings in the modeling done for the EIS and the DEQ permitting do meet standards and based on the basis for the standards "no injury" in terms of human health is accurate.
AQ	802.0200	C.27	There are concerns that mercury uptake by vegetation is not accounted for in the analysis.	Please see response to Comment 802.0200 C.14.
AQ	802.0200	C.28	There are concerns that fugitive dust from the kiln was not analyzed.	The fugitive dust PM/HAPs were addressed in Alt2/ModPro2 (lime kiln). See DEIS Sections 4.3.2.2.2, 4.3.2.2.4, and Appendix F-2
AQ	802.0200	C.29	There are concerns that the modeling does not account for terrain	The DEIS applied AERMAP, which is a terrain pre-processor within AERMOD. The modeling reports address this in detail. Terrain variability in the model was addressed in Section 5.3 of the PTC application modeling report. 1/3 arcsecond NED data was used. Additionally, Section 5.1.4 of the 2018 EIS modeling report also addressed terrain usage.
AQ	802.0200	C.30	There are concerns that fugitive dust and VOC emissions from the landfarm are not analyzed.	The potential for onsite landfarming to remediate petroleum-contaminated soils (PCS) encountered during construction and operation of the SGP is mentioned in Section 8.7.4 of Perpetua's Plan of Restoration and Operations. Presently, Perpetua Resources has no definitive plans to conduct landfarming onsite; therefore, emissions from this

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				<p>activity were not included in the EIS analysis. The current plan would be to dispose of PCS at authorized off-site locations.</p> <p>If petroleum-contaminated soils are encountered and landfarming is a viable option for their reclamation, the PCS landfarm and the comprising materials would be sampled and characterized and the landfarm would be constructed, operated and monitored in accordance with IDEQ's Standard Operating Procedure for Landfarming Petroleum-Contaminated Soils: SOP WST-2017-02 and all applicable IDAPA regulations. In addition, the landfarm would conform to all applicable local, state and federal regulatory requirements including those related to stormwater control and media monitoring.</p>
AQ	802.0200	C.31	There are concerns that the methodologies for the near-field and far-field analyses are not consistent.	Yes, the methodologies are different. However, they are required to be different. AERMOD is the EPA recommended near-field model out to a radius of 50-km. Conversely, the far-field analysis uses a model (Calpuff) for areas outside of the 50-km radius. The analysis was also consistent with the FLAG guidance and the methods are appropriate for visibility, Class I, and Class II SIL impacts. The methods are correct per EPA Appendix W modeling guidance.
AQ	802.0200	C.32	There are concerns that arsenic and antimony were not included in the analysis of HAP analysis.	There are arsenic and antimony emissions in the MineHAP emissions inventory, and arsenic in the processHAP emissions inventory. Each pollutant was incorporated into the analysis. Refer to Appendix F of the DEIS.
AQ	802.0200	C.33	There are concerns that fugitive dust emissions are not adequately characterized.	Fugitive emissions were quantified thoroughly; this includes fugitive emissions from road travel, ore, waste rock, and limestone for Alternative 2.
AQ	802.0200	C.34	There are concerns that the Project disregards a treaty/agreement between the Nez Perce and the U.S.	The DEIS put forth the government to government tribal consultation process in Section 1.6 and

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			government and would impede tribal uses of the land to which they have treaty rights. There are concerns that the Forest Service fails to acknowledge the primacy of the 1855 Treaty and fails to take action to safeguard treaty-reserved rights. There are concerns that the Stibnite Gold Project will undo some of the Tribe's work to protect, manage, and restore its treaty-reserved resources, such as air, wildlife, and fisheries. There are concerns that the DEIS does not identify and fully evaluate/disclose impacts to the Nez Perce Tribe's 1855 Treaty-reserved rights and access to Tribal cultural resources as post-mining land uses.	detailed it in Section 5.1.2, specifically noting that intergovernmental consultation serves as the primary means for federal agencies to carry out their trust obligations. Further, tribal treaty rights were presented and described in Section 3.24 of the DEIS. Analysis of tribal rights and resources was presented in Section 4.24. Impacts to air, wildlife, and fisheries were further analyzed in their respective sections of DEIS Chapter 4.
AQ	802.0200	C.35	There are concerns that modeling analysis is lacking analysis of all air quality impacts	The modeling analysis is accurate and complete according to Idaho DEQ and the Forest Service. Proposed changes in Alternative 2 / ModPro2 are evaluated and updated, as necessary in the SDEIS.
AQ	802.0200	C.36	There are concerns that dust impacts from blasting, loading and transport of ore/waste rock were not analyzed.	Blasting emissions were included in the inventory (see Table 6 in the 2018 Stibnite Gold Project Air Quality Analysis modeling report) and modeled as volume sources (see Table 18 in the same report). This includes Yellow Pine, Hangar Flats and West End pits. Additionally, loading and transport were modeled as well. These were modeled as area sources within the pits/tailings and a general "process" area.
AQ	802.0200	C.37	There is recommendation that emission controls should be clearly identified in the EIS.	Emissions controls and other Forest Service regulatory requirements, best management practices, and environmental design features are more clearly stated in the SDEIS.
AQ	802.0200	C.38	There are concerns that air quality emissions will adversely affect water quality.	Mercury deposition was analyzed in the DEIS using a combination of the REMSAD and AERMOD models (See Section 5.4 of the 2018 modeling report). The REMSAD analysis evaluated mercury (Hg) flux for the three nearest hydrologic sub-basins in the Project and surrounding area. The values

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				<p>ranged from 12.7-13.9 g/km²-yr, which was deemed to be representative of the current background.</p> <p>AERMOD was used as a screening tool comparing gaseous mercury (Hg₂) and particulate mercury (HgP). The AERMOD results demonstrated that the Project would contribute up to 18.6 percent of the current Hg background with the Project and east of the mine hydrologic sub-basins. Other surrounding sub-basins suggest Alternative 1 would contribute a negligible amount of mercury.</p>
AQ	802.0200	C.39	There is a concern that the proposed amount of magnesium chloride for dust control is not sufficient	The Idaho DEQ draft permit requires that fugitive emissions be monitored at least every 12 hours each day. Additionally, a facility-wide inspection would be conducted at least every 12 hours. If fugitive dust were seen, proper control mechanisms would be required. This could include the use of magnesium chloride, calcium chloride, and water sprays as needed. Perpetua would be required to meet those and other requirements. Lastly, the SDEIS incorporates many of those requirements as Forest Service regulatory requirements, best management practices, and environmental design features to minimize fugitive dust.
AQ	802.0200	C.40	There are concerns that emissions calculations have not been completed.	Emission calculations associated with Alternative 1 and Alternative 2 were assessed. It was concluded that the emission calculations were complete and accurate. However, an update to Alternative 2 (ModPro2) is evaluated and calculations adjusted, as necessary in the SDEIS.
AQ	802.0200	C.41	There are concerns that the modeling does not account for blasting variability between the years.	The modeling addresses the maximum worst-case ton blasted during LOM7 (LOM4 in modeling report). Note that the difference is that the modeling report does not include the three pre-mining years.

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AQ	802.0200	C.42	There are concerns that the frequency of monitoring and compliance assurance is not sufficient.	Monitoring and compliance has been updated in the SDEIS and the PTC requires recordkeeping and compliance.
AQ	802.0200	C.43	There are concerns that the listed mitigation measures do not explicitly show the control effectiveness.	The SDEIS addresses explicit control effectiveness within the Forest Service regulatory requirements, best management practices, and environmental design features tables in Section 2.4.9.
AQ	802.0200	C.44	There are concerns that mitigation measures of fugitive dust isn't accounted for as much as possible.	Please see responses to Comments 802.0200 C.39 and C.42.
AQ	802.0200	C.45	There are concerns that the visibility analysis does not incorporate a larger area.	The visibility study was updated in 2020 and is consistent with the FLAG guidance documentation.
AQ	802.0200	C.46	There are concerns that the emissions are not fully analyzed in the DEIS and the fugitive emissions exclusion is not accurate.	All DEIS data was reassessed and emissions for both Alternative 1 and Alternative 2 are accurate and complete in the SDEIS. Fugitive emissions are included in the inventory and modeling. Tailpipe emissions are not required per Idaho DEQ permitting, but were accounted for in the DEIS. Any changes in emissions estimates for Alternative 2 are accounted for within the SDEIS. Please see the response to Comment 802.0200 B.5.
AQ	802.0200	C.47	There are concerns regarding compliance with fugitive dust emission requirements that may lead to other monitoring and mitigation measures such as speed limits.	Please refer to response to comments 802.0200 C.39 and 802.0200 C.42 for general compliance.
AQ	802.0200	C.48	There are concerns regarding fugitive dust leading to NAAQS violations.	Please see response to Comment 802.0200 C.10.
AQ	802.0200	C.49	There are concerns that ozone will increase.	DEIS (Section 4.3.1.3.2.1) modeling evaluated the potential impact of ozone and secondary PM _{2.5} . The EPA employs a screening method called Modeled Emission Rates for Precursors (MERPs). Section 5.2.2. of the 2018 modeling report illustrated that the potential ozone impacts from the Project would be compliant. The EPA has concurred with the approach taken in the DEIS.

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AQ	802.0200	C.50	There are concerns that air quality emissions are underestimated	Please refer to response to comment 802.0200 C.46.
AQ	802.0200	C.51	There are concerns that PM10 emissions are underestimated	Please refer to response to comment 802.0200 C.46.
AQ	802.0200	C.52	There are concerns that the DEIS fails to adequately analyze impacts to the wilderness characteristics of the Frank Church River of No Return Wilderness. Commenters note that the federal Wilderness Act and the Central Idaho Wilderness Act require the Forest Service to consider impacts to the Wilderness from activities outside the Wilderness area boundary and that the Forest Service has a legal duty to avoid activities outside the Wilderness that could degrade the area's wilderness characteristics. Specifically, commenters note concerns about noise, light, visual impacts, and water and dust pollution that are likely to affect the Wilderness through direct impacts and edge effects that will degrade the area's unique ecological values and reduce the solitude sought out by hikers in a wild, trailless area. There are concerns that the DEIS fails to adequately analyze the impacts related to these concerns.	Please refer to the wilderness section, DEIS Section 4.23.1.
AQ	802.0200	C.53	There are concerns that the dust control plan is not included in the DEIS.	The IDEQ Air Quality permit requires submittal of the fugitive dust control plan prior to construction. The Forest Service would also require submittal of the fugitive dust control plan prior to approval of the mine plan.
AQ	802.0200	C.54	There is a statement that mercury and HAP emission controls need to be identified.	Mercury and HAP controls are more clearly identified in the SDEIS.
AQ	802.0200	C.55	There is a statement that mercury emissions are within standards and are regulated by IDEQ and EPA.	No further response required. Comment general in nature or position statement.
AQ	802.0200	C.56	There are concerns that metals are not addressed in fugitive dust.	Metals were addressed in the fugitive dust (DEIS Section 4.3.2.1.1 and Appendix F); see the reference Midas 2017c.

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AQ	802.0200	C.57	There is a statement that the proposed IDEQ permit provides specific emission limits for proposed activities.	No response required. Comment general in nature. Where appropriate, elements of the IDEQ PTC are incorporated into the SDEIS.
AQ	802.0200	C.58	There is a statement acknowledging controls that are part of the proposed Project.	No response required. Comment general in nature.
AQ	802.0200	C.59	There are concerns regarding mercury mitigation from uncontrolled fugitive sources.	Please refer to the response to Comment 802.0200 C.56. Please also refer to responses to Comments 802.0200 A.7 and C.38.
AQ	802.0200	C.60	There are concerns that the explicit exceedance locations for PM10 are not shown with identification of the primary contributing sources and potential mitigation measures.	See response to 802.0200 C.7 and 802.0200 C.10. Also, mitigation measures are no longer needed , specific to potential exceeded locations as there are no longer any exceedances.
AQ	802.0200	C.61	There is a concern that not all air pathways are included in the HAP inventory.	Please refer to the response to Comment 802.0200 C.46.
AQ	802.0200	C.62	There are concerns that not all proposed air quality mitigation measures were included in the analysis.	The SDEIS incorporates any additional Forest Service regulatory requirements, best management practices, and environmental design features associated with the analysis and/or IDEQ PTC requirements, as applicable.
AQ	802.0200	C.63	There is an opinion that the methods used in the N/S screening was overly conservative.	Please refer to response to Comments 802.0200 A.5. and B.1.
AQ	802.0200	C.64	There are concerns that the listed mitigation measures do not explicitly show the control effectiveness.	Please refer to response to comment 802.0200 C.5.
AQ	802.0200	C.65	There is a recommendation to draft a fugitive dust plan to ensure the 90%+ control with monitoring and recordkeeping procedures.	Please see response to Comment 802.0200 C.53.
AQ	802.0200	C.66	There are concerns that the frequency of monitoring and compliance assurance is not sufficient.	Please see response to Comment 802.0200 C.42.
AQ	802.0200	C.67	There are concerns that potential air impacts for each category in Section 3.3 is not included and should be added.	DEIS Section 3.3 reflects the fact that the secondary NAAQS were not included. All primary standards were included. The SDEIS includes all primary and

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				secondary standards as well as a discussion describing the difference between the two.
AQ	802.0200	C.68	There are concerns that the air quality requirements of the Wilderness Act were not recognized.	Please refer to the wilderness section, DEIS Section 4.23.1.
AQ	802.0200	C.69	There is a statement that EPA Tier 4 engines should be required.	All engines that are associated with a standard would be Tier 4 certified. This is incorporated in the Forest Service regulatory requirements, best management practices, and environmental design features tables within Section 2.4.9 of the SDEIS.
AQ	802.0200	C.70	There is a recommendation that the Forest Service provide a correction factor to represent mercury emissions and deposition.	A correction factor is not necessary as the emissions and deposition are accurately calculated. A revised description of the analysis of mercury emissions and deposition was included in the SDEIS.
AQ	802.0200	C.71	There is a concern that greenhouse gas emissions from the kiln are not included in the analysis.	The Alternative 2 inventory accounted for the lime kiln in the GHG emissions.
AQ	802.0200	C.72	There is a statement that the proposed Project has potential air emissions less than major source thresholds.	No further response required. Comment is general in nature.
AQ	802.0200	C.73	There is a statement that the proposed Project meets NAAQS and IDEQ requirements.	No further response required. Comment is general in nature.
AQ	802.0200	C.74	The concern is that metals and other pollutants will be deposited into the South Salmon river and reduce the regional air quality.	Analysis in the DEIS demonstrated that the NAAQS would be met and the Calpuff modeling illustrated that the regional air quality, while potentially reduced, would be within the appropriate SILs. Regarding the metals, please refer to response to comments 802.0200 A.5 and C.38.
AQ	802.0200	C.75	There is a statement that the air emissions inventories are not easily comparable.	The SDEIS addresses any confusion between the inventories to ensure better readability and understanding.
AQ	802.0200	C.76	There are concerns that the HAP emissions are under-reported and that could affect the non-major source classification	Since the DEIS the emissions have been reassessed and remain below major source thresholds. Additionally, the DEQ PTC confirms minor source

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				status. Any subsequent changes are incorporated into the SDEIS, as necessary.
AQ	802.0200	C.77	There is a concern that VISCREEN modeling shows visibility impacts to wilderness areas	The VISCREEN modeling has been updated per EPA and Forest Service request. The updates are incorporated into the SDEIS.
AQ	802.0200	C.78	The concern is how an inversion may affect any air plume associated with the mine. Will settling respond differently and would that effect nearby communities and livestock?	An inversion scenario would limit air flow and potentially make things more stagnant. This would impact dispersion, likely causing fewer emissions to travel further from their origin points at the mine. However, the total amount of inversions outside the cities is fairly scarce. Lastly, the modeling incorporates 5 years of meteorological data so winter months were incorporated.
AQ	802.0200	C.79	There is a question whether trash haulage was included in the emissions analysis.	Trash haulage is assumed in the emission calculations as part of the general truck traffic emissions.
AQ	802.0200	C.80	There is a concern that ongoing IDEQ air permitting may affected the ability of the DEIS to analyze air quality.	The DEIS and subsequent SDEIS, while similar to the IDEQ permit, are beholden to different requirements. Therefore, the IDEQ permitting does not explicitly impact the air quality analysis within the SDEIS.
AQ	802.0200	C.81	There are concerns that management of baghouse dust by placing it in the tailings impoundment has not been sufficiently explained in the EIS.	All baghouses on site are required to be included in the Operation & Maintenance Manual as part of the IDEQ permit. This is referenced in the SDEIS.
AQ	802.0200	C.82	There is a concern that mercury in vegetation near the Project would be released by a wildfire.	While it is possible that a forest fire could release mercury into the atmosphere from burnt vegetation, the total mercury from the Project relative to the existing background is quite small. Please refer to section 5.4.2 of the 2018 modeling report.
Climate Change	802.0300	Primary	Commenters suggest that climate change is not adequately addressed as it pertains to water resources, wildlife, vegetation, fisheries, and tribal resources plus its potential	Climate change impacts were described in DEIS Section 4.4 and included issues and indicators and how greenhouse gas emissions relate to climate

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			effects on mine reclamation and impact mitigation measures.	change. Direct and indirect effects were outlined for each of the alternatives. The SDEIS updates and incorporates appropriate elements of the climate change analysis as described in the following comment responses. Updates include discussion regarding CEQ, CPP, and other pertinent elements, as necessary.
Climate Change	802.0300	A.1	General concerns that climate change impact/impacts are not discussed fully.	The SDEIS addresses any updates since the DEIS.
Climate Change	802.0300	A.2	There were questions whether the proposed Project would utilize renewable energy sources.	Solar panels would be used during the construction phase where appropriate. However, the mining activities are primarily based on diesel engines etc. Additionally, the project is constructing/upgrading power transmission lines to increase efficiency.
Climate Change	802.0300	A.3	There were questions regarding whether employees would commute to work or whether there would be on-site housing.	There is on-site housing and commuting emissions along Warm Lake Road. Construction and operations traffic emissions incorporate crew bus/van transport, personal vehicles, and salaried workers.
Climate Change	802.0300	A.4	There were concerns there was not a full accounting for emissions, such as for commuting employees as well as the trips using heavy machinery to transport waste and other products from the mine site.	All VMTs and subsequent emissions are accounted for supply/haulage traffic. These include food delivery, trash/recyclables etc.
Climate Change	802.0300	B.1	There are concerns about quantitative calculations for GHGs, how does the CEQ, NEPA and CPP come into play.	The DEIS discussed CEQ guidance on climate change analysis in NEPA (Section 3.4.2.1) as applicable at the time the DEIS was released. The SDEIS discusses updates to CEQ guidance for climate change analysis in NEPA. The Clean Power Plan is not applicable.
Climate Change	802.0300	B.2	There is a recommendation to use the NorWest Model for climate change impacts.	The NorWeST model was discussed in relation to stream temperature and climate change in Section 3.12.4.7.3.3 in the DEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Climate Change	802.0300	B.3	There is a concern that the best available science is not being used to analyze climate change.	Forest Service research scientists and the Office of Sustainability and Climate (OSC), along with other agencies such as NOAA, developed vetted, verified, and peer reviewed data that is considered to be the best available scientific information to be used regarding climate change in planning and analysis contexts. Examples include the Intermountain Region Climate Change Vulnerability and Adaptation Assessment (Halofsky et al. 2018) and NorWeST Stream Temperature Modeling, both of which are utilized in the DEIS analysis. Subsequent to the DEIS publication, the Payette and Boise NF completed carbon templates which will be incorporated into the SDEIS.
Climate Change	802.0300	C.1	There are concerns that the impacts of climate change are not addressed adequately over the life of the mine. These include impacts to tailings facility overflow, stream temperature, flooding, slope stability, vegetation regeneration, and wildfire.	Appropriate updates have been made to the SDEIS regarding stream temperature, flooding, vegetation, and wildfire. The tailings facility overflow and slope stability are addressed via compliance with Idaho requirements for design criteria.
Climate Change	802.0300	C.2	There are concerns that the social cost of carbon and the socioeconomic impacts of climate change were not analyzed.	The social cost of carbon was not a requirement per the 2019 CEQ guidance as stated in Section 4.4.1.5 in the DEIS. The SDEIS will use CEQ guidance that is current at the time of publication.
Climate Change	802.0300	C.3	There are concerns that climate change was not adequately incorporated into sensitivity analyses for water resources modeling.	Please refer to the Water Resources Sections, DEIS Sections 4.8 and 4.9 which discusses the incorporation of different temperature and precipitation conditions on model sensitivity.
Climate Change	802.0300	C.4	There is recommendation that current climate trends should be incorporated in the analysis.	The SDEIS addresses any pertinent updates regarding the recommendation.
Climate Change	802.0300	C.5	There are concerns that the Project has a large carbon footprint that will add to climate change.	Subsequent to the DEIS publication, the Payette and Boise NF completed carbon templates which will be incorporated into the SDEIS. SDEIS
Climate Change	802.0300	C.6	Commenters provide accounts of their use of the EFSFSR, SFSR, and Salmon River.	No further response required. Comment general in nature or a position statement.

Resource	Comment Code	Comment Number	Concern Statement	Response
Climate Change	802.0300	C.7	There is a statement that the greenhouse gas emissions for the proposed Project should not be considered minor.	Comment noted. However, the Project is considered minor per regulation.
Climate Change	802.0300	C.8	There is concern that the DEIS states that climate uncertainty cannot be qualified.	While there is truth to the fact that climate uncertainty may not be fully quantifiable, the SDEIS further evaluates it and address with any updates, as appropriate.

Soils Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Soils	802.0400	Primary	There are concerns that potential impacts from soil erosion and sedimentation (and their associated mitigation measures) are not fully addressed in the EIS. Further, there are concerns regarding metal concentrations in materials used for covers, and recommendations that those materials be screened for arsenic, mercury, and antimony before placement as cover material.	The SDEIS (Section 2.4.9) clarifies the Forest Service regulatory requirements, best management practices, and environmental design features. Impacts of potential erosion and sedimentation from the Project are described in Section 4.5.2.2. The SDEIS clarifies the chemical characterization activities for reclamation cover materials and incorporates the Reclamation Closure Plan into the Project analysis.
Soils	802.0400	C.1	There are concerns that the impacts to soils, vegetation, and wildlife from dust abatement measures, specifically mag chloride applications, are not fully explained in the DEIS.	Impacts of dust abatement measures were described in the context of surface water quality (DEIS Section 4.9.2.1.2). Under Forest Service requirements, the rate and quantity of dust abatement applications would be regulated to ensure that applied chemicals are absorbed by road materials before leaving the road surface. Therefore, under planned operating conditions, the dust abatement measures would not affect soils. Dust abatement measures are described further in the Project's Dust Control Plan.
Soils	802.0400	C.2	There are concerns that the effects of climate change, seismicity and blasting as they relate to soil erosion are not	The SDEIS (Section 2.4.9) clarifies the roles of Forest Service regulatory requirements, best

Resource	Comment Code	Comment Number	Concern Statement	Response
			analyzed, particularly in how they apply to sedimentation in ESA fish habitat.	<p>management practices, and environmental design features and are included in analyzing impacts related to soil erosion. This includes erosion related to ground disturbance and authorized site activities such as blasting.</p> <p>The effects of climate change on soils were described in DEIS Section 4.4.2.1.4.3 and note potential impacts on the revegetation success associated with soil moisture content.</p> <p>The Project is not anticipated to result in any effects to soil erosion from seismicity.</p>
Soils	802.0400	C.3	There are concerns that the EIS lacks analysis of traffic-related dust, erosion, and sedimentation.	<p>The SDEIS (Section 2.4.9) clarifies the roles of Forest Service regulatory requirements, best management practices, and environmental design features and are included in analyzing impacts related to traffic related soil erosion and sedimentation.</p> <p>Dust emissions related to traffic were described in the air quality section of the DEIS (Section 4.3.2). Dust abatement measures are described further in the Project's Dust Control Plan.</p>
Soils	802.0400	C.4	There are concerns that the EIS lacks analysis of the sediment erosion effects of re-routing stream channels.	The SDEIS (Section 2.4.9) clarifies the roles of Forest Service regulatory requirements, best management practices, and environmental design features and are included in analyzing impacts related to erosion effects of re-routing streams.
Soils	802.0400	C.5	There are concerns that the erosion and sedimentary impacts to salmon habitat from the 2020 Buck Fire along Johnson Creek are not analyzed in the EIS.	The 2020 Buck Fire occurred concurrently with the publication of the DEIS. The DEIS acknowledged the impact implications of past, current, and future wildland fires in Section 4.1, and the SDEIS will update that acknowledgement along with any additional implications for erosion and sedimentation, as applicable.

Resource	Comment Code	Comment Number	Concern Statement	Response
Soils	802.0400	C.6	There are concerns that the impacts of the Project and the objectives of the Reclamation Closure Plan do not conform to the requirements of NFMA and Forest Plans.	As described in DEIS Section 1.5.1, the Forest Service approval of the Project and its Reclamation Closure Plan would be in accordance with its requirements under NFMA and Forest Plans as amended for consistency with the Project approval.
Soils	802.0400	C.7	There are concerns that the impacts of reduced soil quality on vegetation, aquatics, wildlife, habitat, and treaty resources are not sufficiently addressed in the EIS.	<p>The impacts of the Project on soil quality were described in DEIS Section 4.5.2. Implications of soil quality changes were described for surface water quality (DEIS Section 4.9.2.1.2), vegetation (DEIS Section 4.10.2.1), wetlands (DEIS Section 4.11.2.1), fisheries (DEIS Section 4.12.2.3.3), and wildlife (DEIS Section 4.13.5).</p> <p>The SDEIS clarifies the roles of Forest Service regulatory requirements, best management practices, and environmental design features and are included in analyzing impacts related to soil quality.</p>
Soils	802.0400	C.8	There are concerns that existing conditions and borrow sources for Alternative 4 are not adequately described.	The SDEIS (Section 2.4.5.13) clarifies the description of borrow sources for the analyzed alternatives.
Soils	802.0400	C.9	There are concerns that the control of sedimentation and erosion with mitigation strategies and control techniques is not described in adequate detail and lacks quantification on sediment delivery to streams.	<p>The SDEIS clarifies the roles of Forest Service regulatory requirements, best management practices, and environmental design features in addressing impacts related to sedimentation.</p> <p>In instances where sedimentation would be expected to be greater than the range of properly applied Forest Service management (e.g., Forest Service roads), required mitigation measures would be incorporated into the Project approval to offset impacts (e.g., Compensatory Mitigation Plan for wetlands).</p>
Soils	802.0400	C.10	There are concerns that the conversion of a productive site to a non-productive site for more than 50 years on a percentage of FS lands is a significant adverse impact that requires an amendment.	The need for an amendment related to this issue was discussed in Appendix A of the DEIS. A full analysis of the impacts to soils is provided in Section 4.5 of the DEIS. It would not be appropriate to

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				conduct a programmatic amendment because the project level assessment of soils identified changed conditions only in the PNF where this project-specific amendment is proposed. This project-specific amendment to allow exceedance of 5 percent TSRC would only apply to the area disclosed in the EIS.
Soils	802.0400	C.11	There are concerns that mercury concentrations in cover materials could result in emission of mercury to the air or ecological impacts.	<p>Fugitive mercury emissions from mine-site materials were described in DEIS Section 4.3.2.1. The effects of those emissions were included in the air quality impact analyses.</p> <p>The SDEIS clarifies the role of aerial deposition of mercury on environmental receptors and clarifies the planned chemical characterization of borrow materials (including mercury) as part of the Project's Reclamation Closure Plan to address concerns around the stability of closed facilities.</p>
Soils	802.0400	C.12	There are recommendations to clarify the limited duration of surface disturbance activities and clarify that seasonal adaptability does not reflect an ability to adapt to a continuous load of sediment or continuously turbid waterbody.	The SDEIS (Section 2.4.3) clarifies the durations of surface disturbance activities and the role of seasonal adaptability in adapting to sediment conditions.
Soils	802.0400	C.13	There are recommendations to screen soils that are to be used for cover materials for arsenic, mercury and antimony concentrations to be protective of recreationalist exposure, ecological receptor exposure, and surface waters.	The SDEIS (Sections 4.5.2 and 4.9.2 clarifies the planned chemical characterization of borrow materials (including antimony, arsenic, and mercury) as part of the Project's Reclamation Closure Plan to address concerns around the stability of closed facilities.
Soils	802.0400	C.14	There are concerns that the practice of reserving high quality growth media for wetland rehabilitation will degrade upland soil quality.	<p>The impacts of reserving high quality growth media for wetland rehabilitation on residual soil quality for upland reclamation were described in DEIS Section 4.5.2.1.3.</p> <p>As described, performance requirements for reclaimed areas would still need to be met prior to</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				closure release. Therefore, the operator may elect to pursue measures as described in DEIS Section 4.5.2.1.3.2 to improve soil quality to promote the release of its closure and financial obligation.
Soils	802.0400	C.15	There were questions whether worker and public exposure to contaminants are likely if on-site soil is used for reclamation and the quality standard to determine this use.	Exposure to contaminants in reclamation cover materials is described in DEIS Section 4.18.2.1.1.2 and Appendix M. Quality standards for human health exposure are described in Appendix M.
Soils	802.0400	C.16	There were questions whether soil covers would reach an adequate depth. Some commenters recommended soil thicknesses in excess of 18 inches.	Reclamation cover designs, including cover thicknesses, are based on the reclamation and revegetation objectives for their associated facilities and are described in the Project's Reclamation Closure Plan.
Soils	802.0400	C.17	There was a concern that the microbial biohazards of compost were not addressed.	DEIS Section 2.3.5.11, describes how composting facilities would be permitted by IDEQ and operated with oversight from the local health district.
Soils	802.0400	C.18	There was a question regarding the collection of 96 soil samples from the Hangar Flats area with only seven submitted for laboratory analysis.	The 96 soil samples were utilized to develop a field observed, qualitative description of soil conditions which were then quantified by the analyzed sub-sample.
Soils	802.0400	C.19	There was a concern that spent heap leach ore from historical mining operations may be reused for road construction purposes.	The Legacy Material Management Plan sets criteria for the characterization, management, and potential re-use of historic mined materials to prevent re-mobilization of contaminants in those materials.
Soils	802.0400	C.20	There is a concern that Risk-Based Soil Screening Levels from DEIS Table 4.18-4 are not protective and that natural background levels be used as criteria for soil cover materials used for reclamation.	The DEIS clarifies the soil metal levels used for reclamation and their protectiveness of public health and surface water in Section 4.18 and for recreational risk in Appendix M.
Soils	802.0400	C.21	There is a recommendation that the EIS reassess and clarify the classification of soil impacts to designate them as an alteration of natural soil characteristics and not conversion of a productive site to a non-productive site.	The analysis of soils was described in DEIS Section 4.5. Also, see response to Comment Code 802.0400, Comment C.10.

Resource	Comment Code	Comment Number	Concern Statement	Response
Soils	802.0400	C.22	There were questions whether soil grubbed from under the DRSFs would be placed on top of the DRSFs.	Soil salvaged via grubbing of facility footprints would be utilized in the reclamation of facilities. However, the specific destination for salvaged soil would be based on the quality of that soil, with higher quality soils destined for stream channel restoration.

Noise Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Noise	802.0900.00 and 802.0901	Primary	There are concerns that the that DEIS does not provide sufficient data to understand noise impacts. These comments were focused in the area of Warm Lake and the Warm Lake Road as well as with the construction of the electrical infrastructure. Further, commenters are concerned that the DEIS does not sufficiently address the impacts of noise on wildlife.	<p>The DEIS provided an explanation of the regulations and definitions of noise levels (Section 3.6.2.1). The DEIS evaluated the existing conditions by presenting measured baseline ambient sound levels (Section 3.6.3) at selected noise-sensitive receptors. To understand the impacts of the various alternatives, the DEIS combined the predicted (standard) sources of noise and added those to the baseline or existing levels for each alternative (Table 4.6-6 and others). This was done for all receptors for all alternatives, as appropriate.</p> <p>The DEIS (Section 3.6) addressed the affected noise environment as it is related to humans and human activity. Effects on non-human species were addressed in the DEIS sections related to fish resources and fish habitat and wildlife and wildlife habitat (Sections 3.12, 3.13, 4.12 and 4.13).</p> <p>Additional mitigation measures to further reduce noise were presented in the DEIS Appendix D.</p>
Noise	802.0900.00 and 802.0901	C.1	There are concerns that the DEIS does not include adequate data regarding noise and thus fails to adequately analyze noise impacts.	The DEIS analysis of noise included a 5-mile radius of the major Project components. These include: mine site, access routes, utilities, and off-site facilities (DEIS Figure 3.6-1). Baseline data was

Resource	Comment Code	Comment Number	Concern Statement	Response
				obtained from 12 different locations (Section 3.6.3.2), which were selected for their location approximate to sensitive areas. The analysis of the impacts included the direct and indirect effects using an alternative by alternative approach as discussed in Section 4.6.2.
Noise	802.0900.00 and 802.0901	C.2	Commenters expressed concerns about the increase in noise over the baseline at Warm Lake.	Warm Lake and Warm Lake Road were included by the Forest Service as locations for noise-sensitive receptors. In the DEIS, Site 6 and Site 7 were located to measure baseline ambient levels of noise at Forest Service Summer Camp/Warm Lake Recreation Area and Warm Lake Road/Warm Lake Camp (Table 3.6-3). The results were included with an explanation of the units of measure (DEIS Section 3.6.2.2). Predicted noise levels (baseline + Project) were shown in the DEIS Section 4.6. The impacts were analyzed for each alternative and included Site 6 and Site 7 (Section 4.6.2.1.1.5).
Noise	802.0900.00 and 802.0901	C.3	Commenters request that Midas Gold and the Forest Service create a monetary mitigation fund to further address light and noise pollution impacts to wildlife.	In accordance with 36 CFR 228, compensatory mitigation cannot be required since the regulations only require to “minimize adverse environmental impacts.” Design features to reduce noise and light impacts to wildlife was addressed in the DEIS Section 4.13. See response to comments 802.0500. B.5 and B.6 (Wildlife Resources).
Noise	802.0900.00 and 802.0901	C.4	Concerns were expressed that the DEIS does not include adequate data regarding noise resulting from the construction of electric power improvements, as well as blasting.	The upgrade of existing and construction of new utilities would occur under each alternative being evaluated with the exception of Alternative 5. Predicted construction impacts to noise from electric power improvements were described in the DEIS (Section 4.6.2.1.1.3). Predicted major noise sources for the transmission line upgrade and construction were presented in Table 4.6-4. In the DEIS, blasting was included in predicting noise impacts. The methodology was discussed as

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				using guidance provided in Dyno Nobel 2010 (DEIS Section 4.6.1). Blasting during operations was discussed in the DEIS (Section 4.6.2.1.2.1) and shown in Table 4.6-10.
Noise	802.0900.00 and 802.0901	C.5	The commenter is requesting that the proponent be required to monitor or establish the effectiveness noise mitigation efforts.	Design features to address noise impacts have been included in the DEIS (Section 4.6.3). In DEIS Appendix D, FS-121 addressed noise reduction and monitoring.
Noise	802.0900.00 and 802.0901	C.6	There are concerns that mitigation of the noise created by the Project is inadequate and should be strengthened. Suggestions included scheduling and sound attenuation.	Design features to address noise impacts have been included in the DEIS (Section 4.6.3). In DEIS Appendix D, FS-121 addressed noise reduction and monitoring. The use of scheduling and sound attenuation were included.
Noise	802.0900.00 and 802.0901	C.7	There are concerns that noise created by the Project would negatively impact habitat for several animal species, and that the DEIS does not include sufficient detail to explain how animal habitat would be protected from increased noise. Commenters suggest that the mitigation for noise pollution should be strengthened by limiting drilling to daylight hours to reduce impacts to wildlife and by conducting noise reduction effectiveness monitoring.	Design features to reduce noise and light impacts to wildlife was addressed in the DEIS Section 4.13. See response to comments 802.0500. B.5 and B.6 (Wildlife Resources). In DEIS Appendix D, FS-121 addressed noise reduction and monitoring.
Noise	802.0900.00 and 802.0901	C.8	There are general concerns that the Project, especially heavy truck traffic, will result in increased noise levels, especially along Warm Lake Road.	The DEIS (Section 3.6.3) described the existing conditions that would potentially be affected by Project-related noise. There were 12 sensitive noise receptors selected, which included Warm Lake Road (Site 7) because it characterized traffic noise (Section 3.6.3.1). A baseline of existing noise was measured for all 12 sites. In the analysis of the Affected Environment (Section 4.6), a projected volume of traffic was estimated to calculate the anticipated increase in noise at locations potentially affected. The results were shown in Table 4.6-6.

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Noise	802.0900.00 and 802.0901	C.9	There is a concern that the DEIS noise calculations underestimated the amount of equipment that would be used for construction and operation.	The DEIS included construction equipment estimates for both phases, construction and operation (Section 4.6). DEIS Table 4.6-1 provided the equipment estimated for the construction phase at the mine site. Major sources of noise during the operations phase were discussed in detail in DEIS Section 4.6.2.1.2.1 and added noise that would result from blasting to the total hourly noise level is included (Table 4.6-10).
Noise	802.0900.00 and 802.0901	C.10	Commenters requested that open and closed roads and trails, plus illegally created and used trails, as well as the transmission line corridors, be mapped and sound contours plotted showing the distance and aerial effects on wildlife security areas and "quiet" users who may be attempting to escape the noise and commotion of society and enjoy these IRAs.	No further response required. Beyond the scope of the proposal.
Noise	802.0900.00 and 802.0901	C.11	There are concerns that noise will impact mine employees.	DEIS Section 4.6 addressed impacts on human noise-sensitive receivers during construction, operation, and closure. The focus was on the impacts that may result from the selection of an action alternative. SGP employees and contractors would be subject to safety rules that would be monitored either by MSHA during operations or OSHA during construction. Noise regulations per MSHA and OSHA would have to be met and hearing protection required, as appropriate. Additional design features and mitigation measures to further reduce noise were presented in DEIS Appendix D.

Hazardous Materials Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Hazardous Materials	802.1400.00	Primary	Some commenters are confident in Midas' plans and practices for management of hazardous materials. Other commenters request that more information on potential risks related to transportation and use of hazardous materials be added to the EIS and that this address any limitations on incident response caused by lack of capabilities in local communities or by the remoteness of the proposed access roads. There are comments that this added analysis address potentially inaccurate data used in the DEIS and expand the geographic area of analysis. Commenters asked that contingency plans be developed to address potential spills at the site and the effects of wildfires and extended power outages on hazardous materials management.	The Final EIS examines transportation of hazardous materials over a larger area including Highway 55 between Boise and Grangeville.
Hazardous Materials	802.1400.00	A.1	Provide more information how the cyanide reagent would be packaged and transported to and from the site.	The SDEIS Section 4.7.2 includes additional information on cyanide handling and transportation. Also please see response to comment 802.1400 C.4.
Hazardous Materials	802.1400.00	A.2	The EIS should present more information on potential risks related to transportation of hazardous materials.	The SDEIS includes a revised analysis of hazardous material spill risk and the Final EIS expanded the area of that analysis to include State Highway 55 between Boise and Grangeville.
Hazardous Materials	802.1400.00	A.3	The EIS spill risk analysis uses incorrect data and is limited in geographic scope.	The SDEIS includes a revised analysis of hazardous material spill risk and the Final EIS expanded the area of that analysis to include State Highway 55 between Boise and Grangeville.
Hazardous Materials	802.1400.00	A.4	There are apparent inconsistencies or errors in the EIS related to transportation of hazmat.	The SDEIS includes a revised analysis of hazardous material spill risk and the Final EIS expanded the area of that analysis to include State Highway 55 between Boise and Grangeville.
Hazardous Materials	802.1400.00	A.5	There are concerns that the EIS data related to traffic incidents involving hazardous materials are not relevant to the Project.	National and local transportation incident statistics are applicable to transportation on highways and main access routes. The SDEIS describes the

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				Transportation Management Plan developed to reduce risks of transportation incidents on local Project access routes.
Hazardous Materials	802.1400.00	A.6	There are requests for more information regarding overland flow containing hydrocarbons.	Section 2.3.5.18 of the DEIS describes that a Spill Prevention, Control, and Countermeasures Plan would be developed for the Project before operations. The required contents of such a SPCC plan are described in detail in the federal regulations but would include measures to prevent releases of liquid hydrocarbons to the environment and document plans to respond to any liquid hydrocarbon releases. Compliance with the SPCC requirements would minimize the potential for any significant diesel fuel spills negating the need to include descriptions of overland flow and impact analysis of such spills in the EIS.
Hazardous Materials	802.1400.00	A.7	There are requests for more information regarding solid waste handling and disposal in the EIS.	The SDEIS analyzes a revised mine plan with additional details regarding solid waste management.
Hazardous Materials	802.1400.00	A.8	There are requests for more information regarding water management and leak detection in the EIS.	The SDEIS analyzes a revised mine plan with an associated Water Management Plan that describes water management practices and leak detection.
Hazardous Materials	802.1400.00	A.9	There is a request for more information regarding safety measures to be taken during hazardous road conditions.	The SDEIS describes the addition of the Transportation Management Plan to the Project. This plan is intended to reduce risks associated with vehicle incidents including risks associated with hazardous road conditions.
Hazardous Materials	802.1400.00	A.10	There is a request for more information regarding the storage location for spill response materials.	Section 2.3.5.18 of the DEIS describes that a Spill Prevention, Control, and Countermeasures Plan would be developed before operations to establish procedures for response to spills of liquid hydrocarbons. In addition, a Hazardous Materials Handling and Emergency Response Plan would be prepared for responding to accidental spills or

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>releases of hazardous materials. These plans would describe measures taken to minimize the potential for releases of liquid petroleum and hazardous materials, inspections and monitoring, spill response procedures, descriptions and locations of spill response equipment and materials, and spill reporting. Such plans, along with the proposed engineering design features intended to minimize the potential for releases of liquid petroleum or hazardous materials (secondary containment) indicate Perpetua's facilities and operations should be sufficient for safe management of hazmat.</p>
Hazardous Materials	802.1400.00	A.11	There is insufficient information in the EIS related to long-term water management at the mine site.	SDEIS Section 4.9.2 describes the effects of long-term water management and treatment as described in the modified mine plan and its associated Water Management Plan.
Hazardous Materials	802.1400.00	A.12	There should be more description in the EIS how wastes will be contained in the TSF.	<p>Section 2.3.5.7 of the DEIS describes the design and operation of the TSF. This section of the DEIS describes that tailings slurry piped to the TSF from the mill would be placed in the TSF where the tailings solids would consolidate and tailings water and any precipitation into the TSF would collect in a supernatant pond on top of the tailings solids. Water from this pond would be reclaimed and recycled back to the mill for reuse. Seepage of tailings water out of the TSF would be prevented with an impermeable liner and overdrains would remove tailings water that accumulates on top of the liner and direct it back to the mill for reuse. Discharge from the TSF would be prevented by maintaining an adequate freeboard to at least hold the collected tailings solids and water in addition to a 24-hour PMP storm event of 11.74 inches. More details of the operation of the tailings pond could be provided but the description already contained in</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				the DEIS is sufficient for the environmental analysis in the EIS.
Hazardous Materials	802.1400.00	C.1	Contingency plans should be developed for the mine site that include potential impacts related to spills, wildfire and extended power outages.	Please see response to comment 802.1400.00 A.10.
Hazardous Materials	802.1400.00	C.2	Midas' proposed practices and plans should be sufficient for safe management of hazmat.	Please see response to comment 802.1400.00 A.10.
Hazardous Materials	802.1400.00	C.3	The mine should prepare transportation-related spill contingency plans.	Please see response to comment 802.1400.00 A.10.
Hazardous Materials	802.1400.00	C.4	The transportation and use of cyanide should be carefully done with appropriate contingency planning.	The proposed handling of cyanide reagent is described in Sections 2.3.5.6 and 2.3.5.18 of the DEIS. The cyanide handling would be in compliance with the <i>International Cyanide Management Code For the Manufacture, Transport, and Use of Cyanide in the Production of Gold</i> (the Code). This standard specifies detailed measures for safe transportation, storage, and use of cyanide reagent, including the development of monitoring and emergency response plans. The cyanide reagent would be transported as dry briquettes in specially designed bulk containers that prevent spills of the dry cyanide during transportation. At the mine site, the dry cyanide would be dissolved in tanks with secondary containment and the solution would be used in the mill circuit to recover gold and silver. Any residual cyanide in the mill tailings would be treated to very low levels of no greater than 10 mg/l WAD cyanide. Because of Perpetua's commitment to compliance with the Code, there is no need to discuss all the Code details in the EIS.
Hazardous Materials	802.1400.00	C.5	The TSF would adequately contain the wastes deposited in it.	As detailed in Section 2.3.5.7 of the DEIS, the TSF is designed to hold all the tailings that would be produced in the proposed operations as well as design inflow from storm and runoff events. This

Resource	Comment Code	Comment Number	Concern Statement	Response
				volume includes run-on water volumes plus freeboard per Idaho design requirements for impoundments.
Hazardous Materials	802.1400.00	C.6	There are concerns about the risk of hazardous materials spills should the Project move forward and the hazardous material spill emergency response capacity of local communities. Additionally, there are questions about who would be responsible for treatment of the hazardous waste produced by the mine and how and where this waste would be transported for treatment. There are concerns that the DEIS contains inconsistencies and incomplete descriptions regarding the transport of hazardous materials, making it impossible to understand the risk of hazardous materials spills from Project related traffic.	Please see response to comment 802.1400.00 A.10.
Hazardous Materials	802.1400.00	C.7	There are concerns that the DEIS does not include adequate descriptions or analysis of the mining process. Commenters raise specific concerns related to this issue, including: The DEIS should clarify tailings processing and neutralization and if there are plans to process the full ore stream. Additionally, the DEIS should address to what extent this might impact tailings geochemistry. The DEIS does not adequately discuss the potential for mercury to be collected by gold and silver cyanide leach carbon adsorption facilities in addition to its potential to become an environmental issue as a result in electrowinning and refining facilities. The DEIS is not clear as to whether additional treatment for residual cyanide, in addition to neutralizing within the ore processing plant to less than approximately 10 milligrams weak acid dissociable cyanide, will occur before the tailings slurry is placed in the tailings storage facility. The DEIS does not analyze the potential for, and impacts from, a tailings spill containing up to 10 milligrams weak acid dissociable cyanide.	<p>Section 2.3.5.6 of the DEIS describes the ore processing and generation of tailings from that process. After removal of the antimony concentrate, the full ore stream is beneficiated in the gold/silver flotation circuit and only the concentrate from that step is intended to be further beneficiated through the rest of the mill circuit. The Gold and Silver Flotation description in Section 2.3.5.6 of the DEIS does state that, in the case where the tailings from the gold/silver flotation circuit contained high enough gold/silver concentrations, the tailings stream could be sent to the cyanide leach circuit. In any case, the tailings stream from cyanide leaching would be processed through the tailings detoxification step to treat the residual cyanide.</p> <p>The proposed tailings characteristics are the result of the proposed mill operations. Any change in the mill operations that would significantly change the characteristics and environmental impacts of tailings would need to be evaluated in a future NEPA analysis.</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>The Gold and Silver Leaching and Carbon Adsorption and Gold and Silver Electrowinning and Refining portions of Section 2.3.5.6 of the DEIS provide description of the collection of precious metals from the gold and silver flotation concentrates. The mercury that is described as being recovered from the air emissions of the induction furnace at the end of this process is actually leached from the concentrate along with the gold and silver by the cyanide solution. As such, it would also be adsorbed onto the carbon and follow the gold and silver through the carbon strip and electrowinning steps to eventually be present in the gold/silver precipitate that is heated in the induction furnace. Narrative explaining this has been added to Section 2.4.5.7 of the SDEIS and is an environmental design feature listed in Table 2.4-13.</p> <p>Treatment of residual cyanide in the tailings stream down to no greater than 10 mg/l WAD cyanide was discussed in the Tailings Neutralization Circuit description in Section 2.3.5.6 of the DEIS. No additional active treatment of cyanide is proposed as 10 mg/l WAD cyanide is generally recognized as being environmentally benign to wildlife exposed to tailings water with this chemistry.</p> <p>Section 2.3.5.7 of the DEIS describes how the management of tailings from the mill area to the TSF would be designed and operated as a no discharge system including secondary containment of the tailings and reclaim pipelines, lining and leak detection of the TSF, and maintaining freeboard in the TSF to contain the 24-hour Probable Maximum Precipitation storm (11.74 inches) on top of the tailings storage at all times. In light of these design and operating characteristics, to conduct an impact analysis for a release of cyanide to the environment</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				would constitute a worst-case analysis which is not required under NEPA.
Hazardous Materials	802.1400.00	C.8	There are concerns that the EIS does not sufficiently analyze the impacts of potential diesel fuel spills.	Please see response to comment 802.1400.00 A.6.
Hazardous Materials	802.1400.00	C.9	There are concerns that the presence and use of hazardous materials associated with the Project will increase levels of cyanide and metals in the environment.	With regard to cyanide, please see response to comment 802.1400.00 C.4. The largest quantity of metals involved in the materials that would be handled by the proposed operations are those contained in mineral form within the ore, development rock, and mill tailings. These materials would be handled as described in Section 2.3.5 of the DEIS in ways that would limit their release to the general environment.
Hazardous Materials	802.1400.00	C.10	There is a concern that remoteness and winter conditions could affect response capability for a transportation incident involving hazmat.	The SDEIS describes the addition of the Transportation Management Plan to the Project. This plan is intended to reduce risks associated with vehicle incidents including risks associated with hazardous road conditions. The SDEIS also includes an assessment of avalanche hazards and proposes avalanche controls to address those hazards.
Hazardous Materials	802.1400.00	C.11	There is a concern that the EIS does not analyze impacts from spill of aviation fuel from an airplane crash.	The Proposed Action does not include regular use of aircraft other than helicopters for construction and support of remote exploration sites and repeater sites within IRAs. Fuel and other chemicals would be transported to the site via surface access routes and trucks. Use of helicopters and responses to emergencies related to their use would be covered with contractual terms developed before their use. Because potential aircraft crashes are considered to be rare and randomly located preparing a detailed environmental impact analysis would be speculative and worst-case, which is not required under NEPA.

Resource	Comment Code	Comment Number	Concern Statement	Response
Hazardous Materials	802.1400.00	C.12	There is a concern that there is insufficient public emergency response capability for a transportation incident involving hazmat.	The Project utilizes mine site emergency response for local incidents. The Project proposal includes outreach and training for public emergency responders for hazardous materials.
Hazardous Materials	802.1400.00	C.13	There is a question whether additional hazardous materials will be utilized during Project construction.	With the exception of the process-related reagents, most of the materials listed in Table 2.3-6 of the DEIS would also be utilized during construction but with different annual uses, on-site storage capacity, on site mine uses, and estimated annual deliveries.
Hazardous Materials	802.1400.00	C.14	There is a question whether testing equipment that utilizes radioactive materials will be utilized by the Project.	Certain process gauging instruments within the ore processing site may utilize radioactive sources. These are highly regulated under federal and state requirements and would be handled according to the individual licenses that would need to be obtained for their use. These testing instruments are commonly used on similar construction projects.
Hazardous Materials	802.1400.00	C.15	There is a recommendation that the EIS note that compliance with the International Cyanide Code is voluntary on the part of the mine operator, and that it is not necessarily applicable to cyanide transporters.	Please see response to comment 802.1400 C.4.
Hazardous Materials	802.1400.00	C.16	There is a recommendation that the leach liner conform to recommendations from other agencies and independent outside experts.	As indicated in Section 2.3.5.7 of the DEIS, the TSF liner would comply with the IDEQ Rules for Ore Processing by Cyanidation.
Hazardous Materials	802.1400.00	C.17	There is risk of release of deleterious materials from mine or mill facilities.	Please see response to comment 802.1400.00 A.10.
Hazardous Materials	802.1400.00	C.18	There is a concern that RHCAs are being identified as “spill buffer strips”.	Any spills of petroleum or reagents in transit to the site would be confined to the immediate spill site to the extent possible and the affected area would be cleaned up. Maintenance of RHCAs through location of access roads far enough from streams would afford space to contain spills at their edges but are not intended to be locations for management of spills.

Resource	Comment Code	Comment Number	Concern Statement	Response
Hazardous Materials	802.1400.00	C.19	Comments regarding onsite storage of hazmat (safety plans, inspections, protection of employees, leak containment). In addition, questions about how regulations would be enforced.	Please see response to comment 802.1400.00 A.10.
Hazardous Materials	802.1400.00	C.20	The amount of mercury containing wastes that will be produced as a result of the Project need to be disclosed including whether autoclave bricks would be hazardous waste/ Also the statement regarding mercury emission control to be revised to provide a more accurate characterization.	Section 2.3.5.6 in the DEIS describes that wastes produced in air pollution control systems would be characterized and handled on site and disposed of according to applicable state and federal regulations. This would include any mercury-containing wastes. This would also apply to other maintenance wastes, including autoclave lining material. Until operational experience is gained with the specific systems at this mill facility it would be speculative at this time to estimate the quantities of these wastes. In any case, handling of these materials is regulated by other agencies and is not part of the decision that will be made by the Forest Service.
Hazardous Materials	802.1400.00	C.21	There are concerns regarding the safety of antimony concentrate transport.	The SDEIS Section 4.7.2 includes additional information regarding antimony concentrate packaging and transportation.

Water Resources Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Water Resources	802.0100	Primary	There are differences of opinion regarding the effects of the Project on water resources. Comments express concerns that the Project will result in impacts to water resources that could negatively affect water quality, fish and wildlife populations, cultural importance, recreation, and wild character of the Salmon River plus that the restoration activity will not result in any improvement compared to current conditions. Other comments note	Impacts to water resources were described in the DEIS in Section 4.8.2 (water quantity), Section 4.9.2 (water quality), Section 4.10.2 (vegetation), Section 4.11.2 (wetlands), Section 4.12.2 (fisheries), Section 4.13.2 (wildlife), Section 4.18.2 (public health and safety), Section 4.19.2

Resource	Comment Code	Comment Number	Concern Statement	Response
			that the Project will result in improvements compared to the currently degraded site condition.	(recreation) and Section 4.23.2 (wild and scenic rivers). The SDEIS clarifies the roles of project design features, best management practices, and mitigation measures in offsetting impacts to water resources and analyzes the effectiveness of mitigation measures applied. The impact analysis presented in Section 4.9 of the SDEIS compare current water resources conditions to predicted conditions for the Project and allow for inspection of the conditions of restored site to current conditions.
Water Resources	802.0100	A.1	There are concerns that detailed designs and technical information on the construction, operation and closure of facilities and controls structures such as the tailings dam, underdrain/seepage water collection system, potential failure of the TSF underdrain, water treatment systems, and passive biotreatment systems (with their effects on methylmercury treatment and generation) are not presented in the EIS. Next, comments ask about the longevity and maintenance of control features such as liners and underdrains. Further, the analyses of the effectiveness of these controls is not presented in the EIS.	The SDEIS includes additional details regarding the tailings dam construction (Section 2.4 including Figure 2.4-10 and 2.4-11) and water treatments (Section 4.9.2). The Final EIS includes mitigation measures to address uncertainty regarding the effectiveness and durability of environmental design features and mine reclamation.
Water Resources	802.0100	A.2	Commenters note that the TSF is described as a zero-discharge facility, but the reclamation and closure plan employs water treatment for tailings solution.	The TSF and connected systems are designed to contain all tailings and inflow from precipitation without discharge to surface streams. After mine and mill closure, the tailings would continue to consolidate and drain and this water would be evaporated and/or treated. The SDEIS clarifies the role of water treatment and discharge in water management and discharge related to the operation and closure of the TSF.
Water Resources	802.0100	A.3	There are concerns that the DEIS analysis did not include a Waste Rock Management Plan.	The SDEIS incorporates the Project Development Rock Management Plan into its analysis.

Resource	Comment Code	Comment Number	Concern Statement	Response
Water Resources	802.0100	A.4	Commenters suggest inclusion of a tabulation of tailings production by year in addition to the presentation of that data in figure form.	Except for initial ramp up years when the process facility is being commissioned and legacy materials are being processed and Project-end partial production during a final year, planned annual tailings production is steady at approximately eight million tons per year. Tabulation of this information can be found in source documents, but is redundant to the narrative and figure presentation in the SDEIS.
Water Resources	802.0100	A.5	There are concerns that the regulation of groundwater and surface water discharges by IDEQ is not sufficiently discussed in the EIS, and outfall locations during operations and closure are not mapped and described. Further, the EIS does not clearly specify what types of runoff/stormwater discharge and wastewater treatment permits will be needed and which agencies will issue these permits. Additionally, there are requests that the Forest Service carefully review at a programmatic level all permits, including Clean Water Act section 404 permits, issued for construction and operation of the mine.	The SDEIS provides additional information regarding water treatment, discharge, and stormwater management through its description of the Project's Water Management Plan in Section 4.9.2. The Final EIS includes a description of the permit applications and permits available for review at the time of its development including the Air Quality Permit to Construct, Compensatory Mitigation Plan, and water quality point of compliance permit application.
Water Resources	802.0100	A.6	There are concerns that the costs for water treatment are not discussed in the EIS.	As described in Section 2.3.7 of the DEIS, the reclamation financial assurance would be determined by the U.S. Forest Service to address all Forest Service costs that would be incurred in taking over closure actions because of operator default. These costs include water management and water treatment expenditures. Provisions for future adjustment of the value of bond instruments utilized for financial assurance would be incorporated into a final plan approval.
Water Resources	802.0100	A.7	There are concerns that the EIS does not include a preliminary adaptive management plan, but allowances are made for adaptive management in designs for environmental controls.	The SDEIS includes descriptions of monitoring requirements and adaptive management for affected environmental resources (e.g., soils in Section 4.5.2, water temperature in Section 4.9.4).

Resource	Comment Code	Comment Number	Concern Statement	Response
Water Resources	802.0100	A.8	Commenters note that water balance diagrams presented do not provide quantitative flow information.	Elements of the water balance resulting in consumptive use are quantified in DEIS Table 2.3-5. Other elements of the water balance represent recycling of water between components of the ore processing system. These components have design capacities as described in Prefeasibility Study Technical Report (M3 2019). Actual instantaneous operating rates vary and would be dependent on processing requirements at any given point in time. Typical water usage rates were described in the SDEIS.
Water Resources	802.0100	A.9	There are concerns that baseline hydrologic data sets are insufficient to model baseline conditions and predict impacts. Commenters suggest there are insufficient data away from the mine vicinity (e.g., hillslopes) in the areas of subsurface geology and hydrologic properties. Further, not all available groundwater well locations were utilized in the calibration of the groundwater flow model. Next, existing seep and spring conditions were not incorporated into model as a way to predict impacts to groundwater dependent ecosystems (GDEs).	<p>DEIS Sections 3.8.3 and 3.9.3 described the baseline data sets utilized in impact analyses for water resources. These data sets included:</p> <ul style="list-style-type: none"> • stream characteristics, • stream gaging data, • seep discharge data, • alluvial and bedrock hydraulic properties, • groundwater production data, • water rights inventory, • field survey of surface water locations, • surface water chemistries, • surface water temperatures, • surface water sediment content, • IDEQ categorization of surface waters, and groundwater chemistries. <p>In addition, DEIS Section 3.3.5 described the baseline temperature and precipitation data for the Project Area.</p> <p>While surface hydrologic data is well-distributed, based on observations where water resources occur, subsurface hydrologic data is concentrated in the vicinities of mineral exploration efforts, where that data has been collected, primarily via drilling (Brown and Caldwell 2022a). This concentration of</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>site-specific data is common for mining projects, and results in the use of regional geologic maps and published hydrologic properties for typical geological formations to provide hydrogeological context and quantification for properties away from the exploration area. These quantitative hydrologic properties are refined through calibration of a numerical groundwater flow model that adjusts hydrologic parameter values of subsurface materials to reflect water level observations from associated pumping wells, monitoring wells, and piezometers.</p> <p>The selection of groundwater wells for the purpose of calibrating the site groundwater flow model was described in Brown & Caldwell 2017, 2018a, and 2019c. In general, groundwater wells for which well completion data (e.g., well casing stick-up, screened interval) were not used for model calibration was because the depth to water measurements for those wells could not be precisely associated with a water level elevation and/or geologic unit.</p> <p>Median seep discharge rates based on field measurements range from flows that are too low to quantify up to 0.21 cfs, but are typically less than 0.01 cfs at most locations. Representation of the low flow rates from localized seep locations using a groundwater flow model that employs 330-foot grid spacing is numerically unreliable. In addition, seeps and groundwater typically have a complex inter-relationship with seepage frequently related in whole or in part to shallow or perched saturated zones rather than the area water table. For this reason, potential impacts to seeps by groundwater drawdown are typically assessed by inspection of the areal extent of predicted groundwater drawdown compared to seep locations. This provides a conservative assessment of potential impacts to seeps and their groundwater dependent ecosystems</p>

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				<p>because groundwater drawdown in the vicinity of seep discharge sourced from a shallow saturated zone will not affect that discharge in actuality.</p> <p>The SDEIS updates baseline hydrogeologic data collected since publication of the DEIS.</p>
Water Resources	802.0100	A.10	<p>There are concerns that the DEIS and supporting documents failed to adequately describe existing baseline conditions for groundwater and surface water conditions. Commenters raise the following specific concerns related to this issue: The DEIS and supporting documents do not provide a conceptual model for existing ground and surface water quality conditions. The DEIS states that existing water quality has been affected by natural mineralization; however, there is no quantification of natural mineralization inputs in surface water, groundwater, or seeps. The natural baseline water quality absent historical mining impacts should be evaluated and presented in a supplemental DEIS. There is a lack of representative sampling, including from fault zones, historic heap leach pads, historic tunnels, and roads. Samples showing high arsenic and antimony releases were inappropriately discarded. There was insufficient geochemical testing of legacy waste rock material and tailings; therefore, their influence on water quality has not been captured</p>	<p>The description of baseline conditions utilized by DEIS Sections 3.8 and 3.9 was based on hydrologic and water chemistry data collected via studies referenced by those sections.</p> <p>The conceptual models for current water quantity and water quality conditions were described in DEIS Sections 3.8.1.1 and 3.9.1.1, respectively. Further details are located in hydrologic source documents (e.g., Brown & Caldwell 2017).</p> <p>The DEIS utilized water chemistry analyses to establish current baseline conditions. These baseline conditions represented the aggregate influences of natural mineralization and historical mining. While relative contributions from natural and anthropogenic sources can be inferred by examination of sample locations compared to historical activities, the usage of current baseline conditions as the initial input for water chemistry predictions associated with proposed activities under the action alternatives does not require baseline source differentiation. Impact analyses utilized the resulting net water chemistry as compared to baseline conditions and/or regulatory water quality standards.</p> <p>Source-specific water chemistry is available for some geological and anthropogenic features, however, the current water chemistry as measured at surface stream locations forms the basis for the impact analysis.</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>For the purposes of characterizing arsenic and antimony releases from leached materials, samples were selected that represented the 95th percentile for sulfide content of because the other constituents of interest correlate with sulfide content. Testing of samples from the 95th percentile of sulfide content provides a conservative estimate of future leaching conditions as tests of samples with ultra-low or ultra-high concentrations of constituents such as arsenic and antimony do not reflect the representative leaching characteristics of the overall mined material.</p> <p>The SDEIS incorporates test results for legacy materials completed subsequent to publication of the DEIS (i.e., the Phase 2 testing). These test results quantify specific inputs from these materials, however, their influence on baseline water chemistry is most directly observed in the water chemistry analyses from surface water sampling.</p>
Water Resources	802.0100	A.11	<p>There are concerns with the use of monthly PRISM data for meteorological inputs for models when shorter interval data is available from the Stibnite climate station. For example, rain-on-snow flood events are not predictable using monthly PRISM data and could impact stream channel morphology and function. Further, there are concerns that the PRISM data pre-2011 does not correlate well with local post-2010 meteorological data.</p>	<p>PRISM data was utilized for model inputs because the period of record of data available from the Stibnite climate station is relatively short (i.e., since 2010). Use of the longer data record allows for representation of more representative minimum and maximum climatic conditions at the monthly time scale utilized for the area modeling.</p> <p>Where short interval precipitation data is informative to project design features such as stormwater controls and containments, event-based rates and flows were utilized (e.g., 100-year storm events as defined by IDAPA requirements and DEIS Table 3.8-5 summary of peak stream flows).</p> <p>PRISM data does not necessarily match data collected from the site climate station because the PRISM data is reflective of conditions across the</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				region based on a 40-year record while the site station reflects a single location with a 10-year record.
Water Resources	802.0100	A.12	There are concerns that the groundwater analyses do not account for historical underground mine workings in the Project vicinity such as groundwater drainage into the EFSFSR by the Bailey Tunnel. Further, there are concerns that the water quality analyses do not include effects of the proposed diversion tunnel.	<p>Historical underground mine workings are not explicitly represented in the Project groundwater modeling. Instead, the environmental effects of the underground workings appear in the baseline conditions for the site. Model parameter selection via the calibration process which aligns the model with field measurements and observations incorporates the net effect of the underground workings on groundwater flow and chemistry. Uncertainties in the selection of model parameter values were discussed further in SDEIS Section 4.8.3.</p> <p>The proposed diversion tunnel would be located outside the highly mineralized zone that is the focus of the proposed mining. Ground support measures for the tunnel involve shotcreting the exposed materials in the walls of the tunnel to maintain a stable structure in areas of faults and fractures. These areas are the most likely to contain mineralization above background. Leaching of constituents from the concrete lined tunnel through non-mineralized materials is not anticipated to modify water chemistry of flow through the tunnel.</p>
Water Resources	802.0100	A.13	Commenters state that the EIS does not present conceptual models for water chemistry. There are concerns that natural mineralization is not sufficiently characterized to support the claim that existing water chemistry conditions are affected by natural mineralization as opposed to historical mining.	<p>The conceptual model for current water quality conditions was described in DEIS Section 3.9.1.1. Further details are located in hydrologic source documents (e.g., SRK 2017).</p> <p>Geochemical test work of samples collected from the local lithologies quantify the leaching characteristics of those materials. Based on these results, native materials have the ability to contribute constituents to water chemistry.</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				Therefore, the existing water chemistry conditions are the net effect of natural mineralization and historical mining.
Water Resources	802.0100	A.14	Commenters request a map of all drill hole locations used to characterize site geochemistry.	Figures 3.1, 3.2, and 3.3 from the SRK (2017) Stibnite Gold Project Geochemical Baseline Report presented the drill hole locations plus sample elevations and lithologies used to characterize site geochemistry.
Water Resources	802.0100	A.15	There are concerns that samples collected for geochemical testing omit some potential source lithologies such as the Stibnite stock and Bradley dump material. Further, two laboratory leach tests on legacy materials that represented the upper range of whole rock arsenic concentrations were not included. Next, there are an insufficient number of kinetic tests performed on legacy materials. Further, the waste rock generated and placed as backfill in the Scout Exploration Decline has not been characterized	<p>The SDEIS incorporates test results for legacy materials completed subsequent to publication of the DEIS (i.e., the Phase 2 testing). These test results quantify specific inputs from these materials, however, their influence on baseline water chemistry is most directly observed in the water chemistry analyses from surface water sampling.</p> <p>Geochemical testing results were incorporated into the water chemistry analysis to the extent that they were characteristic of materials that would be exposed for leaching during operations or upon site closure. In instances where materials with high whole rock or leachable constituent concentrations are destined for designed containment that inhibits their environmental exposure (e.g., the lined tailings storage facility), those leaching characteristics are not germane to water quality predictions.</p> <p>The SDEIS includes a description of the material handled in the development of the Scout Decline.</p>
Water Resources	802.0100	A.16	There are concerns that kinetic humidity cell tests were not run long enough to reach steady-state conditions.	Humidity cell tests (HCTs) were generally run for a period of 144 weeks. Termination of HCTs was based on attainment of steady effluent concentrations for a period of approximately 20 weeks and examination of the residual acid-generation potential. Forest Service review of HCT results and approval of test termination was required prior to stopping test work on any

Resource	Comment Code	Comment Number	Concern Statement	Response
				individual sample. Many of these tests were run for longer time periods than what is typical for the industry.
Water Resources	802.0100	A.17	There are concerns that analytical method detection limits that are near or above standards for Hg, Cu and nitrate are not appropriate for assessing impacts associated with those analytes.	<p>Per comments on the DEIS, the role of analytical method detection limits for mercury, copper, and nitrate are clarified in the SDEIS water chemistry analyses, where concentrations of these constituents are reported below the applied method detection limit.</p> <p>In some instances, analytical method detection limits based on standard methods are higher than the more stringent standards applied for some constituents such as mercury. In those cases, low detection limit sampling and analytical methods may be able to quantify concentrations these constituents near the levels of the regulatory standards.</p> <p>In the case of mercury, where the detection limit for the standard analytical method is an order of magnitude higher than the most stringent standard, available low detection limit analytical results are utilized for the water chemistry impact analysis.</p>
Water Resources	802.0100	A.18	Commenters suggested inclusion of the raw data for ABA, MWMP, and HCT test work as an appendix to the EIS.	The geochemical source documentation (e.g., SRK 2017, 2018b, 2019) contain the raw test data and are available for public review via the Project webpage.
Water Resources	802.0100	A.19	Commenters state that the results of PHREEQC runs plus their model inputs were not adequately described and the model source files did not execute when run. Also, antimony was not included in the runs.	The details of geochemical modeling utilizing the PHREEQC model code are described in geochemical source documentation (e.g., SRK 2018b). Source files executable by PHREEQC version 2 were also supplied for public examination. These files included antimony as a modeled constituent, allowing dissolved and solid phase reactions as described in SRK 2018b.

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Water Resources	802.0100	A.20	There are concerns that the analysis in the EIS did not incorporate sufficient stream sediment chemistry that could be material to the food chain/dietary pathways for fish. Further, there were questions regarding how monitoring methodologies required by the BNF and PNF by the National Marine Fisheries Service were applied.	<p>DEIS Section 3.9.3.1.1.6 and Tables 3.9-9 and 3.9-10 presented sediment conditions for the baseline conditions. Sediment chemistry from source documentation (MWH 2017, Table 5-12) was also incorporated into the impact analysis. In addition, analysis of effects of sediment chemistry on ecological receptors utilized analytical data generated from unfiltered water samples, where metal concentrations dissolved in the surface water plus solid concentrations in sediment suspended in the water were quantified.</p> <p>The SDEIS clarifies the description of the food chain/dietary pathways for fish based on the baseline aquatic survey (MWH 2017) that examined metal concentrations in macroinvertebrate and fish tissue.</p> <p>Methods employed for the field surveys followed Payette National Forest-modified protocol for the PACFISH/INFISH Biological Opinion (PIBO) (Henderson et al. 2005)</p>
Water Resources	802.0100	A.21	There are concerns that there are insufficient water chemistry data to account for maximum surface water concentrations and potential short-term acute toxicity for aquatic life.	<p>DEIS Section 3.9.1.1 examined the relationships between surface water analyte concentrations and flow rates in Figure 3.9-11. Most constituents exhibited relatively steady concentrations in surface water that experience temporary reductions in their concentrations in response to high flow events. Mercury concentrations differ from other analytes in that periods of high flow corresponded to temporary increases in total and dissolved mercury concentrations. However, the magnitude of the temporary increase remained below the aquatic life standard for mercury and did not approach concentrations with the potential for short-term acute toxicity for aquatic life.</p>

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Water Resources	802.0100	A.22	There are concerns that there are no Idaho or Federal antimony criteria protective of aquatic life.	Antimony criteria protective of aquatic life are near to or greater than the federal and Idaho drinking water standard of 0.006 mg/l. Therefore, the drinking water standard was conservatively applied for evaluation of antimony impacts to water quality.
Water Resources	802.0100	A.23	Commenters suggest that the effectiveness of previous and ongoing remedial actions on water quality and sediments have not been analyzed in the EIS.	The effects of previous remedial actions were reflected in the baseline measurements of water and sediment chemistry utilized by the DEIS analysis. The SDEIS discusses the effectiveness of previous remedial actions only insofar as they inform the predicted effects of proposed activities.
Water Resources	802.0100	A.24	Commenters provided accounts of their use of the EFSFSR, SFSR, and Salmon River.	No further response required. Comment general in nature.
Water Resources	802.0100	A.25	There are concerns regarding the treatment of wetland areas that are determined to be non-jurisdictional.	Impacts to jurisdictional and non-jurisdictional wetlands are included in the effects analysis of the EIS. While only impacts to jurisdictional wetlands are incorporated into Compensatory Mitigation Plan requirements, impacts to all wetland areas and their associated environmental resources are subject to disclosure as part of the NEPA analysis and mitigation requirements incorporated into the Project ROD.
Water Resources	802.0100	A.26	There are concerns that the most recent federal and state water quality standards were not utilized in the DEIS water quality analyses. Further, the aluminum, arsenic, barium, beryllium, cadmium, lead, nickel, pH, silver and zinc criteria applied are not the strictest standards.	The SDEIS clarifies the application of water quality standards to the predicted Project impacts per comments received on the DEIS.
Water Resources	802.0100	A.27	There is a recommendation to apply human health methylmercury criteria to surface water rather than aquatic life criteria.	Building on DEIS Table 4.12-7, the SDEIS clarifies the application of the human health methylmercury criteria to the analysis of impacts to fish tissue and human health. The aquatic life criteria are applied for assessment of impacts to wildlife.

Resource	Comment Code	Comment Number	Concern Statement	Response
Water Resources	802.0100	A.28	There is a recommendation to utilize fish tissue selenium concentrations in place of water-based selenium concentrations for the impacts analysis.	Selenium concentrations in baseline surface water measurements and leaching test effluents are generally below analytical method detection limits. Baseline fish tissue concentrations are well below EPA criteria and are also frequently below analytical method detection limits. Therefore, impacts associated with selenium in fish tissue are not expected, and the aquatic life selenium standard is utilized for the analysis of water quality.
Water Resources	802.0100	A.29	There are concerns that total kjeldahl nitrogen concentrations were not utilized in the water quality analyses.	Kjeldahl nitrogen measurements are utilized in the quantification of organic forms of nitrogen plus ammonia in water samples. These measurements typically do not include other inorganic nitrogen forms such as nitrate and nitrite. Leachate from mined materials contains the inorganic forms of nitrogen (i.e., ammonia, nitrate and nitrite), and these constituents are included in the water quality analysis. Organic nitrogen forms are generally not present in leachate from mined materials.
Water Resources	802.0100	A.30	There are concerns that some elements of the water quality analysis such as development rock seepage, TSF seepage and process water chemistry were not quantitatively described in the DEIS.	TSF seepage and process water chemistry were described in DEIS Table 4.9-9 while full quantitative descriptions for development rock seepage were incorporated by reference to source documents (e.g., SRK 2018a). The DEIS analysis focused on discussion of the resulting impact to surface water and groundwater concentrations in response to the seepage. The SDEIS provides the quantitative descriptions of the development rock seepage per the comment on the DEIS.
Water Resources	802.0100	A.31	There are concerns that the HCT tests were terminated prior to reaching steady state and therefore do not reflect a complete characterization of material acid-generation and acid-neutralization.	Please see response to Comment 802.0100 A.16.

Resource	Comment Code	Comment Number	Concern Statement	Response
Water Resources	802.0100	A.32	There is a concern regarding the method detection limit used for the methylmercury analysis.	The SDEIS clarifies that the methylmercury analytical detection limit utilized for the analysis is 0.1 ng/l.
Water Resources	802.0100	A.33	There is a recommendation to use particle tracking in the groundwater flow model to assess effectiveness of groundwater management systems.	An analysis of groundwater movement from mine facilities to receiving groundwater and surface waters was included in the SDEIS (Brown and Caldwell 2021e).
Water Resources	802.0100	A.34	There is a request to provide a comparison of existing contaminant sources to proposed new sources, along with proposed monitoring locations.	The SDEIS clarifies the roles of existing sources and proposed new sources in its analysis. The SDEIS also incorporates the site Water Resources Monitoring Plan into the Project description.
Water Resources	802.0100	A.35	There is a recommendation to add a summary table for water quality data from seep and spring samples.	Water chemistry data from seep and spring samples is presented in the source document Stibnite Gold Project Water Resources Summary (Brown & Caldwell 2017, Table 7-21 and Appendix B). Projected impacts to seeps and springs would be primarily related to potential reductions in water quantity rather than modifications in water chemistry. The source document is available for review through the Project webpage. Additional impact assessment was also conducted via sensitivity analysis for groundwater modeling.
Water Resources	802.0100	A.36	There is a recommendation to add a summary table for predicted water quality from proposed mine sources.	The SDEIS summarizes the predicted water chemistries from proposed mine sources in Table Tables 4.9-18 through 4.9-21.
Water Resources	802.0100	A.37	There is a recommendation to add a summary table for predicted changes in stream flows.	The SDEIS summarizes the predicted changes in stream flows as described in Section 4.8.2 in Table 4.8-4.
Water Resources	802.0100	A.38	There is a recommendation to add a summary figure of pre-impact and post-impact assessment areas for surface water resources.	SDEIS Figure 4.8-1 depicts the assessment areas for surface water resources.
Water Resources	802.0100	A.39	There is a recommendation to add a discussion of data limitations on ESA-listed species.	The SDEIS clarifies the data limitations regarding ESA-listed species on the water resources analysis.

Resource	Comment Code	Comment Number	Concern Statement	Response
Water Resources	802.0100	A.40	There are recommendations regarding the presentation of baseline surface water chemistry data in the Final EIS.	Water chemistry data from baseline surface water samples is presented in the source document Stibnite Gold Project Water Resources Summary (Brown & Caldwell 2017, Section 7.7 and Appendix B). Baseline data related to Project surface water impacts is emphasized through incorporation in the SDEIS.
Water Resources	802.0100	A.41	There is a recommendation to describe the groundwater chemistry effects associated with backfill of the Yellow Pine Pit.	The SDEIS clarifies the description of groundwater chemistry effects associated with the migration of solutes from the Yellow Pine Pit backfill as described in DEIS Section 4.9.2.1.3.
Water Resources	802.0100	A.42	There is a recommendation to include a description of the assessment of treatment and disposal of existing Yellow Pine Pit Lake water. This description would include a table of current water quality in the Yellow Pine Pit Lake.	A description of Yellow Pine Pit lake dewatering appears in the SDEIS. Existing pit lake chemistry is described in SDEIS Section 3.9.4.5.
Water Resources	802.0100	A.43	There is a recommendation to evaluate water chemistry effects of fugitive dust deposition on surface water resources.	The SDEIS describes the effects of dust deposition on surface water chemistry per comments on the DEIS.
Water Resources	802.0100	A.44	There is a recommendation to evaluate the extent and indirect impacts of the dewatering drawdown.	Predicted drawdown extent from dewatering operations was presented in the figures associated with DEIS Section 4.8.2.1.2. The SDEIS clarifies the description of the indirect impacts of that drawdown.
Water Resources	802.0100	A.45	There are concerns that there is not enough technical information and supporting data on the construction of the tailings storage facility and tailings dam to perform an adequate review. Commenters note that the DEIS and Prefeasibility Study do not provide enough information to answer such basic questions as (1) how will the dam be constructed in a downstream manner given the simultaneous development of the Hangar Flats DRSF, which will not be compacted to engineering standards; and, (2) will the proposed construction approach allow for expansion of the tailings facility in a downstream	The SDEIS includes additional information regarding tailings dam construction in Section 2.4 including Figures 2.4-10 and 2.4-11. Expansion of the proposed tailings facility is not part of the mining plan evaluated in the EIS. Any future expansion would be subject to additional NEPA analysis and permitting.

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			manner, or will dam expansion be limited to upstream-type development?	
Water Resources	802.0100	A.46	There is a recommendation to list Watershed Conditions Indicators (WCIs) numerical values in the EIS.	Baseline WCIs were described in DEIS Section 3.12.4.7.3.3 with Project effects on them described in DEIS Section 4.12.2.3.3. The WCI numerical values appear in appendix J-1 of the DEIS.
Water Resources	802.0100	B.1	Commenters request that pre-mining and post-mining potential contaminant sources be summarized and compared.	The SDEIS clarifies the roles of existing sources and proposed new sources in its analysis. The SDEIS also incorporates the site Water Resources Monitoring Plan into the Project description.
Water Resources	802.0100	B.2	There are concerns that the Forest Service has arbitrarily constrained the temporal and/or geographic scope of its effects analysis, thus omitting disclosure and evaluation of significant effects caused by the Stibnite Gold Project.	The geographic area and timeframe for the water resources impacts analysis were developed to incorporate the direct and cumulative effects of the proposed Project and its alternatives on surface water and groundwater. The SDEIS clarifies the determination of the geographic and temporal extents of the analysis.
Water Resources	802.0100	B.3	There are concerns that the EIS does not analyze potential impacts of discharge to Rapid Infiltration Basins (RIBs) on groundwater and surface water quality.	Potential impacts of RIBs discharge on surface water chemistry were described in DEIS Section 4.9.2.1.2.1. The effects of RIBs discharge are a primary impetus for active water treatment during the operational time-period as described in Alternative 2. However, in the 2021 revised mine plan RIBs were removed from the proposed mining activities. Therefore, they would not be included in the Forest Service decision on the Project.
Water Resources	802.0100	B.4	There are concerns that the rapid infiltration basins used to dispose of water pumped from pit dewatering will result in contamination of both surface and groundwater.	Water quality impacts associated with RIBs discharge are addressed via active water treatment of that discharge as described in Alternative 2 of the DEIS.
Water Resources	802.0100	B.5	There are concerns that a worst-case water balance was not incorporated into the temporary closure plan.	Facility designs incorporate water containment capacities for potential scenarios such as 100-year 24-hour storm events and extended power outages

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				that affect pump operation along with additional freeboard requirements. Requirements for water management under temporary closure are not reduced compared to the requirements under operations.
Water Resources	802.0100	B.6	There are concerns that the EIS does not analyze for potential water treatment plant failures or propose any mitigation for containment of contaminated water in the event of a water treatment plant failure.	The SDEIS clarifies the description of water treatment plant failures. Briefly, systems allow for the routing of treatment effluent back to containment in the event of a system failure or non-compliance with discharge requirements.
Water Resources	802.0100	B.7	There are concerns that assumptions regarding bedrock permeability or impermeability plus fracture zones may affect predicted impacts to groundwater, pit lake refilling, and restoration of stream flows that influence fishery resources. These include the representation of more permeable conditions around and under stream channels associated with alluvium versus less permeable bedrock conditions away from stream channels.	Hydrogeologic test work in the mine area indicates that bedrock units have low permeability characteristics and fracture zones do not result in laterally extensive areas of bedrock flow. The SDEIS and Final EIS incorporate recent data and interpretations that clarify the role of alluvial contributions to subsurface flow and stream channels. These data highlight the importance of the alluvial groundwater system relative to the bedrock in influencing water quantity and water quality conditions along with pit lake refilling. A revised pit lake refilling rate was included in the SDEIS to represent open pit modifications associated with the 2021 modified mine plan. The SDEIS provides additional details on stream restoration plans and the integration of designed and native flow channels.
Water Resources	802.0100	B.8	There are concerns that the hydrologic properties for alluvium, bedrock, and backfill used by the groundwater flow model are incorrect and not supported by data.	The ranges of hydrologic parameters used for the site alluvium and bedrock were established from aquifer testing conducted on site as described in Brown & Caldwell (2017; Section 8.4). Parameter values for numerical groundwater flow modeling were selected from these ranges based on the calibration of water levels predicted by the

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>groundwater flow model to field water level observations.</p> <p>Because pit backfill does not currently exist and cannot be directly tested, hydrologic parameter values for backfill materials were estimated based the anticipated particle size of the waste rock fines where groundwater flow would occur.</p>
Water Resources	802.0100	B.9	There are concerns that bedrock faults were not accurately represented in the groundwater flow model and in the water chemistry predictions. Further, these faults could affect the hydraulic properties of engineered liners over time.	<p>Baseline hydrology studies for the area indicate that a spatially extensive zone of groundwater flow via bedrock fractures is not present on site. Therefore, preferential flows associated with these structures do not exert a primary influence on groundwater flow and chemistry. The SDEIS presents additional hydrologic information developed, including incorporation of the Meadow Creek fault zone into the groundwater model used in the SDEIS, since the DEIS regarding bedrock structures.</p> <p>Designs of engineered liners account for fault activity and displacement within the context of the maximum credible earthquake event.</p>
Water Resources	802.0100	B.10	There are concerns that alternative model conceptualizations were not utilized to address model uncertainty and sensitivity.	<p>As described in DEIS Section 4.8.8.2.3, alternative conceptual models for the system would likely not produce significantly different predictive results or reduce uncertainties associated with model predictions.</p> <p>Instead, the uncertainty analysis determined that changes in hydraulic conductivity values utilized for the fractured bedrock unit in the numerical groundwater flow model yielded the most significant differences in predictive results. The SDEIS and Final EIS incorporate additional test data collected subsequent to the DEIS regarding the hydraulic conductivity of the bedrock units.</p>

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Water Resources	802.0100	B.11	There is a statement that the uncertainty analyses presented in DEIS Sections 4.8.8 and 4.9.8 were an appropriate acknowledgment of the modeling issue.	No further response required. Comment general in nature or a position statement.
Water Resources	802.0100	B.12	There is a concern that model uncertainty relating to long-term predictions was not acknowledged in the EIS.	The SDEIS clarifies the role of model uncertainty relating to long-term predictions.
Water Resources	802.0100	B.13	There are concerns that conceptual model assumptions are unrealistic such as movement of groundwater seepage into pit lakes and that meteoric precipitation will runoff closed development rock storage facilities instead of infiltrating through the cover and contacting development rock. Further, the infiltration versus runoff assumptions for DRSF result in an incorrect prediction of toe seepage rates	<p>The SDEIS examines predicted groundwater seepage with regard to pit lakes utilizing the revised groundwater flow model applied to the 2021 modified open pit designs.</p> <p>Meteoric water contacting the cover of a closed waste rock facility would either runoff or infiltrate into the development rock, potentially emerging as future toe seepage. The hydraulic nature of a cover, where finer grained growth materials are placed over coarser-grained waste rock, would tend to hold water in the cover layer until its moisture content reaches a level to overcome soil capillary effects and move into the coarser material under the influence of gravity. Once entering the coarser material, flow tends to move vertically down into the waste rock and away from the cover. Therefore, meteoric waters contacting the development rock would emerge as seepage rather than return to the surface cover and contribute to runoff.</p> <p>Infiltration rates resulting in toe seepage were based on a maximum daily infiltration rate for soil cover materials. Precipitation would be anticipated to infiltrate until that maximum is reached with the remaining water converting to surface runoff. Therefore, toe seepage rates would be dependent on the infiltration rate of the cover and not on the relative volume of runoff.</p>
Water Resources	802.0100	B.14	There are concerns that there is no quantitative fate and transport analysis for the migration of analytes in	The SDEIS clarifies the description of analyte migration in groundwater away from open pits.

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			groundwater away from open pits into the EFSFSR system after mining.	
Water Resources	802.0100	B.15	There are concerns that the blended aggregate chemistry is not appropriate for modeling water chemistry from DRSFs.	Placement of development rock in DRSFs would occur run-of-mine as the material is excavated from the open pit operations. Therefore, placement of different rock materials would be interspersed throughout the DRSF. Toe seepage from DRSFs originates as infiltration that moves predominantly vertically down through the placed development rock before moving laterally at the base of the DRSF, commingling with other near-vertical flow paths. The water chemistry of commingled seepage having interacted with each of the rock types within the DRSF can be predicted by weighted aggregation of leachate chemistry from the various component rock types.
Water Resources	802.0100	B.16	There are concerns that the 10-meter mixing zone applied to the seepage from DRSFs does not account for the lithologic differences below the Fiddle DRSF, Hangar Flats DRSF and West End DRSF.	The lithologic differences between DRSF's are clarified in the SDEIS.
Water Resources	802.0100	B.17	There are concerns that the post-closure modeling does not account for scenario changes such as the move from active to passive water treatment decades after closure.	The transition between water treatment approaches are clarified in the SDEIS utilizing the revised groundwater flow model applied to the modified mine plan.
Water Resources	802.0100	B.18	Commenters suggest that that the geochemical testing results are not sufficiently described in Chapter 3. Further, Chapter 3 refers to the initial geochemical test work while Chapter 4 includes the second phase of geochemical test work.	The Phase 2 geochemical test work is described consistently in the water chemistry sections of the SDEIS. The SDEIS clarifies the summary of geochemical testing results per comments received on the DEIS.
Water Resources	802.0100	B.19	Commenters suggest that the relative lithologic composition of waste rock for Alternative 1 is sufficiently described, but that the compositions for the other alternatives are not well described in Chapter 4. Further,	The SDEIS clarifies the composition of waste rock between alternatives.

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			other model inputs differences between Alternative 1 and the other alternatives are not clearly presented.	
Water Resources	802.0100	B.20	<p>Commenters suggest that the PAG analysis does not incorporate observations of acid-generation from legacy waste rock and ore material and does not account for exhaustion of neutralizing potential over time. Further, comments note that pyrite encapsulation is the more likely inhibitor of acid generation than neutralization. Further, the Neutralization Potential of Stibnite waste and ore samples has been overestimated, potentially affecting PAG calculations. Further, only one HCT test of PAG waste rock generated acidity and was therefore used to represent acidic drainage across the site</p>	<p>In general, legacy materials were not prone to acid-generation because they were related to oxidized materials nearest to the ground surface. Since the geologic mineralization event, natural oxidation processes diminished the sulfide content of those materials.</p> <p>While pyrite encapsulation is a likely inhibitor of acid-generation, neutralization potential is measured through quantification of acid-neutralizing minerals in mined materials. This quantification is independent of the effects of any pyrite encapsulation. Therefore, materials characterized as potentially acid-generating are less likely to generate acidity in actuality, as demonstrated by actual pH measurements from kinetic tests performed on mined materials.</p> <p>Because few samples subjected to kinetic tests generated acidity in actuality, there were limited test results for use in representation of acidic drainage. However, these results also imply that the amount of material resulting in acid-drainage would also be low compared to the non-acidic materials.</p>
Water Resources	802.0100	B.21	<p>There are concerns regarding the validity of applying the HCT kinetic test methodology to predict future conditions. There are suggestions that large scale field tests are more appropriate than laboratory HCT tests.</p>	<p>Humidity cell testing (HCT) is a widely accepted methodology for examining the potential for mined materials to generate acidity and/or leach solutes when exposed to atmospheric conditions. Larger scale field testing would also be informative to this forecasting and is often performed in conjunction with HCTs to assess the differences in sulfide oxidation between field and laboratory conditions. In general, laboratory testing is more aggressive in creating conditions that promote sulfide oxidation, and therefore, provides a conservative</p>

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				quantification of leachate chemistry from mined materials.
Water Resources	802.0100	B.22	There are concerns that the Phase 2 kinetic test results do not appear to have been included in the geochemical modeling	The SDEIS clarifies the utilization of the Phase 2 kinetic tests and incorporates them into the analysis.
Water Resources	802.0100	B.23	There are concerns that the exclusion of First Flush leachate chemistries is inappropriate because they may be representative of remobilization of secondary salts.	The effects of the exclusion of first flush data are described in SDEIS Section 4.9.3.
Water Resources	802.0100	B.24	There are concerns that the number and location of geochemical samples selected for test work do not adequately characterize the legacy mine materials and proposed mine materials for the water quality analysis. Further, some test work was not performed on legacy materials (e.g., MWMP on legacy waste rock, mineralogy on legacy tailings, HCT tests on legacy waste rock or tailings).	The selection of samples for geochemical testing was summarized in DEIS Section 4.9.2 with detailed information available from source documents (SRK 2017, 2019). The SDEIS clarifies the use and limitations of the test work in the water quality analysis and incorporates test data completed since the development of the DEIS.
Water Resources	802.0100	B.25	There are concerns that the tailings mix and sequence assumed for water chemistry predictions is not appropriate for the water quality analysis.	The generation of tailings from mined ore was described in DEIS Chapter 2 and is related to run-of-mine ore production. Management of tailing solution post-closure is the primary consideration of the water chemistry analysis because that solution is actively managed and recycled during operations. By that post-closure period, the tailings solution would be well-recycled, having contact each of the components in the tailings mix, diminishing the consequence of its sequence.
Water Resources	802.0100	B.26	Commenters note that there were no submerged column tests performed to represent conditions for waste rock backfill in pits that will inundate with groundwater recovery.	Waste rock placed as backfill would be exposed to atmospheric conditions for a period of years between its mining and inundation by recovering groundwater. This exposure would constitute the primary period for sulfide oxidation and generation of leachable analytes from the material. These geochemical processes were quantified by the HCT testing. Inundation by recovering groundwater typically reduces the sulfide oxidation rate, making

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				the HCT data a conservative quantification for the generation of acidity and leachable constituents from the material.
Water Resources	802.0100	B.27	There are concerns that assumed values that quantify the percentage of weathered waste rock in the development rock storage facilities and wall rock that is available for leaching by meteoric water are too low.	The masses of oxidized material in pit wall rock and development rock storage facilities are predicted based on the mass of rock contacted by groundwater and/or meteoric water. These predictions were based on the fracture nature of the pit wall rock (SRK 2018) and the particle sizes of the development rock (SRK 2017). These predictions were based on conservative estimates of wall rock fracture density and the percentage of fine-grained material in the development rock. The sensitivity of model water chemistry predictions to the mass of oxidized rock was examined and described in DEIS Section 4.9.8. Water chemistry impacts were insensitive to the predicted mass of wall rock oxidation, but were sensitive to the predicted development rock oxidized mass.
Water Resources	802.0100	B.28	There are concerns that the analytes of concern from waste rock leachate should include Al, Mn, Se and sulfate in addition to Sb and As.	As described in DEIS Section 4.9.2 and the source model document (SRK 2018, Section 4), predicted concentrations of aluminum, manganese, selenium, and sulfate were below the strictest potentially applicable surface water standard for those constituents. Therefore, they were not included as analytes of concern in the analysis.
Water Resources	802.0100	B.29	There are concerns that leaching assumptions for closed waste rock facilities, tailings and pit walls underestimate future Hg mobilization to surface waters.	The mercury leaching potential for mined materials was based on the kinetic testing of those materials. Under typical atmospheric and groundwater conditions, mercury leachate concentrations are controlled by its low water solubility. However, application of stringent water quality standards identified the need for water treatment to reduce the dissolved mercury concentrations mobilized from mined materials.

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				The role of water treatment in managing mercury leachate is clarified in the SDEIS. In addition, the role of mercury concentrations in reclamation cover materials is further discussed in the SDEIS.
Water Resources	802.0100	B.30	There are concerns that the water chemistry effects of wastewater treatment sludges were not included in the water quality analysis.	The SDEIS clarifies the water treatment processes including the disposition of wastewater treatment sludges.
Water Resources	802.0100	B.31	There are concerns that the water chemistry model is not well calibrated. Further, the application of measured versus predicted water quality existing conditions for average flow conditions differs from the application for minimum and maximum flow conditions.	The SDEIS updates the surface water chemistry model calibration utilizing data collected since the development of the DEIS.
Water Resources	802.0100	B.32	There were concerns that the sensitivity analysis for water chemistry predictions did not evaluate some material model inputs (e.g., sensitivity to leachate concentrations, temperature effects on bacterial enhanced analyte release from mined materials, dewatering pumping rates, infiltration through covers and liners, infiltration through DRSF into pit lakes, surface water inflows to pit lakes, salinity effects on pit lake mixing, evolving pit wall runoff chemistry over time, changes in pit backfill composition, percentage of fine particles in mine wastes, application of minimum, average and maximum flow conditions, more rapid or more prolonged snowmelt, lower total snowmelt inflows, wildfire contributions of sediment, turbidity and mercury, changes in organic carbon that could affect bioavailability).	<p>The sensitivity analysis for water chemistry predictions was described in DEIS Section 4.9.8. In that description, model sensitivity to leachate concentrations attributable to the mass of oxidized rock, flow conditions (e.g., infiltration) and temperature were specifically identified and discussed.</p> <p>With predicted pit lake TDS values below 300 mg/l, salinity effects on pit lake mixing would be negligible because TDS concentrations greater than tens of thousands mg/l are needed to create water density differentials that would affect mixing.</p> <p>Wildfire contributions to water chemistry were described in DEIS Section 4.1.8. The SDEIS clarifies those contributions while updating that section to incorporate fire activity since the development of the DEIS.</p>
Water Resources	802.0100	B.33	There are concerns that the EIS analysis does not include a comparison of pre- and post-mining TMDLs as requested via a scoping comment. Further, the TMDL discussion does not examine previous sediment reduction projects, the success of those efforts, the current sediment	DEIS Section 4.9.2.2 described the current application of TMDLs to water quality criteria as applied by IDEQ. Establishment of TMDLs is outside the regulatory purview of the Forest Service

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			load, and the projected sediment load (including metal and other pollutant content) following Project implementation.	<p>as the IDEQ sets those limits for sub-basins in the management area.</p> <p>Any modifications in the analyzed project design required to meet TMDLs established by IDEQ could require additional NEPA analysis if they fall outside the authorized use of National Forest System lands established by the Project ROD.</p> <p>Previous sediment reduction projects were reflected in the current sediment contents as described in DEIS Section 3.9.3.1.1.6 while predicted sediment load attributable to the Project was described in DEIS Sections 4.5.2, 4.8.2 and 4.9.2. The SDEIS clarifies the role and effectiveness of design features, best management practices and mitigation measures in controlling sediment, utilizing previous experience in the identification of those controls.</p>
Water Resources	802.0100	B.34	There are concerns that the analytes of concern for impacts to fish were limited to five metals when there are multiple other analytes of concern to salmonids and other aquatic life.	DEIS Section 4.12.2.3.2.1 described the analytes of concern for impacts to fish included metals, spilled materials, turbidity, and temperature.
Water Resources	802.0100	B.35	There are concerns that analyses of the ammonia nitrate and phosphorus species were not performed.	In general, measurements of these analytes during baseline and Project geochemical characterization were well-below water quality criteria and frequently below analytical method detection limits. Therefore, they were not analyzed in detail as potential water quality impacts. The SDEIS clarifies the analyses of ammonia and phosphorus species.
Water Resources	802.0100	B.36	There are concerns that the impacts to salmonids due to groundwater chemistry changes are not analyzed. Groundwater and hyporheic inputs increase salmonid incubation and emergence success due to their temperature and oxygen profiles.	<p>Groundwater inputs were included in the predicted surface water chemistry and temperature for the impact analysis as described in DEIS Section 4.9.1 and source documents (Brown & Caldwell 2019a).</p> <p>Temperature effects on salmonids were described in DEIS Section 4.12.2.</p>

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Water Resources	802.0100	B.37	There are concerns that the antimony speciation's role in toxicity to humans and aquatic biota was not accounted for because no speciation data for water samples was reported.	Based on published data for the site, dissolved antimony occurs predominantly in its oxidized form [Sb(V)] under baseline conditions. This would also be expected the predominant species under the Project alternatives. Sb(V) is the antimony species on which toxicity criteria are based.
Water Resources	802.0100	B.38	There are concerns that consumptive uses of water resources via forced evaporation and proposed revisions to potable water needs have not been accounted for in the analysis of water rights availability for consumptive use.	The consumptive water use for the Project was described in DEIS Table 2.3-5. These uses account directly for potable water. Any forced evaporation would be applied to water consumed by ore processing, such as a means to dispose of that process solution. Therefore, that use is accounted for within the ore processing component of the water balance.
Water Resources	802.0100	B.39	There are concerns that the SFA did not strictly adhere to the PNF Watershed Condition Indicators as required under consultation agreements with USFWS and NOAA Fisheries. While this information appears in the DEIS, the FS does not describe the adequacy of the SFA in representing stream functionality in the alternatives analyzed or the long and short-term effectiveness of measures at restoring stream functionality and mitigating impacts. Lastly, the DEIS discussion does not adequately describe how indicators affect each other, how filters were used to affect the SFA ledger, assumptions made, and increases in some indicator units may lead to decreases in other indicators. Therefore, a plan that prioritizes low cost indicators may have resulted.	<p>The SDEIS clarifies the mitigation measures employed to restore stream functionality along with their effectiveness. As part of this clarification, the utilization of the SFA is further described per comments received on the DEIS.</p> <p>The SDEIS analyses did not utilize the SFA ledger in its evaluation of Project effects. The SDEIS analysis utilized different tools as described in Section 4.12.2.</p>
Water Resources	802.0100	B.40	There are concerns that the EIS does not analyze the human health risks associated with ingestion of and dermal contact with EFSFSR water by recreational users over multiple days. There are recommendations that monitoring include mercury, antimony and arsenic along with other required drinking water constituents.	Under planned operating and closure conditions, water quality of surface flow departing the site would be the same or better than baseline conditions. Therefore, there would be no change in potential human health impacts from dermal contact or ingestion of river water downstream.

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				The Project's Water Resources Monitoring Plan incorporates monitoring for antimony, arsenic and mercury.
Water Resources	802.0100	B.41	There are concerns that Sections 3.23 and 4.23 exclude the Salmon River from its analysis while analyzing its tributary. Likewise, potential impacts in Burntlog Creek are not included in the analysis of Johnson Creek downstream of Burntlog Creek.	The SDEIS provides additional information regarding the location of the main Salmon River and Burntlog Creek outside the analysis area of EIS because the extent of predicted impacts do not reach those areas.
Water Resources	802.0100	B.42	There are concerns that the riparian vegetation shading effects on water temperature have not been correctly applied in the Stream and Pit Lake Network Temperature model.	The SDEIS clarifies the application of riparian vegetation shading affects to the Stream and Pit Lake Network Temperature model.
Water Resources	802.0100	B.43	There is a concern that the impacts of extreme weather events that could transport metals and sediment downstream have not been analyzed relative to ESA listed populations in lower reaches of the EFSFSR, SFSR, and Salmon River.	<p>The weather events included in the design and analysis of the Project were described in DEIS Section 2.3.5. The most common weather event utilized is the 100-year, 24-hour storm event which was utilized primarily for the design of the water management system components.</p> <p>In addition, the site-wide water balance model utilizes monthly precipitation observations for the area from 1896 to 2017 to incorporate longer-scale events into the site water balance.</p> <p>Predicted impacts associated with these weather events did not extend downstream to lower reaches of the EFSFSR, SFSR or Salmon River. This is largely due to the design and sizing of water management infrastructure to contain process solution, seepage and sediment under these weather conditions.</p>
Water Resources	802.0100	B.44	There are concerns that the suitability studies of affected potential Wild and Scenic Rivers must be conducted prior to approval of any action alternatives associated with the Stibnite Gold Project.	See responses to comments 802.1003 C.1 (Wild & Scenic Rivers), 802.1003 C.2 (Wild & Scenic Rivers), and 802.0800 C.3 (Recreation).

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Water Resources	802.0100	B.45	There is a concern that the methylation rate for mercury has been underestimated in the EIS analysis.	The methylation rate used for the impact analysis represents a conservative rate developed from published site-specific observations of collocated mercury and methylmercury. In addition, changes in surface water sulfate concentrations attributable to the Project have limited potential increase in the methylation rate compared to baseline conditions which is accounted for in the conservatism in the rate utilized.
Water Resources	802.0100	B.46	There is a concern that the effects of air-deposition on surface water mercury concentrations has not been included in the EIS analysis.	SDEIS Section 4.9.2 describes the potential effects of air deposition of surface water mercury concentrations.
Water Resources	802.0100	B.47	There is a statement that use of a Neutralizing Potential Ratio of 1.5 to differentiate between PAG and non-PAG material does not align with the GARD Guide.	<p>The utilization of the Neutralizing Potential Ratio of 1.5 is based on comparison of site-specific static and kinetic testing that demonstrated that site mined materials are predominantly non-acid-generating.</p> <p>A sensitivity analysis utilizing a 2.0 Neutralizing Potential Ratio did not significantly affect the PAG categorization of mined materials as described in DEIS Section 4.9.8.</p> <p>The citation to the GARD Guide has been removed from the SDEIS.</p>
Water Resources	802.0100	B.48	<p>There are concerns that the purpose and need and no action alternative ignore the fact that the Project site currently violates water quality and other environmental standards. Commenters state that the "agencies must consider the cleanup/remediation of the site as their first obligation under the Clean Water Act, 1897 Organic Act, the NFMA, NEPA, and other applicable laws/regulations (as well as its Treaty obligations), which the DEIS fails to do." (Save the South Fork Salmon letter p. 82).</p> <p>Commenters note that the Forest Service and Midas Gold are under an outstanding obligation to remediate the Project site and therefore, the agency cannot conclude that the no action alternative would result in continuation</p>	<p>Please also see the responses in Federal Laws and Regulations section.</p> <p>Existing activities such as the ASAOC were considered as part of the No Action Alternative, but unspecified potential future activities would be speculative and were not considered.</p>

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			of the current contaminated conditions. The no action alternative should be based on what the area will look like after a mandated cleanup is implemented, not on existing degraded conditions. There is a request that the Forest Service review and consider a cleanup/remediation plan that does not involve additional/new mineral extraction.	
Water Resources	802.0100	B.49	There are concerns that the assessment of surface water quality presumes a mixing zone based on the location of the downstream monitoring location.	<p>Surface water chemistry concentrations are predicted at discrete locations (referred to as nodes) in the surface water stream. As such, predicted analyte concentrations at each node are a result of geochemical mixing of the surface water sources upstream of that node.</p> <p>The most downstream node in the model is located downstream of the proposed mine activity and thereby incorporates any inflow occurring between the mine activity and the node. This inflow represents less than six percent of the flow at that downstream node. Therefore, mixing with that influent water has limited influence on predicted analyte concentrations at the downstream node.</p>
Water Resources	802.0100	C.1	There are concerns regarding the effects of diverting runoff for consumptive use on surface water baseflows.	The SDEIS includes more information regarding the water rights application filed subsequent to the DEIS and the effects of diverting runoff on surface water flow.
Water Resources	802.0100	C.2	Commenters suggest that effects of legacy mine wastes have impacted groundwater quality throughout the entire valley, and that the assessment of Project impacts underestimates the spatial extent of future impacts. Further, they suggest that historical heap leach operations are the source of Hg in groundwater due to mobilization by cyanide solution.	<p>Existing groundwater chemistry conditions were described in DEIS Section 3.9.1.1.2. This description acknowledged the role of legacy mine wastes in contributing constituents to groundwater.</p> <p>The spatial extent of predicted groundwater impacts of the proposed Project was determined through use of the revised numerical groundwater flow and geochemical models applied to the 2021 modified mine plan. The nature and extent of groundwater impacts are influenced by project design features,</p>

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				best management practices, and mitigation measures that were generally not in place during the historic mining. Therefore, the extent of historic mining impacts would not correlate with the extent of impacts associated with the proposed Project.
Water Resources	802.0100	C.3	There are concerns that mine operations will reconfigure the Project Area into a “hanging valley” that stores mine waste in a valley bottom that is susceptible to chemical mobilization of water quality contaminants and physical erosion of mined materials and control structures.	The Project incorporates design features, best management practices, and mitigation measures to establish the controls that address physical and chemical stability of the mine wastes. The SDEIS clarifies the roles of these measures and describes their effectiveness as controls.
Water Resources	802.0100	C.4	There are concerns regarding mobilization of analytes when legacy materials are moved.	Removal of legacy materials would occur under the Environmental Legacy Management Plan. This Plan incorporates controls to inhibit the mobilization of analytes during removal. The SDEIS incorporates the plan into its description of water quality effects of the proposed Project.
Water Resources	802.0100	C.5	There are concerns that the SODA materials to be used in the tailings impoundment embankment would release arsenic, antimony and mercury when leached. Further, construction materials will leach arsenic and antimony.	<p>The disposition of SODA materials is a component of the Environmental Legacy Management Plan that describes the characterization and routing of those materials, including their potential use in the tailings impoundment. Mobilization of arsenic, antimony, and mercury are concerns addressed by the Plan and its associated controls on those materials.</p> <p>Leaching potential of arsenic and antimony from materials utilized for construction such as road materials was examined (SRK 2021). Use of native materials outside the orebodies results in leaching conditions similar to baseline conditions.</p>
Water Resources	802.0100	C.6	There are concerns that the restoration of surface water drainages will not be equivalent to restoration of wetland functionality due to the absence of secondary channels and woody debris, ineffectiveness of erosion/sediment controls, ineffectiveness of non-dynamic, non-porous	The Restored Stream Channel design is part of the Compensatory Mitigation Plan for wetlands. The restored streams and wetlands include features (e.g., wood debris) to restore wetland functionality. The effectiveness of the restored channels in restoring

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			control structures or because the relatively flat gradients across reclaimed mine areas are out of character with natural stream reaches.	functionality would be subject to monitoring prior to acceptance of the restoration as complete.
Water Resources	802.0100	C.7	There are concerns that comparison of post-mining water chemistry to existing conditions are not appropriate and that water chemistry should be compared to a remediation of the existing condition. Further, there are concerns that the resulting water chemistry in the EFSFSR are not sufficiently presented and discussed in the EIS.	The predicted water chemistry effect on the EFSFSR associated with the proposed Project was presented in DEIS Section 4.9.2.1.2. Predicted constituent concentrations were compared to both regulatory standards and baseline conditions to inform the impact analyses for water quality. Comparison to regulatory standards identified the impact potential of constituents on water resources while comparison to baseline conditions described the potential for constituents to modify the current conditions. Neither past remediation efforts nor the current ASAOC developed a prediction of water chemistry resulting from those actions. Therefore, comparison to regulatory standards offered a conservative assessment for the water quality impacts of the Project.
Water Resources	802.0100	C.8	There are supportive comments that the restoration plan would reduce metal-loading to surface water and groundwater.	Comment noted. The changes in metal-loading to surface water and groundwater were described in DEIS Section 4.9.2.
Water Resources	802.0100	C.9	There are concerns that without functioning underdrain systems for the TSF and DRSF's, groundwater contamination would occur.	Underdrains are design features associated with the proposed mine waste storage facilities to control drainage and protect groundwater. The effectiveness of these systems would be tracked utilizing the Project's Water Management Plan and Water Resources Monitoring Plan to identify potential for groundwater contamination during operations.
Water Resources	802.0100	C.10	There are concerns that seepage rates from facilities such as the Fiddle DRSF would be greater than could be feasibly treated by passive biotreatment systems. Further,	Passive treatment systems have an associated flow rate at which they are effective and beyond which treatment reactions do not have sufficient time to occur.

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			there are concerns regarding the fate of metals sequestered in the passive treatment systems.	Metals sequestered in passive treatment systems are stable with low susceptibility to leaching unless the geochemical conditions of the system are disrupted, promoting oxidation of the system and re-mobilization of metals. The SDEIS clarifies the description of the passive treatment systems designs and their associated flow rates.
Water Resources	802.0100	C.11	There are concerns that the long-term or perpetual treatment of water pollution described in the DEIS has not been adequately analyzed and that the public must have an opportunity to comment on final treatment issues before issuance of a final EIS. Additionally, there are concerns that the need for perpetual water treatment means that the operation would never be fully reclaimed, in violation of the requirements of the Organic Act, National Forest Management Act, Clean Water Act, and agency regulations (36 CFR 228, 36 CFR 251, and 36 CFR 261).	The SDEIS provides additional information regarding water treatment in Section 4.9.2. This water treatment is expected to be required for a period of 40 years and is no longer expected to be perpetual due to changes in the mine plan such as elimination of sources such as the Fiddle Development Rock Facility and placement of additional geosynthetic liners as part of mine closure.
Water Resources	802.0100	C.12	There are concerns that the Stibnite Gold Project and the DEIS fails to comply with all of the requirements of the Payette and Boise National Forest Land and Resource Management Plans (Forest Plans), in violation of the National Forest Management Act (NFMA) and NEPA. Commenters state that the July 2019 draft Forest Plan consistency table identified approximately 175 different Forest Plan provisions that apply to the Stibnite Gold Project, but which either the Forest Service determined would not be met or was unsure whether they would be met. There are concerns that the DEIS fails to acknowledge this and glosses over the Forest Plan consistency issues in Appendix A. Commenters provide specific examples of Forest Plan provisions that the Project may violate, but which are not mentioned in the DEIS, including: standards designed to protect riparian areas and streams, specifically Riparian Conservation	Please see response to Comment 801.0301.01 C.6, Forest Plan Amendments.

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			<p>Areas; standards MIST08 and MIST09; mining provisions (see PNF Forest Plan pp. III-48 - III-51); provisions designed to protect threatened, endangered, proposed, and candidate species; air quality, soil, water, riparian, and aquatic resources; wildlife; vegetation, botanical resources, and non-native plants; and other public land values. Commenters state that the Forest Service must consider the relevant Forest Plan provisions and explain to the public how the Project complies with them; and where it does not comply, make changes to the Project, reject the Project, or amend the Forest Plan.</p>	
Water Resources	802.0100	C.13	<p>There are concerns that proposed Forest Plan amendment 1 would violate the substantive standards in the 2012 Planning Rule, thus violating NFMA. Additionally, there are concerns that an analysis of the full impacts of the proposed amendment 1 are not disclosed in the DEIS. Commenters identify the following issues related to this concern: The Project could last into perpetuity (e.g., post-reclamation water treatment); therefore, indefinite and in-perpetuity timeframes should be included in the timeframes for the proposed amendment. Project-specific amendments are not appropriate for indefinite amendments to the Forest Plan. The Project will affect aquatic and watershed resources beyond the management areas proposed for amendment; however, the DEIS has failed to evaluate impacts at a larger geographic scale. By failing to include impacts beyond the mine site, the geographic scope of the proposed amendment was unreasonably narrow and the true impacts of this proposed amendment were neither considered nor disclosed to the public. Proposed mitigations do not sufficiently minimize impacts to avoid degradation and the DEIS does not include analysis of specific mitigations. This amendment is not based on the best available science as required by 36 CFR 219.13(5)(I). This amendment is not consistent with the substantive requirements of the 2012 Planning Rule. First, the</p>	<p>Please see response to Comment 801.0301.01. C.9, Forest Plan Amendments.</p>

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			<p>proposed amendment does not meet the requirement to maintain or restore ecological integrity. Although the DEIS states that the amendment meets this requirement, commenters state that the DEIS instead documents exceedances in water quality and blocked fish habitat and does not describe how ecosystem integrity would be restored during operations and after closure. Commenters cite inadequacy of analyses of potential impacts to fisheries and water quality as demonstrating inconsistency with meeting the 2012 Planning Rule's substantive requirements. Second, the proposed amendment does not meet the requirement for ecosystem integrity for air, soil, and water. Commenters cite adverse impacts to water quality as demonstrating that the amendment is not consistent with the requirement. Third, the proposed amendment does not meet the ecosystem integrity component under the diversity of plant and animal communities requirement. Commenters state that the physical habitat impacts from mining are underestimated and that the DEIS assumes no interactions among impacts, leading to a serious underestimate of impacts to fishes and their habitat, demonstrating inconsistency with the 2012 Planning Rule. Fourth, the proposed amendment fails to be in accordance with substantive provisions on ecosystem diversity. Fifth, there are additional species-specific plan components that are problematic with respect to proposed amendment 1. Commenters cite specific requirements of the 2012 Planning Rule and ways in which the DEIS fails to show consistency. Finally, the proposed amendment is not in accordance with the substantive requirement for integrated resource management for multiple use.</p>	
Water Resources	802.0100	C.14	<p>There are concerns that the long-term or perpetual treatment of water pollution described in the DEIS has not been adequately analyzed and that the public must have an opportunity to comment on final treatment issues before issuance of a final EIS. Additionally, there are</p>	<p>Please see response to Comment 801.0301.01 C.9., Forest Plan Amendments.</p> <p>The SDEIS clarifies the effectiveness of the water treatment plant performance along with the controls</p>

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			<p>concerns that the need for perpetual water treatment means that the operation would never be fully reclaimed, in violation of the requirements of the Organic Act, National Forest Management Act, Clean Water Act, and agency regulations (36 CFR 228, 36 CFR 251, and 36 CFR 261).</p> <p>Commenters state that the costs associated with perpetual water treatment often make up the majority of the financial assurance bond and can often fall upon taxpayers; therefore, careful analysis of the potential liabilities is critical.</p> <p>Commenters provide examples in support of the assertion that the analysis is inadequate: Little technical information is provided on the either the active or passive treatment methods. There is uncertainty related to the production of methylmercury in the passive system and no information is provided on methods to remove methylmercury if it is produced.</p> <p>A reliable water balance has not been put forth, calling into question the premise that the temporary storage facility is a zero-discharge facility during operations. Climate change is not considered in the water balance model for the temporary storage facility.</p> <p>While adaptive management would be used to allow for updating the temporary storage facility, not even a preliminary adaptive management plan is available. Neither the water treatment evaluation nor the water balance include an estimate of the volume and concentration of contact water that could escape capture.</p> <p>Perpetual water treatment has been omitted from alternatives 1, 3, and 4, but the DEIS does not elaborate on the rationale for this omission. The perpetual water treatment liabilities should be characterized for all alternatives.</p>	<p>and practices in place to manage upset conditions as described in the Project's Water Management Plan.</p> <p>The costs associated with long-term operation and maintenance of the approved water treatment plants would be incorporated into the financial surety of the Project.</p> <p>The Project Water Management Plan has been incorporated into the SDEIS to describe the capture of contact water and the controls and practices in place to manage upset conditions.</p> <p>The SDEIS includes additional information regarding water treatment including the application of active and passive measures. Implications of the treatment processes on methylmercury production are also discussed.</p> <p>The roles of temporary storage, water treatment and discharge are clarified in the SDEIS. The tailings facility will not discharge during operations but will utilize water treatment and discharge to achieve closure. The water balance utilized for project development includes examination of wetter and dryer than average time periods in addition go conditions based on recorded data.</p> <p>The Water Management Plan has been incorporated into the SDEIS document. This Plan describes the operation and monitoring of water management activity including the capture of contact water and water treatment. Any contact water not reporting to designed capture areas would be considered a spill and covered under the Project's Spill Response Plan.</p> <p>In the SDEIS, water treatment requirements are incorporated into all action alternatives either as part of the alternative description or as a required</p>

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			<p>Commenters provide a list of information that they assert should be included for alternatives 1, 3, and 4. There are shortcomings in the characterization of water quality and quantity of the sources requiring treatment.</p> <p>The DEIS does not adequately discuss the treatment of post-closure flow from the development rock storage facilities.</p>	<p>mitigation measure. Therefore, the residual water quality impacts for action alternatives all include the effects of water treatment.</p> <p>The SDEIS clarifies the descriptions of water sources including their quantity, chemistry, treatment requirements, and the anticipated effectiveness of that water treatment. These sources include post-closure seepage from development rock storage facilities among the other Project water sources from the operational and closure periods.</p>
Water Resources	802.0100	C.15	<p>There are comments recommending that the Forest Service develop alternatives that "evaluate additional mitigation measures to ensure that contaminated water isn't released in the event of a water treatment plant failure, and that financial assurance is in place to cover the full cost of these back-up systems, as well as the regular replacement of water treatment systems during post-closure, etc." (Save the South Fork Salmon letter p. 84). This alternative would address concerns related to uncertainties associated with long term water treatment systems for mines.</p>	<p>The SDEIS clarifies the effectiveness of the water treatment plant performance along with the controls and practices in place to manage upset conditions as described in the Project's Water Management Plan.</p> <p>The costs associated with long-term operation and maintenance of the approved water treatment plants would be incorporated into the financial surety of the Project.</p>
Water Resources	802.0100	C.16	<p>There are concerns that the proposed mitigation measures are not adequate to offset the negative impacts of the Project. Additionally, there are concerns that the DEIS assumes that mitigation and restoration efforts are possible and effective, while experience shows that habitat restoration and mitigation are difficult, expensive, and often ineffective. There are concerns that the DEIS violates NEPA by failing to provide analytical data and discussion about the effectiveness of the mitigation measures.</p>	<p>The SDEIS describes the effectiveness of mitigation measures and discusses the uncertainty in the effective implementation of those measures.</p>
Water Resources	802.0100	C.17	<p>There are concerns that contact water would not be fully captured and hence, not fully treated. This could result in a departure from predicted water chemistry.</p>	<p>The Project Water Management Plan has been incorporated into the SDEIS to describe the capture of contact water and the controls and practices in place to manage upset conditions.</p>

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Water Resources	802.0100	C.18	There are concerns that installed liner/underdrain systems will not be 100% effective at avoiding discharges to groundwater that is hydrologically connected to surface water.	The SDEIS describes the effectiveness of liner and underdrain systems in protecting groundwater. This description incorporates aspects of the Project's Water Management Plan and Water Resources Monitoring Plan that will implement those systems under operations.
Water Resources	802.0100	C.19	There are concerns that water quality impacts could be worse than predicted. Further, the proposed mining includes sulfide materials which could have the potential to generate acid-mine drainage unlike the historically mined materials which were primarily oxidized.	The sulfide characteristics of the mined materials were examined via accepted static and kinetic geochemical testing. While mined materials associated with the Project contain sulfides, that content is not high enough to result in acid-generation in most cases. The effects of the materials that are identified with the potential for acid-generation have been incorporated into the project design and environmental controls (e.g., the Project's Development Rock Management Plan and Water Resources Monitoring Plan). In general, water quality impacts associated with the Project would be more related to the neutral pH leaching of arsenic, antimony, and mercury than with acid-generation. Therefore, the prediction of impacts associated with these constituents was the focus of uncertainty analysis described in DEIS Section 4.9.8.
Water Resources	802.0100	C.20	There are supportive comments that traffic has been routed to avoid impacts to waterways.	No further response required. Comment general in nature or a position statement.
Water Resources	802.0100	C.21	There are concerns that the ROW infrastructure impacts on sedimentation and stream temperatures have not been considered, and there are no applicable mitigation measures for impacts mentioned in Appendix D of the DEIS. Potential mitigation measures would include hardened stream crossings, bridges, seasonal construction restrictions, use of Riparian Habitat Conservation Areas, and turbidity monitors.	The impacts of infrastructure on surface waters were described in DEIS Sections 4.9.2.1.2.2 and 4.9.2.1.2.3. The SDEIS clarifies the descriptions of protective design features, best management practices, and mitigation measures including culverts, crossing and bridges, and describes the effectiveness of this measures.

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Water Resources	802.0100	C.22	There are concerns that there is no known use of a Riparian Habitat Conservation Area to buffer spills, especially for gasoline or diesel fuel. In addition, there are concerns that RHCAs will not be suitable to buffer sedimentation.	The SDEIS re-examines the spill risk potential and environmental effects. The analysis no longer considers the effects of RHCAs as buffers for spills and sedimentation.
Water Resources	802.0100	C.23	There are concerns that Burntlog road specific sediment mitigation measures and monitoring methods are not provided for culvert/bridge replacement and road prism construction for fill slopes, cut slopes, road surface and road ditch lines.	The SDEIS clarifies the descriptions of design feature, best management practices, and mitigation measures pertaining to potential impacts associated with the Burntlog Road. The NEPA analysis and the ROD will incorporate these requirements into the Project, but a complete, for-construction design would not be a requirement for Forest Service project approval.
Water Resources	802.0100	C.24	There are concerns regarding the collection of natural and anthropogenic debris in road construction borrow pits and the effects of that debris on water quality. Further, the comment suggests clearing of the debris from borrow pits as an environmental measure.	Management of waste and debris associated with the Project Area was described in DEIS Sections 2.3.5.10 and 2.3.5.11. Clearing of debris would be conducted in accordance with Valley County, Idaho, and federal standards.
Water Resources	802.0100	C.25	There are concerns regarding the compensatory mitigation proposed for the Project. One concern is that there is a temporal deficit, specifically that negative effects of the Project will outweigh compensatory mitigation measures until at least year 16 of operations. Another concern is that the DEIS fails to explain how continued or expanded mining operations would affect the compensatory mitigation program. Another concern is that the DEIS has not conducted a thorough review of the ratios needed to fully offset impacts, and the Forest Service needs to describe the failure rate for the different wetland types being restored and adjust the mitigation ratios and long term monitoring and enforcement plans accordingly. Lastly there are concerns about the durability of the site protection instruments.	<p>Approval of compensatory mitigation for the Project considers the spatial and temporal loss of functionality and incorporates requirements for offsetting that loss into the Project's 404 permit per a process administered by the U.S. Army Corps of Engineers.</p> <p>Expansion of mining operations not included in the Project's ROD or mitigation requirements would necessitate additional NEPA analysis and permit modification.</p> <p>The SDEIS clarifies the analysis and assumptions made regarding the implementation effectiveness of mitigation measures including the failure rates for different mitigation activities. These clarifications include description of the durability and monitoring requirements for environmental measures.</p>

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Water Resources	802.0100	C.26	There are comments supporting Alternative 4 because this alternative avoids wetland impacts and excludes fish from the mine site, thus reducing impacts to fish.	No further response required. Comment general in nature or a position statement.
Water Resources	802.0100	C.27	There are concerns regarding spills from truck traffic into surface waters and the effects of any spills on wildlife.	The impacts of spills on surface water and wildlife were described in DEIS Sections 4.9.2.2.2.2 and 4.12.2. The SDEIS clarifies the descriptions of design features, best management practices, and mitigation measures aimed at reducing spills and remediating spill material. The analysis incorporates the Project's Transportation Risk Management Plan and spill response plans into the Project approval via the ROD.
Water Resources	802.0100	C.28	There are concerns that the impacts of headwater and upstream habitats on downstream habitats have been underestimated.	The extent of impact analysis downstream is constrained by the extent that predicted effects of the Project differ from baseline conditions. From the location that baseline and Project conditions are consistent, downstream effects are also expected to be consistent.
Water Resources	802.0100	C.29	There are concerns regarding the temperature and water chemistry of recycled wastewater and pit lakes and its effects on aquatic organisms. Comments request more information regarding mitigation of the water chemistry affects.	<p>The pit lake water chemistry was described in DEIS Section 4.9.2.1.2.1 plus Figures 4.9-2 and 4.9-3. Under operating conditions, recycled wastewater would not be discharged to the environment without treatment to attain discharge standards.</p> <p>The effects of the Project related changes in water chemistry on aquatic organisms was described in DEIS Section 4.12.2. Water treatment requirements are applied to the Project so that surface water chemistry meets standards protective of aquatic life.</p> <p>The SDEIS clarifies the descriptions of project design components, best management practices and mitigation measures and the effectiveness of those measures on controlling water chemistry affects. Per comments on the DEIS, the SDEIS specifically</p>

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				examines the potential groundwater migration from pit lakes and its potential to affect water resources.
Water Resources	802.0100	C.30	There are concerns that the relative impacts to seeps and springs between action alternatives are not correctly characterized because of the variability in seep and spring flows.	<p>Impacts to seeps and springs are primarily associated either directly with Project disturbance or indirectly with groundwater dewatering, dust, and sedimentation. The effects of alternative project footprints on surface water resources were described in DEIS Section 4.10.2.</p> <p>Because dewatering requirements for the action alternatives in the DEIS were identical, there are no differences in predicted dewatering impacts between DEIS alternatives. The ModPRO2 alternative incorporated in the SDEIS does include a different dewatering requirement that was evaluated for its environmental effects.</p> <p>Natural variability in seep and spring flows introduces uncertainty into the prediction of impacts associated with Project alternatives. Seep and spring locations may be hydraulically connected or disconnected from the groundwater areas affected by mine dewatering. Therefore, the potential for these impacts is incorporated in site water resources monitoring to identify Project effects on these surface water resources.</p> <p>Differences in dust and sedimentation effects under the action alternatives were described in DEIS Sections 4.3.2 and 4.9.2.</p>
Water Resources	802.0100	C.31	There are general concerns regarding negative impacts of mining on fish populations, including species that are federally listed under the Endangered Species Act.	Impacts of the proposed Project and alternatives were described in DEIS Section 4.12.2 and relate to changes in surface water chemistry, water temperature, turbidity, and access to habitat. The SDEIS clarifies the roles of project design features, best management practices, and mitigation

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				measures in addressing impacts to fish species, including ESA-listed species.
Water Resources	802.0100	C.32	Commenters state the desire for National measures that exclude the SFSR from development.	Comment noted. The scope of this NEPA analysis relates to the proposed Project, its related activities, and reasonably foreseeable future actions. It does not consider broader exclusion measures for the SFSR.
Water Resources	802.0100	C.33	There are concerns that there will be no, or an insufficient, trust fund to address unpredicted legacy water quality issues.	As described in DEIS Section 2.3.7, the reclamation financial assurance would be determined by the U.S. Forest Service to address all Forest Service costs that would be incurred in taking over closure actions because of operator default. Provisions for future adjustment of the value of bond instruments utilized for financial assurance will be incorporated into a final plan approval.
Water Resources	802.0100	C.34	There are concerns that the compensatory mitigation for impacts to wetlands is not thoroughly described in the DEIS.	The SDEIS clarifies the compensatory mitigation requirements and describes the mitigation plan.
Water Resources	802.0100	C.35	There is a recommendation to pursue policy solutions to protect the SFSR by designating it a National Wild and Scenic River or Idaho State Protected River or congressional action that withdraws federal mineral rights from the area.	Please see response to Comment 802.0100 C.32.
Water Resources	802.0100	C.36	There are concerns that the Project would contaminate the groundwater. Specifically, there are concerns that the underdrains below the tailings storage facility and the development rock storage facilities would not protect the groundwater from contamination. There are concerns that unless a liner with a seepage collection system is provided for the tailings storage facility, the groundwater will become contaminated. There are concerns that the DEIS fails to adequately describe underdrain systems, liners, covers, and how seepage would be collected.	The SDEIS describes the effectiveness of liner and underdrain systems in protecting groundwater. This description incorporates aspects of the Project's Water Management Plan and Water Resources Monitoring Plan that will implement those systems under operations.

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Water Resources	802.0100	C.37	There is a concern that mercury in surface water is not associated with particles under low flow conditions.	The SDEIS clarifies the description of mercury deportment in surface water under different flow conditions. Briefly, mercury is present in surface water as a dissolved constituent and as a constituent associated with particles. The amount of particular material bearing mercury in a stream is more dependent on stream flow than the dissolved component.
Water Resources	802.0100	C.38	There are concerns regarding the environmental damage left by past mining activities.	The effects of past mining activities were incorporated into the description of the current environment in DEIS Chapter 3. DEIS Chapter 4 compared the effect of proposed mining and restoration activities to baseline conditions. Information on legacy mining activities has been added to the SDEIS.
Water Resources	802.0100	C.39	There are concerns that the Project will damage the wild character and outstandingly remarkable values of Wild and Scenic Rivers and the DEIS does not include sufficient mitigation measures to address these impacts. There are concerns that the DEIS fails to adequately characterize and consider Project impacts (and associated mitigation measures) to Wild and Scenic Rivers Act eligible streams within the vicinity of the Project Area. Additionally, there are concerns that the scope of analysis is not sufficient to consider impacts to other eligible and congressionally designated waterways outside of the Project Area that may be impacted. Commenters specifically note the following designated, eligible, and suitable waterways that may potentially be impacted: South Fork of the Salmon River, Middle Fork Salmon River, Main Salmon River, Burntlog Creek, Johnson Creek, North Fork Payette River and Main Payette River.	See response to comment 802.1003 C.6 (Wild & Scenic Rivers).
Water Resources	802.0100	C.40	There are concerns that the tailing storage facility would fail, releasing toxic materials into the waterways and negatively affecting water quality and killing fish. There are concerns that the DEIS fails to take a hard look at the	The EIS examines the design and the factors of safety for the proposed tailings storage facility and does not conclude that failure of the storage facility is reasonably foreseeable. Therefore, impacts of a

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			risks and results of tailings storage facility failure. There are concerns that failure of the tailings storage facility dam would have catastrophic impacts on downstream resources	tailings storage facility failure are not described in the EIS.
Water Resources	802.0100	C.41	There are concerns that Warm Lake could be affected due to mine-related transportation.	The impacts of spills on surface water and wildlife were described in DEIS Sections 4.9.2.2.2.2 and 4.12.2. The SDEIS clarifies the descriptions of design features, best management practices, and mitigation measures aimed at reducing spills and remediating spill material. The analysis incorporates the Project's Transportation Risk Management Plan and spill response plans into the Project approval via the ROD.
Water Resources	802.0100	D.1	There are concerns that facility locations (e.g., the tailings storage facility) that do not include valley bottom riparian areas and surface water channels have not been considered.	Alternative facility locations were considered as part of the NEPA analysis as described in DEIS Section 2.8 with technically and economically feasible alternatives that met the purpose and need for the Project analyzed in detail. The site location precludes project designs that avoid surface waters and riparian areas completely.
Water Resources	802.0100	D.2	There are concerns that water treatment options are not applied consistently across all alternatives (notably to Alternative 1). Further, commenters state that the effects of water treatment should be applied to all alternatives, not just Alternative 2.	Water treatment to achieve water chemistry standards may be incorporated into the Project either as a design feature included in an action alternative description or as a mitigation measure required by the Forest Service for Project approval. The examination of residual impacts after the application of required mitigation measures would therefore be comparable regardless of whether water treatment was included as part of the activity or as a permitting requirement. The SDEIS clarifies the application of water treatment across all action alternatives.

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Water Resources	802.0100	D.3	Commenters note the positive effects of water treatment and other water quality impacts under Alternative 2,	Water treatment appears to be a feasible component of water management that assists in meeting water quality standards.
Surface Water Quality	802.0101	Primary	There are concerns that the Project will result in surface water contamination with heavy metals (including mercury) that could negatively affect water quality, fish and wildlife populations, cultural importance, and recreation plus that the restoration activity will not result in any improvement compared to current conditions. Alternatively, there are commenters that conclude that the restoration activity would have beneficial impacts on water quality.	<p>Project effects on surface water quality and associated resources were described in DEIS Sections 4.9.2 (water quality), 4.12.2 (fisheries), 4.17.2 (cultural resources), and 4.19.2 (recreation).</p> <p>These effects include restoration efforts and were compared to baseline conditions to identify the net implications of project mining and restoration activity on water resources.</p> <p>The SDEIS clarifies the use of design features, best management practices and mitigation measures to manage and offset Project impacts, and describes the effectiveness of these measures.</p>
Surface Water Quality	802.0101	C.1	There are concerns regarding the adequacy of the water quality and fish habitat monitoring for the non-mine portions of the Project Area, and interest in more detail in the parameters, timing and duration of the monitoring mentioned in the DEIS.	<p>DEIS Sections 3.9.2 and 3.12.2 described the baseline conditions of the non-mining portions of the Project including access roads and utility corridors. The SDEIS updates these descriptions based on information collected since the development of the DEIS and in relation to specific comments on the DEIS.</p> <p>The SDEIS incorporates the Project Water Resources Monitoring Plan into its description and analysis for the Project.</p>
Surface Water Quality	802.0101	C.2	There are concerns that the EIS did not fully present the surface water quality predictions for all alternatives (primarily Alternative 4).	The SDEIS clarifies the presentation of surface water quality predictions for the alternatives analyzed.
Surface Water Quality	802.0101	C.3	There are concerns that Alternative 4 does not adequately describe the Hangar Flats tailings storage facility liner configuration and the DEIS does not include a figure depicting the liner.	The SDEIS clarifies the description of the tailings storage facility and its liner design. However, the SDEIS relies on supporting documents available on the Project webpage to provide visual representations of the design.

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Surface Water Quality	802.0101	C.4	There are concerns that the Project would increase surface water temperatures requiring environmental measures to maintain temperatures for cold water species (i.e., salmonid species) in the analysis area.	The SDEIS clarifies the roles of design features, best management practices and mitigation measures to manage surface water temperature. Operational and reclamation actions protective of cold water species are incorporated into the Project approval via the ROD.
Surface Water Quality	802.0101	C.5	There are concerns that the stream temperature analysis does not include projections for increased temperature due to climate change to fully gauge the impacts of change due to mining activity. Further, small deviations in predictions could lead to drastic underestimations of mining impacts.	DEIS Section 4.4.2 described the incorporation of climate change into the analysis of temperature. The sensitivity of predictions to uncertainties such as climate change was described in DEIS Section 4.9.8. These sensitivities were identified as potentially significant factors that would be addressed via conservative modeling assumptions and monitoring required under the Project's Water Resources Monitoring Plan.
Surface Water Quality	802.0101	C.6	There are concerns that the Project would increase water temperatures and action alternatives should mitigate for temperature for cold water species to result in no net increase in stream temperature to fully protect salmonid species in the analysis area. Additionally, commenters state that the stream temperature analysis should include projections for increased temperatures due to climate change to fully gauge the impacts of predicted temperature change due to mining activity. There are concerns that there is missing information related to the analysis of stream temperature impacts to bull trout.	See the responses to 802.0101 C.4 and C.5.
Surface Water Quality	802.0101	C.7	There are statements that the removal of legacy tailings will improve water quality.	Removal of legacy tailings appears to be a feasible component of site environmental management that assists in meeting water quality standards.
Surface Water Quality	802.0101	C.8	There are concerns that the detailed wetland information presented in the DEIS and Appendix I are difficult to correlate.	The SDEIS clarifies the correlation of the wetland information utilized in various portions of the NEPA analysis.

Resource	Comment Code	Comment Number	Concern Statement	Response
Surface Water Quality	802.0101	C.9	There are concerns that the EIS does not describe cumulative effects on water quality.	The SDEIS clarifies the description of cumulative effects on water quality including incorporation of the activities of the recent ASAOC into the analysis.
Surface Water Quantity	802.0102	Primary	There are concerns that breaching of the tailings impoundment prior to appropriate tailings dewatering and stabilization could result in discharge of untreated tailings water.	Please see response to Comment 802.0100 C.40.
Groundwater Quality	802.0103	Primary	There are concerns that the Project would result in contaminated groundwater with impacts to use by people, wildlife and vegetation. Alternatively, there are commenters that conclude that the restoration activity would have beneficial impacts on water quality.	The effects of the Project on groundwater quality were described in DEIS Section 4.9.2.1.3. The SDEIS clarifies the relationship between groundwater effects and water use by people, wildlife and vegetation. Impacts in water use are related to changes in water supply chemistry compared to baseline conditions with project design features, best management practices, and mitigation measures employed to manage water chemistry in accordance with applicable water quality standards.
Groundwater Quality	802.0103	C.1	There is supporting opinions that the tailings facility design and restoration work proposed for the Project that would protect water quality from the effects of legacy spent ore storage piles and unlined tailings disposal areas.	Tailings facility design and restoration activities appears to be a feasible components of site environmental management that assists in meeting water quality standards.
Groundwater Quantity	802.0104	Primary	There are concerns that the NEPA analysis neglected groundwater and there was not groundwater flow model performed.	DEIS Section 4.8.1.1 described the groundwater flow modeling conducted for the NEPA analysis. In addition, supporting model documentation cited in the DEIS is available via the Project web-page. DEIS Section 4.8.2.2.2 described the predicted impacts to groundwater resources. In Section 4.8.4, the DEIS concluded that other reasonably foreseeable future actions do not result in a cumulative effect on water quantity. The SDEIS describes updated groundwater modeling conducted since the DEIS was prepared.

Resource	Comment Code	Comment Number	Concern Statement	Response
Groundwater Quantity	802.0104	C.1	There are opinions that the tailings storage facility presents a low risk to water quality and that there is a low risk of impoundment dam failure, breaching, or leakage.	The EIS examines the design and the factors of safety for the proposed tailings storage facility and does not conclude that failure of the storage facility is reasonably foreseeable.
Water Rights	802.0106	Primary	There are concerns regarding how consumption of water by the Project will affect local stream flows plus three minimum stream flow water rights for the EFSFSR, SFSR and main Salmon River. Further, there are concerns that the analysis in the EIS does not include flow data or usage periods associated with the minimum stream flow water rights that can be used in its analysis.	The DEIS described the implications of the Project for minimum stream flow (MSF) water rights in Section 4.8.2.1.3. Activities that conflict with the fulfillment of these MSF water rights would not be authorized. The SDEIS includes updated information on the Project effects to stream flows.
Water Rights	802.0106	C.1	There are concerns that the mitigation requirements for new water rights applications to the Idaho Department of Water Resources are not known, including reductions in Meadow Creek flows at times by up to 100%.	If mitigation measures required by IDWR are not within the approved activities for the Project under the ROD for Forest Land Use, those measures would be subject to additional NEPA analysis and permitting. The SDEIS includes updated information on the Project effects to stream flows.
Water Rights	802.0106	C.2	There are concerns that EIS does not explain the process for acquiring water rights or modifying the point of diversion, place of use or beneficial use of existing water rights. Further, the DEIS does not identify the Project's need for new water rights applications.	Acquisition of new water rights and modification of existing water rights are actions undertaken by the Idaho Department of Water Resources (IDWR). For descriptions of these processes, the Forest Service refers commenters to the IDWR documentation of its regulatory processes. The need for new water rights applications is clarified in the SDEIS.
Water Rights	802.0106	C.3	There are concerns regarding the water chemistry of water used consumptively for dust abatement.	Impacts of dust abatement measures were described in the context of surface water quality (DEIS Section 4.9.2.1.2). Under Forest Service requirements, the rate and quantity of dust abatement applications would be regulated to ensure that applied chemicals are absorbed by road materials before leaving the road surface. Dust

Resource	Comment Code	Comment Number	Concern Statement	Response
				abatement measures are described further in the Project's Dust Control Plan.
Water Rights	802.0106	C.4	Commenters note a potential inconsistency in the reported total diversion for the EFSFSR minimum stream flow in Table 3.8.8.	The SDEIS clarifies the presentation of total diversion for the EFSFSR minimum stream flow.

Vegetation, Wildlife, TES, and Invasives Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Wildlife Resources	802.0500.00	Primary Statement	There are concerns that the Project will result in impacts to wildlife species and their habitat that could negatively affect wildlife populations and species diversity in the area.	Section 3.13 of the DEIS described the existing conditions of wildlife species as well as the suitable habitat in the Project Area and DEIS Section 4.13 described potential Project-related impacts to wildlife species and their habitat over time. Appendix D of the DEIS contained the Project's mitigation measures and design features. In the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis. Where appropriate, additional information has been incorporated into the SDEIS to further support and expand the wildlife analyses.
Wildlife Resources	802.0500.00	A.1	There are concerns about the wildlife mortality reporting tool and the avian mortality reporting system. Commenters note that more details are needed, and more work should be done to prevent mortalities rather than simply reporting them.	The U.S. Fish and Wildlife Service's wildlife mortality report tool, now called the "Injury and Mortality Reporting System" would be required for the Project. Additional information is located here: U.S. Fish & Wildlife Service - Migratory Bird Program Conserving America's Birds (fws.gov) . Results from the Injury and Mortality Reporting System would guide any potential additional mitigation measures required by the Forest Service for the Project. Additional information has been incorporated into the SDEIS to further support and

Resource	Comment Code	Comment Number	Concern Statement	Response
				expand the wildlife analyses, specifically in Section 4.13.3.
Wildlife Resources	802.0500.00	B.1	There are concerns that the proposed Burntlog Road would negatively impact the population of mountain goats in the Burnt Log Roadless Area.	Additional information compiled or made available since the distribution of the DEIS has been incorporated into the SDEIS to further support and expand the big game analyses in Section 3.13.3.5 Big Game Species.
Wildlife Resources	802.0500.00	B.2	There are concerns that antimony runoff would contaminate soil and groundwater, leading to adverse impacts, including death, to small mammal species.	Impacts due to antimony in water sources that may be accessed by wildlife species, including small mammals, would not be expected to occur as a result of the Project as described in Section 4.9 of the DEIS.
Wildlife Resources	802.0500.00	B.3	A concern was raised regarding potential impacts to gray wolves due to the Project.	Section 4.13.2.2.4.1 of the DEIS described potential Project-related impacts to gray wolves and their habitat over time from the Project.
Wildlife Resources	802.0500.00	B.4	There are concerns that the Project may negatively impact big game populations (especially elk and bighorn sheep), and therefore, hunting opportunities, not only in the immediate Project Area but also the region.	Section 4.13.2.5 of the DEIS described potential Project-related impacts to big game species and Section 4.19 of the DEIS described potential Project-related impacts to hunting.
Wildlife Resources	802.0500.00	B.5	There are concerns that construction and improvements to the Burntlog Route may increase public access and motorized traffic on roads and trails in the area and impact wildlife, specifically through increased human presence (e.g., noise, light at night).	DEIS Section 4.13 described potential Project-related human presence and noise impacts to wildlife species. This analysis includes the Burntlog Route. Additionally, Appendix D of the DEIS contained the Project's noise-specific mitigation measures and environmental commitments. However, in the SDEIS, design features and mitigation measures and their effect on Project-related impacts are incorporated into the Project and considered during impact analysis. Where appropriate, additional information has been incorporated into the SDEIS to further support and expand the wildlife analyses.
Wildlife Resources	802.0500.00	B.6	There are concerns that the Project would not comply with the MBTA and negatively impact bird populations and	Section 4.13.2.6 of the DEIS described potential Project-related impacts to migratory bird species

Resource	Comment Code	Comment Number	Concern Statement	Response
			result in mortalities. Specifically, that increased noise, habitat destruction, and road creation would contribute to direct mortality as well as nest failure, changes in species compositions, and other impacts.	and their habitat over time. Additionally, the Project would report any wildlife injuries or mortalities using the U.S. Fish and Wildlife Service's Injury and Mortality Reporting System (U.S. Fish & Wildlife Service - Migratory Bird Program Conserving America's Birds (fws.gov)). Results from the Injury and Mortality Reporting System would guide additional mitigation measures required by the Forest Service for the Project. Additional information has been incorporated into the SDEIS to further support and expand the wildlife analyses, specifically in Section 4.13.3.
Wildlife Resources	802.0500.00	B.7	A concern was raised on potential vehicle/wildlife collision and the lack of analysis in the EIS.	See response to Comment 802.0500; B.6.
Wildlife Resources	802.0500.00	B.8	There are concerns that the spatial configuration of mature forest and openings to fisher habitat were not included in the analyses. In particular, increases in open areas can impact fishers.	Detailed analysis of the forest condition, specifically Potential Vegetation Groups (PVGs) that contain suitable habitat for fishers, was included in the DEIS in Section 3.13.3.3.2 and Section 4.13.2.2.2.5.
Wildlife Resources	802.0500.00	B.9	There are concerns of the effect of mercury, arsenic, "toxic chemicals" on wildlife; effects of open pits and tailing areas on birds and other wildlife species.	DEIS Section 4.13 described potential Project-related impacts to wildlife species and their habitat over time. This included potential impacts from chemicals that may be found in portions of the Project Area.
Wildlife Resources	802.0500.00	B.10	A comment stated that models used for Region 4 sensitive bird species did not account for special habitat features.	Models for Region 4 sensitive bird species in the SDEIS take into account the best available vegetation and species-specific data that was available for the Project Area.
Wildlife Resources	802.0500.00	B.11	A concern was raised that the analysis did not include all big game, culturally important species, and invertebrate species; failed to include best available scientific information on mining impacts to wildlife; did not include cumulative impacts of climate change on wildlife habitat;	Additional information compiled or made available since the distribution of the DEIS has been incorporated into the SDEIS to further support and expand the big game analyses. Culturally important species were not discussed in Section 3.13 of the DEIS but referenced most appropriately in Section 3.24 (Tribal Rights and Interests). Additional

Resource	Comment Code	Comment Number	Concern Statement	Response
			and did not analyze how Project would impact old forest habitat.	information compiled or made available since the distribution of the DEIS has been incorporated into the SDEIS to further support and expand the invertebrate analyses, specifically the Monarch butterfly. Climate change was discussed in Sections 3.4 and Section 4.4 of the DEIS, which included text on wildlife and wildlife habitat (Section 3.4.3.3.9 and various subsections in Section 4.4 Climate Change under each alternative). Section 4.13 of the DEIS described potential Project-related impacts to wildlife species and their habitat over time.
Wildlife Resources	802.0500.00	B.12	Mitigation and the effects of reclamation on wildlife are not discussed and analyzed in the DEIS. Compensatory mitigation for impacts to migratory birds was specifically requested.	Appendix D of the DEIS contained the Project's mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis. Where appropriate, additional information has been incorporated into the SDEIS to further support and expand the wildlife analyses. Compensatory mitigation specific to Project-related impacts to migratory birds is not part of the SDEIS but is discussed in detail for the loss of wetland and riparian areas in Section 4.11. Compensatory mitigation for the loss of wetlands and riparian areas would indirectly benefit a variety of wildlife species, including migratory birds that utilize wetland and riparian habitats.
TEPC or Special Status Wildlife – Canada Lynx	802.0501.00	Primary Statement	There are concerns that the DEIS does not include adequate documentation to support the claim that the habitat in the Project Area's Lynx Analysis Units is unsuitable for Canada lynx. Additionally, there are concerns that the DEIS fails to describe how habitat within the Lynx Analysis Units is expected to change over time.	Section 3.13.3.2.1 of the DEIS described the existing conditions of the species as well as the Lynx Analysis Units in the Project Area and Section 4.13.2.1.1 described potential Project-related impacts to Canada lynx and their habitat over time.

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TEPC or Special Status Wildlife – Canada Lynx	802.0501.00	A.1	There are concerns that the 2020 Buck Fire has burned through areas that are part of the Stibnite Gold Project Area, leading to significant changed circumstances and its potential effects on the suitability of the area to lynx or other wildlife.	A brief reference to the 2020 Buck Fire has been added to the SDEIS in Section 4.13. However, a full analysis of the 2020 Buck Fire has not been completed for the SDEIS as a majority of the data analysis for vegetation and wildlife habitat was already completed for the Project prior to the fire burning portions of the Project Area.
TEPC or Special Status Wildlife – Canada Lynx	802.0501.00	A.2	There are concerns that the DEIS fails to adequately analyze adverse impacts, including cumulative impacts (e.g., cumulative impacts resulting from climate change) to Canada lynx. Specifically, commenters express concerns about access roads and over-snow vehicle routes fragmenting suitable habitat and acting as a barrier to movement. Additionally, there are concerns that the DEIS fails to provide mitigation measures that would reduce impacts to suitable Canada lynx habitat. Commenters suggest that the Forest Service should consult with the U.S. Fish and Wildlife Service to determine effects and develop a mitigation plan.	Section 3.13.3.2.1 of the DEIS described the existing conditions of the species as well as the Lynx Analysis Units in the Project Area and Section 4.13.2.1.1 described potential Project-related impacts to Canada lynx and their habitat over time. Given the rarity of the species in and near the Project Area and the effects analysis and mitigation described in DEIS Section 4.13.3 and Appendix D of the DEIS, no further analyses or mitigation is proposed for the Project.
TEPC or Special Status Wildlife – Wolverine	802.0502.00	Primary Statement	There are concerns that the DEIS fails to adequately analyze impacts, including cumulative impacts, to wolverines and does not include sufficient mitigation measures to minimize impacts.	Section 4.13.2.1.3 of the DEIS described potential Project-related impacts to wolverines and their habitat over time. Given the existing habitat conditions and past occurrence data for the species in and around the Project Area, appropriate mitigation and monitoring for the wolverine is presented in the EIS.
TEPC or Special Status Wildlife – Wolverine	802.0502.00	A.1	Commenters note specific concerns including: access roads, particularly the Burntlog Road, having significant negative impacts on wolverines and not being adequately analyzed in the DEIS. The DEIS draws incorrect conclusions from the scientific literature (e.g., Luensmann 2008, Scrafford and Boyce 2014) by cherry-picking data, taking statements out of context, and citing older unpublished research instead of more recent peer-reviewed research (e.g., Scrafford et al. 2018).	Section 3.13.3.2.3 of the DEIS described the existing conditions of the species as well as the suitable habitat in the Project Area and Section 4.13.2.1.3 described potential Project-related impacts to wolverines and their habitat over time.

Resource	Comment Code	Comment Number	Concern Statement	Response
TEPC or Special Status Wildlife – Wolverine	802.0502.00	A.2	Winter recreation, including snowmobiles and backcountry ski/snowboard use, is expected to increase as a result of the Project and the corresponding adverse impacts on wolverine are not fully disclosed and mitigated. The cumulative impacts of increasing winter recreation and climate change combined with the Project are not considered.	Section 4.13.2.1.3 of the DEIS described potential Project-related impacts to the species, including over-snow recreation. Given the existing habitat conditions and past occurrence data for the species in and around the Project Area, appropriate Forest Service requirements, best management practices, and design features for the wolverine is incorporated into the Project and considered in the analysis in the SDEIS.
TEPC or Special Status Wildlife – Wolverine	802.0502.00	A.3	The proposed mitigation measures for wolverine are insufficient. The Forest Service should develop additional mitigation measures and a monitoring program.	Given the existing habitat conditions and past occurrence data for the species in and around the Project Area, appropriate Forest Service requirements, best management practices, and design features for the wolverine is presented in Section 4.13 of the SDEIS. There is existing collaborative monitoring in place for wolverine that will continue into the future.
TEPC or Special Status Wildlife – Wolverine	802.0502.00	A.4	The determination for wolverine is improper. Commenters express concerns that the Project may jeopardize the viability of wolverine in the region.	The determination of “would result in adverse effects to wolverine but would not jeopardize the continued existence of the species” is appropriate given the existing habitat conditions, past occurrence data, and anticipated Project-related impacts to the species.
Botanical Resources	802.0700.00	Primary Statement	There are concerns that the Project will negatively impact botanical resources, including sensitive species, and the DEIS does not adequately analyze impacts to these resources.	Section 3.10 of the DEIS described the existing conditions of the species as well as the suitable habitat in the Project Area and Section 4.10 described potential Project-related impacts to vegetation, including sensitive species over time. Appendix D of the DEIS contained the Project’s mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis. Where appropriate, additional

Resource	Comment Code	Comment Number	Concern Statement	Response
				information has been incorporated into the SDEIS to further support and expand the wildlife analyses.
Botanical Resources	802.0700.00	A.1	There are concerns regarding impacts to pollinators and other seed dispersing organisms in relation to Project disturbance.	Section 4.10 of the DEIS described potential Project-related impacts to pollinators.
Botanical Resources	802.0700.00	A.2	There are concerns that impacts to culturally important plant species were not analyzed, and in particular, the spatial and temporal (i.e., gathering season) context was not included.	Section 4.10 of the DEIS described potential Project-related impacts to vegetation, including sensitive species over time. In addition, culturally important plant species were most appropriately addressed in Section 3.24 and Section 4.24 (Tribal Rights and Interests).
Botanical Resources	802.0700.00	A.3	There is a concern that the vegetation impacts analysis does not provide sufficient context to understand the implications of disturbed acreages, habitat connectivity, soil erosion, hydrologic changes, and biodiversity changes and that the magnitude, extent, direction, duration, and speed of effects of each alternative need to be defined quantitatively and/or qualitatively. The effects of resource impacts should also be integrated with other resource analyses.	Section 4.10 of the DEIS described potential Project-related impacts to vegetation, including sensitive species over time. The vegetation analysis was integrated, where appropriate, with other resources in the DEIS, such as, Section 4.11 (Wetlands and Riparian Areas), Section 4.13 (Wildlife and Wildlife Habitat, including Threatened, Endangered, Proposed, and Sensitive Species), and Section 4.14 (Timber Resources).
Botanical Resources	802.0700.00	A.4	There is a concern that the DEIS does not disclose wetlands along the Burntlog Route that would not be reclaimed. Further, they could represent irretrievable and irreplaceable impacts to habitat for sensitive species.	Section 3.10.3.2.2 of the DEIS described the baseline conditions for plant species that may occur in wetland habitats, including along the Burntlog Route. DEIS Section 4.10 described plant species that may occur in wetland habitats and the anticipated impacts based on Project alternative, plus irretrievable and irreplaceable impacts. Further information was located in the DEIS in Sections 3.11 and 4.11 regarding recording and reporting wetland impacts and determining the appropriate mitigation.
Botanical Resources	802.0700.00	A.5	There are concerns that the DEIS does not consider climate change in its analysis of reclamation efforts.	Section 4.4 of the DEIS described potential Project-related impacts to climate change as a result of the Project. Additionally, Section 4.5 of the DEIS contained specific information on reclamation for

Resource	Comment Code	Comment Number	Concern Statement	Response
				the Project. Specific to the reclamation plan, Appendix D of the DEIS contained the Project's mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis.
Botanical Resources	802.0700.00	A.6	There are concerns that elements of the Reclamation Closure Plan (such as seed mixes) have not been analyzed, and the effectiveness of mitigation measures has not been examined or may not comply with NFMA policies and plans.	Specific to the Reclamation and Closure Plan, Appendix D of the DEIS contained the Project's mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis. This includes elements of reclaiming disturbed areas such as seeding. Further, as stated in the DEIS, the seed mix used in the Reclamation and Closure Plan would be reviewed and approved by the Forest Service (Section 2.3.7.4).
Botanical Resources	802.0700.00	A.7	There are concerns that vegetation removal and tree clearing under all action alternatives would not maintain or move toward desired conditions for vegetation as described in the Forest Plans, and likely that any or all impacts may result in changes to the surrounding ecosystem that persist in perpetuity and would result in these areas not being able to meet desired conditions for the foreseeable future.	Section 3.10 of the DEIS described the baseline vegetation conditions in the Project Area in relation to the Forest Plans. Section 4.10 of the DEIS described potential Project-related impacts to the various PVGs and specific vegetation types in relation to desired conditions in the Forest Plans.
Botanical Resources	802.0700.00	A.8	There are concerns that the DEIS fails to give adequate attention to the permanent loss of vegetation habitat types.	Section 4.10 of the DEIS described potential Project-related impacts to vegetation, including sensitive species over time.
Botanical Resources	802.0700.00	A.9	Regular dust surveys should be conducted along mine site access routes with a conservative trigger for dust suppression activities.	Specific to dust surveys, Appendix D of the DEIS contained the Project's mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project

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				and considered during impact analysis. A Dust Control Plan would be developed and elements of the plan beyond standard dust control BMPs may include surveying and monitoring dust levels along Project roads based on Forest Service, IDEQ, and EPA guidelines.
Botanical Resources	802.0700.00	A.10	Mitigation is not adequately addressed. The DEIS contains some design features to help avoid and minimize impacts but falls short in mitigating impacts. None of the alternatives contain any compensatory mitigation measures to be implemented in advance of, during operations or following mining operations.	Appendix D of the DEIS contained the Project's mitigation measures and design features. Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis. Compensatory mitigation specific to Project-related impacts to general vegetation communities is not part of the SDEIS, although the Reclamation and Closure Plan would be implemented to restore impacted vegetation communities, plus the loss of wetland and riparian areas is discussed in detail in Section 4.11 Wetlands and Riparian Resources. Compensatory mitigation for the loss of wetlands and riparian areas would indirectly benefit a variety of vegetation species, including sensitive species.
TES or Special Status Botanical Resource – Whitebark Pine	802.0701.00	Primary Statement	There are concerns that the DEIS fails to adequately analyze the impacts of Project activities on whitebark pine.	Section 4.10 of the DEIS described potential Project-related impacts to vegetation, including sensitive species over time. However, given the recent listing of the species, information has been revised/added to the SDEIS to indicate the species is now federally proposed as threatened.
TES or Special Status Botanical Resource – Whitebark Pine	802.0701.00	A.1	There are concerns regarding whether the USFWS has evaluated whitebark pine for this Project and how that would relate to the DEIS analysis.	The text in the SDEIS has been revised to indicate the species is now federally proposed as threatened. The remaining text in the EIS is still valid and appropriate given the baseline information for whitebark pine in the Project Area. The Biological Assessment for the Project will also be updated as

Resource	Comment Code	Comment Number	Concern Statement	Response
				applicable for the USWFS to evaluate whitebark pine.
TES or Special Status Botanical Resource – Whitebark Pine	802.0701.00	A.2	The Forest Service should consider expanding the monitoring program to include the limber pine population and stands of whitebark pine located in the Cinnabar Peak area.	Appendix D of the DEIS contained the Project’s mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis.
TES or Special Status Botanical Resource – Whitebark Pine	802.0701.00	B.1	There are concerns regarding the removal of whitebark pine trees and the potential impacts to groundwater and spring run-off.	Section 4.10.2.1.4 of the DEIS described potential Project-related impacts to whitebark pine over time.
TES or Special Status Botanical Resource – Whitebark Pine	802.0701.00	B.2	The DEIS fails to consider the cumulative long-term impacts of climate change on whitebark pine.	Section 4.10.2.1.4 of the DEIS described potential Project-related impacts to whitebark pine over time. Additionally, Section 4.10.4 described cumulative impacts to vegetation species.
TES or Special Status Botanical Resource – Whitebark Pine	802.0701.00	B.3	The DEIS did not consider impacts of air quality on whitebark pine (heavy metals and dust).	Specific information on impacts of air quality on the whitebark pine is not available and therefore, this analysis is not included in the SDEIS. However, specific to potential impacts from dust, Forest Service requirements, best management practices, and design features. are incorporated into the Project and considered during impact analysis. A Dust Control Plan would be developed and elements of the plan beyond standard dust control BMPs may include surveying and monitoring dust levels along Project roads based on Forest Service, IDEQ, and EPA guidelines. Further, Section

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				4.10.2.1.4 of the DEIS describes potential Project-related impacts to whitebark pine over time.
TES or Special Status Botanical Resource – Whitebark Pine	802.0701.00	B.4	Commenters recommend that to minimize effects to whitebark pine, the Forest Service should avoid creation of the West End development rock storage facility and use the Yellow Pine route as the primary mine access road rather than constructing the proposed Burntlog Road.	Effects to whitebark pine from the elimination of the West End Development Rock Storage Facility was described under Alternative 2 in DEIS Section 4.10.2.3.4. Exclusion of the proposed Burntlog Route and use of the Yellow Pine route and its related impacts to whitebark pine was described under Alternative 4 in DEIS Section 4.10.2.5.4. Appendix D of the DEIS contained the Project’s mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis.
TES or Special Status Botanical Resource – Whitebark Pine	802.0701.00	B.5	There are concerns that the mitigation measures for whitebark pine are inadequate and a more proactive mitigation strategy (including pinecone collection and seedling plantings) should be developed.	The Forest Service believes that the mitigation measures in the DEIS are appropriate for the species. DEIS Section 4.10.2.1.4 described potential Project-related impacts to whitebark pine over time. Appendix D of the DEIS contained the Project’s mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis.
R4 Sensitive or Forest Special Status Botanical Species	802.0702.00	Primary Statement	There are concerns that the Project has incomplete survey information for R4 sensitive and Forest Service botanical species and that the Project, particularly surface disturbance will result in impacts to R4 sensitive or Forest special status botanical species. Commentors have concerns that impacts to these species will not be able to be mitigated.	Section 3.10 of the DEIS described baseline conditions for vegetation, including sensitive species, in the Project Area. In relation to mitigation specific to R4 sensitive species and watch species, Appendix D of the DEIS contained the Project’s mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis.

Resource	Comment Code	Comment Number	Concern Statement	Response
R4 Sensitive or Forest Special Status Botanical Species	802.0702.00	A.1	The DEIS does not address impacts to pollinators of bent-flowered milkvetch and Sacajawea's bitterroot.	Section 4.10 of the DEIS described potential Project-related impacts to pollinators.
R4 Sensitive or Forest Special Status Botanical Species	802.0702.00	A.2	The DEIS does not include a species-specific impact analysis for sensitive plant species and their habitats.	DEIS Section 4.10 described potential Project-related impacts to vegetation, including specific sensitive species over time.
R4 Sensitive or Forest Special Status Botanical Species	802.0702.00	A.3	The Forest Service should consider expanding the monitoring program to include new bent-flowered milkvetch subpopulations found in 2016.	The Forest Service believes the existing mitigation in the DEIS is appropriate. Appendix D of the DEIS contained the Project's mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis.
R4 Sensitive or Forest Special Status Botanical Species	802.0702.00	A.4	The Forest Service should consider seed banking of bent-flowered milkvetch and Sacajawea's bitterroot.	Appendix D of the DEIS contained the Project's mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best management practices, and design features are incorporated into the Project and considered during impact analysis.
Invasives – Vegetation	802.0704.03	Primary Statement	There are concerns that the Project, particularly roads, traffic, transmission line corridors, and soil disturbance, will introduce and spread non-native plant species and noxious weeds. Commenters request that the Forest Service and Midas Gold [Perpetua] do proactive work and also commit to best management practices to ensure that noxious weeds are not introduced and any potential weed	Section 4.10.2.1.7 of the DEIS described potential Project-related impacts as a result of introducing and spreading non-native plant species in the Project Area. In regard to mitigation, Appendix D of the DEIS contained the Project's mitigation measures and design features. However, in the SDEIS, Forest Service requirements, best

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			spread is minimized. Commenters note that the Forest Service should create plans to replant disturbed areas with native plant species and establish a long-term monitoring program to ensure recovery of native vegetation. There are concerns that the DEIS does not adequately analyze the impacts of non-native species on the native plant community and the overall ecosystem.	management practices, and design features are incorporated into the Project and considered during impact analysis.

Wetlands Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Permitting – 404 Clean Water Act	801.0310.01	Primary	There are concerns that the DEIS lacks proper analysis under Clean Water Act Section 404 (b) (1) guidelines and that the compensatory mitigation lacks detailed information necessary to determine how mitigation would offset impacts.	The DEIS discussed analysis under the Clean Water Act in Section 4.11.1.2 and in Appendix B, where it was noted that the process was not yet complete. Information that has become available and updated since distribution of the DEIS has been incorporated into the SDEIS to further support and expand the analyses. A final Compensatory Mitigation Plan will also be referenced and included in the Final EIS.
Permitting – 404 Clean Water Act	801.0310.01	C.1	There are concerns that the DEIS does not consider temporal and spatial loss of wetlands. Commenters state that temporal and spatial loss should be accounted for in the Final EIS and that site-specific reclamation designs should be disclosed, and the associated effectiveness considered.	Since distribution of the DEIS, the Assessment Areas used in the Montana Wetland Assessment (MWAM) have been consolidated and revised to meaningful subbasins and similar geomorphic position to address spatial loss. This information has been incorporated into the SDEIS (Section 4.11) to more clearly express the spatial loss of wetlands. Off-site measures to offset temporal effects on wetlands were incorporated in the 2023 Compensatory Mitigation Plan submitted to the U.S. Army Corps of Engineers. These measures involved procurement of existing mitigation credits from credit banks and restoration projects on private lands outside the SGP watershed.

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Permitting – 404 Clean Water Act	801.0310.01	C.2	There are concerns that the Conceptual Stream and Wetland Mitigation Plan does not include the detailed information necessary to determine how compensatory mitigation would offset impacts.	Since distribution of the DEIS, the Conceptual Stream and Wetland Mitigation Plan has been revised and replaced with a final Compensatory Mitigation Plan that includes additional detail relative to the selected alternative. This information has been added to the SDEIS.
Permitting – 404 Clean Water Act	801.0310.01	C.3	There are concerns that the compensatory mitigation would not occur concurrently with impacts and would not adequately address temporal loss. In addition, there are concerns that it would not include indirect impacts. Commenters suggest that compensatory mitigation be undertaken in advance or concurrent with impacts to account for temporal loss, that mitigation include indirect impacts, and that the compensatory mitigation plan should consider offsite mitigation sites where success is more likely than permittee responsible stream restoration.	Regarding temporal loss, there is limited ability given the scale and location of the impacts to mitigate prior to or concurrently with impacts. However, since distribution of the DEIS, impacts have been separated out by meaningful subbasins and similar geomorphic position to address spatial loss and mitigation that would occur prior to, or concurrently with impacts, has been identified. This information was incorporated into the SDEIS and Final EIS (Section 4.11). Also, as described comment 801.0310.01 C.1., Regarding indirect impacts, the Conceptual Stream and Wetland Mitigation Plan has been revised and replaced with a final Compensatory Mitigation Plan that includes additional detail relative to the selected alternative and for indirect impacts.
Permitting – 404 Clean Water Act	801.0310.01	C.4	There are concerns that the Section 404 section contains incomplete information for Alternative 1 and 2.	The DEIS discussed analysis under the Clean Water Act in Section 4.11.1.2 and in Appendix B, where it was noted that the process was not yet complete. Information that has become available and updated since distribution of the DEIS has been incorporated into the SDEIS to further support and expand the analyses.
Permitting – 404 Clean Water Act	801.0310.01	C.5	There are concerns that the DEIS and its supporting documents rely upon missing and incomplete information. Additionally, there are concerns that some of the information listed in the DEIS as "incomplete and unavailable" is not truly unavailable but has simply not been provided to the public. Commenters express concerns that the lack of disclosure of this information	Incomplete and unavailable information was summarized in Table 4.1-1 of the DEIS. Concerns relative to Permitting and the Clean Water Act (CWA) include an analysis under CWA 404(b)(1) guidelines. The DEIS discussed analysis under the Clean Water Act in Section 4.11.1.2 and in Appendix B, where it was noted that the process was

Resource	Comment Code	Comment Number	Concern Statement	Response
			hinders the public's understanding of adverse impacts, impedes public participation, and violates NEPA.	not yet complete. Information that has become available and updated since distribution of the DEIS has been incorporated into the SDEIS to further support and expand the analyses.
Permitting – 404 Clean Water Act	801.0310.01	C.6	There are concerns that the DEIS lacks analysis of Clean Water Act Section 404(b)(1) guidelines. Additionally, there are concerns that the proposed mine will violate Section 404(b)(1) requirements and thus a Section 404 permit cannot be issued. Commenters emphasize that the Army Corps of Engineers (Corps) must consider all impacts, including direct, indirect, and cumulative, from construction and operation of the Stibnite Gold Project and all associated facilities. Commenters state that these impacts show the Project is not in the public interest and thus the Corps cannot issue a Section 404 permit. Comments cite numerous court cases in support of discussion regarding the requirements of Section 404.	The DEIS discussed analysis under the Clean Water Act in Section 4.11.1.2 and in Appendix B, where it was noted that the process was not yet complete. Information that has become available and updated since distribution of the DEIS has been incorporated into the SDEIS to further support and expand the analyses. The Conceptual Stream and Wetland Mitigation Plan has been revised and replaced with a final Compensatory Mitigation Plan that includes additional detail relative to the selected alternative and for indirect impacts. The USACE will ultimately decide whether a Section 404 permit can be issued for the Project. Compliance with the Clean Water Act Section 404(b)(1) guidelines will not be determined through the NEPA process, but a final decision will come following the receipt of a complete application by the USACE.
Permitting – 404 Clean Water Act	801.0310.01	C.7	There are concerns that the Stream Function Analysis, developed for the Stibnite Gold Project as a tool to quantify compensatory mitigation, is a new unproven model that does not comply with NEPA's best available science requirement. Commenters note that there are other proven models that have been used on the Payette and Boise National Forests as well as elsewhere in the Pacific Northwest to characterize impacts to streams. There are concerns that the description and results of the Stream Function Analysis do not appear in the body of the DEIS and that the conceptual/compensatory mitigation is buried in Appendix D of the DEIS.	Methods other than the Stream Function Analysis were considered in Project development and impact analyses. However, there is no specific method or policy that mandates what method to use. After consideration of other methods, Perpetua Resources elected to develop the Stream Function Analysis to inform the analysis of impacts to WOTUS to be reviewed by the Corps. This methodology is not a singular tool for decision makers, and the Forest Service has elected to use the other proven models used on the Payette and Boise National Forests to analyze Project impacts associated with fisheries.

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				<p>The SDEIS will be updated to clarify the description of the Stream Function Analysis and its application to the NEPA impact analysis. The SFA ledger was not utilized to assess the wetlands impacts and restoration effectiveness.</p> <p>Since distribution of the DEIS, the Conceptual Stream and Wetland Mitigation Plan has been revised and replaced with a final Compensatory Mitigation Plan that includes additional detail relative to the selected alternative. This information has been added to the SDEIS.</p>
Permitting – 404 Clean Water Act	801.0310.01	C.8	There are concerns that the EIS does not clearly specify what types of runoff/stormwater discharge and wastewater treatment permits will be needed and which agencies will issue these permits. Additionally, there are requests that the Forest Service carefully review at a programmatic level all permits, including Clean Water Act section 404 permits, issued for construction and operation of the mine.	See response to comment 802.0100 A.5 (Water Resources).
Permitting – 404 Clean Water Act	801.0310.01	C.9	There are concerns that potential impacts to water resources from leaks and spills during road construction and utilization are not adequately addressed. There are also concerns about cumulative impacts from new roads and taxpayer funding of Clean Water Act enforcement.	See responses to comments 802.0100 C.27 (Water Resources), 802.1200 C.24 (Transportation and Access), and 802.1200 C.33 (Transportation and Access).
Permitting – 404 Clean Water Act	801.0310.01	C.10	There are concerns that the Corp's decision to rely on the DEIS to support a Section 404 permit decision without a completed application or notice to the public is premature and inadequate.	<p>The USACE does not “rely” on the DEIS to make a decision. Rather, the NEPA process is used to inform the mutual responsibilities as appropriate and outlined in the 404(b)(1) Guidelines/NEPA merger process.</p> <p>The USACE will ultimately decide whether a Section 404 permit can be issued for the Project. Compliance with the Clean Water Act Section 404(b)(1) guidelines will not be determined through the NEPA process, but a final decision will come</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				following the receipt of a complete application by the USACE.
Riparian Area, Wetlands	802.0105	A.1	There are concerns that proposed restoration plans are over engineered and may not function as intended because they lack the dynamic elements of naturally functioning ecosystems.	See response to comment 801.1505 Primary and 801.1505 C6 (Reclamation).
Riparian Area, Wetlands	802.0105	A.2	Commenters suggest adding more detail regarding baseline wetland data.	As noted for response to comment 801.0310.01 C.1 (Permitting – 404 CWA), additional information compiled or made available since the distribution of the DEIS has been incorporated into the SDEIS to further support and expand the analysis of impacts to wetlands.
Riparian Area, Wetlands	802.0105	B.1	There are concerns that indirect and cumulative effects were not analyzed for wetlands in the off-site focus area. Commenters suggest that quantitative analysis be added on indirect effects, including dust deposition, mercury deposition, changes in hydrology, impacts due to water-body crossings, and fragmentation. Commenters also suggest tables to make direct, indirect, permanent, and temporary effects clear.	See response to comment 801.0310.01 C.3 (Permitting – 404 Clean Water Act), 802.0400 C.3 and 801.0400 C11 (Soils), and 802.0200 C13 and 802.0200 C.38 (Air Quality).
Riparian Area, Wetlands	802.0105	B.2	There are concerns that the indirect impacts to wetlands from dewatering are underestimated. Commenters suggest a figure to compare modeled groundwater dewatering and wetland distribution. Commenters also suggest that the accuracy of the modeling be assessed.	The majority of wetlands that would be impacted are impacted directly and would result in a complete loss of the wetlands. As a result, although at baseline it would appear that many wetlands may be affected by dewatering, the reality is that the wetlands would no longer be present by the time dewatering occurs. Indirect impacts to wetlands not impacted directly are driven by geomorphic positions. Although dewatering can impact wetlands from an alteration of hydrology, most wetlands that are not directly impacted are downstream riverine wetlands and are unlikely to see drastic alterations, or slope wetlands which receive water from seepage, above any effect from dewatering

Resource	Comment Code	Comment Number	Concern Statement	Response
Riparian Area, Wetlands	802.0105	B.3	There are concerns that the indirect impacts of fugitive dust depositions and mercury deposition were not analyzed at the mine site or along the transportation corridor.	See response to comment 802.0105 B1.
Riparian Area, Wetlands	802.0105	B.4	Commenters suggest maps to compare pre-impact and post-impact assessment areas to better determine wetland impacts.	Additional maps were added to the SDEIS (Section 4.8.2 as Figure 4.8-10).
Riparian Area, Wetlands	802.0105	B.5	There are concerns that there is no known use of a Riparian Habitat Conservation Area to buffer spills, especially for gasoline or diesel fuel.	The SDEIS was revised where appropriate to remove mention of RHCAs buffering spills and specify BMPs where appropriate.
Riparian Area, Wetlands	802.0105	C.1	There are concerns that the temporal loss of wetland and riparian functions was not adequately addressed.	See response to comment 801.0310.01 C.3 (Permitting – 404 Clean Water Act).
Riparian Area, Wetlands	802.0105	C.2	There are concerns that the potential for conversion of wetland types in off-site wetland areas was not adequately addressed. Commenters suggest disclosing risks associated with wetland type conversion in reclamation designs.	Since distribution of the DEIS, the Conceptual Stream and Wetland Mitigation Plan has been revised and replaced with a final Compensatory Mitigation Plan that includes additional detail relative to the selected alternative. This information has been added to the SDEIS.
Riparian Area, Wetlands	802.0105	C.3	There are concerns that indirect effects to ESA-listed species in downstream areas were not adequately addressed in the analysis of wetland impacts.	ESA-listed species were addressed in Section 4.12 for fish species and 4.13 for wildlife and plant species. In addition, the Biological Assessment for the Project also addresses impacts to these species.
Riparian Area, Wetlands	802.0105	C.4	There are concerns related to the amount and extent of wetland impacts. These concerns include the amount of impacts at the mine site and potential downstream effects, as well as the potential for wetland impacts in the off-site areas. Concerns in off-site areas include hazardous material spills and sedimentation.	The DEIS disclosed impacts to wetlands at the mine site, as well as in off-site areas (DEIS Section 4.11). Information that has become available and updated since distribution of the DEIS has been incorporated into the SDEIS to further support and expand the analyses of impacts to wetlands. Also, see response to comment 801.0310.01 C9 (Permitting – 404 Clean Water Act) and 802.0400 C.3 (Soils).

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Riparian Area, Wetlands	802.0105	C.5	There are concerns over how a future Jurisdictional Determination and compensatory mitigation would affect the impact assessment. Specifically, commenters expressed the concern that non-jurisdictional wetlands would not require compensatory mitigation. Further, the DEIS and compensatory mitigation plan lack the detail necessary to determine how or where mitigation would be achieved. Commenters suggest that a new jurisdictional determination should be conducted under the 2020 WOTUS rule to determine the amount of compensatory mitigation that will be required and the true environmental impact of this Project.	As available, results of the Jurisdictional Determination process have been incorporated into the SDEIS (Section 3.3 and 3.8.4.2). Furthermore, additional temporal and spatial detail on compensatory mitigation was added to the SDEIS as detailed in the response to comments 801.0310.01 C.1 through C.3 (Permitting – 404 Clean Water Act). However, it should be noted that Jurisdictional Determinations are a procedural action determined with the regulations at the time, and it would be inappropriate to limit consideration of impacts to a narrow approach of jurisdiction, even though compensatory mitigation would only be required for WOTUS. Rather, the Agencies have a responsibility to consider the full effects of the Project and mitigate where feasible.
Riparian Area, Wetlands	802.0105	C.6	There are concerns that the restoration of surface water drainages will not be equivalent to restoration of wetland functionality due to the absence of secondary channels and woody debris, ineffectiveness of erosion/sediment controls, ineffectiveness of non-dynamic, non-porous control structures or because the relatively flat gradients across reclaimed mine areas are out of character with natural stream reaches.	See response to comment 801.1505 C6 (Reclamation).
Riparian Area, Wetlands	802.0105	C.7	There are concerns that road traffic along the Burntlog Route will have indirect impacts on fens in the vicinity of Mud Lake.	Fens in the vicinity of Mud Creek are described in Section 3.11.3.2.4 in the DEIS and potential impacts are addressed in Section 4.11.2.2.1.2 of the DEIS.

Fish or Aquatic Resources Concerns

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Fish or Aquatic Resources	802.0600.00	A.1	There are concerns that the current baseline conditions, such as physical habitat characteristics fundamental to fish population productivity (e.g., stream channel dimensions, off-channel habitat, floodplain connectivity); salmonid distribution, abundance, and density estimates; and metals concentrations in fish tissue, are insufficient and/or frequently inaccurately characterized, rendering predictions of impacts as unreliable and flawed in the DEIS.	Baseline conditions were primarily based on field surveys, with some extrapolations in a scientifically valid manner. These surveys began in 2012 as part of aquatics baseline studies, as well as additional studies to fill in data gaps for the evaluations for the DEIS. Some data are limited but were collected following approved protocols.
Fish or Aquatic Resources	802.0600.00	A.2	There are concerns that there are errors in the estimated fish linear densities and salvage numbers, specifically that the estimated numbers are too high, and that the information related to this concern and presented in Section 4.12 is confusing and inconsistent with information presented in the appendices.	Estimated fish linear densities are high for Chinook salmon due to the concentrated area in which the spawning adults were released. The number of spawning adults released in Meadow Creek were released in a high concentration within a small area, resulting in a higher fish linear density. Any potential contradictions and confusion regarding passage blockages as described in Appendix J-2 plus any errors in the estimated fish linear densities and salvage numbers, will be corrected and clarified in the SDEIS, as applicable.
Fish or Aquatic Resources	802.0600.00	A.3	There is a statement that poor salmon recovery is not attributable to mining, but instead attributed to IDFG regulations and activities.	No response required. Beyond the scope of the proposal.
Fish or Aquatic Resources	802.0600.00	B.1	There are concerns that the models applied in the analyses are flawed oversimplifications or are unproven, such as characterizing groundwater - surface water interactions.	The models applied to the fisheries evaluations are considered to be the best available tools. These tools were approved for use by the federal resource agencies engaged in the Project.
Fish or Aquatic Resources	802.0600.00	B.2	There are concerns that the DEIS underestimates impacts to physical habitat, which will impact salmonid populations.	The DEIS described the potential effects regarding changes in flows (Sections 4.12.2.3.3.1, 4.12.2.3.4.2, 4.12.2.3.6.2, 4.12.2.3.7.2, 4.12.2.4.4.2, 4.12.2.4.5.2, 4.12.2.5.3.1, 4.12.2.5.4.2, 4.12.2.5.5.2, 4.12.2.6.4.2, 4.12.2.6.5.2, and 4.12.2.6.6.2) and road crossings and sedimentation (Section 4.12.2.3.3.1, 4.12.2.3.4,

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				4.12.2.3.8, 4.12.2.4.3.1, 4.12.2.5.3.1, and 4.12.2.6.4.4). The best available tools were used to conduct the assessment.
Fish or Aquatic Resources	802.0600.00	B.3	There are concerns that the DEIS underestimates and overlooks the spill risk to fish and aquatic habitat along the transportation corridor such as cumulative, chronic, and potentially additive effects of multiple spills over time; underestimates the impact zone around roadways; and estimates spill risk rates that are two orders of magnitude lower than rates cited in other large mine DEISs.	The DEIS described the potential effects regarding potential spills (Section 4.12.2.3.2.1, 4.12.2.3.2.2, 4.12.2.3.5.4, 4.12.2.3.6.5, 4.12.2.3.8, 4.12.2.4.2, 4.12.2.5.2, 4.12.2.6.2, 4.12.2.6.4.4, 4.12.2.6.5.4, and 4.12.2.6.8). Additionally, Section 4.7.2 described the hazardous materials, potential mechanisms of spills, and BMPs that would be applied to reduce the effects.
Fish or Aquatic Resources	802.0600.00	B.4	There are concerns that the two aquatic monitoring methods (Nephelometry and total suspended solids) identified for the Project are not consistent with the stream substrate monitoring methods (modified McNeil core samples, cobble embeddedness and free matrix) that the Boise and Payette National Forests currently use and are required by the National Marine Fisheries Service to use under the Endangered Species Act.	The National Marine Fisheries Service has reviewed the Project monitoring data in its consideration of the Project's Biological Assessment and accepted them for use.
Fish or Aquatic Resources	802.0600.00	B.5	There are concerns that the DEIS analysis does not include a steelhead productivity analysis.	A productivity analysis for steelhead was included in the SDEIS.
Fish or Aquatic Resources	802.0600.00	B.6	There are concerns that comparing impacts on fisheries to current habitat conditions drastically underestimates the cumulative impacts of mining. Commenters state that current conditions within the site have been severely impacted by historic mining and thus impacts to fisheries should be predicted relative to estimated habitat conditions prior to mine development.	The Project Area has been impacted by historic mining activities, but effects of the Project must be compared to existing baseline conditions rather than historic conditions and do include potential additive effects from historic mining if those impacts are currently occurring.
Fish or Aquatic Resources	802.0600.00	C.1	There are concerns the DEIS does not adequately address interactions between the various impacts to fisheries and by considering fish species, stream reaches, and limited habitat impacts separately, the DEIS fails to acknowledge the broad ecological	Addressing the interactions between the various fisheries impacts is important, therefore, the best available tools were applied in the DEIS evaluation, including the intrinsic potential model and SPLNT

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			understanding that multiple stressors will amplify one another's effects on the ecosystem.	model that include multiple environmental/habitat factors.
Fish or Aquatic Resources	802.0600.00	C.2	There are concerns that the loss of headwater streams are not adequately addressed in the downstream effects.	The Project would affect the headwaters of Meadow Creek but is not expected to result in significant impacts to other headwater streams. Bull trout and westslope cutthroat trout would be the most affected by the loss of upper Meadow Creek. Effects to bull trout habitat loss were included in the Occupancy Probabilities evaluation described in DEIS Sections 4.12.2.3.6.1, 4.12.2.3.7.1, 4.12.4.6.1, 4.12.2.4.7.1, 4.12.2.5.6.1, 4.12.2.5.7.1, 4.12.2.6.6.1, and 4.12.2.6.7.1. The Intrinsic Potential model applied to both Chinook salmon and steelhead factors in the habitat availability.
Fish or Aquatic Resources	802.0600.00	C.3	There are concerns that the Project groundwater impacts have not been incorporated into the fisheries analyses.	The SPLNT model incorporates streamflow-groundwater interaction, and the results are then applied to the fisheries effects evaluation as presented in the DEIS.
Fish or Aquatic Resources	802.0600.00	D.1	There are concerns that the mitigation measures do not reduce and/or offset impacts to fish and are overly optimistic in the potential success.	The Project includes numerous mitigation measures and design features focused on protecting water quality, stream habitat and riparian vegetation as described in Appendix D of the DEIS. Many of the mitigation measures and design features to be implemented for the Project are standard operating procedures in mining and construction projects that have proven to be successful in reducing and/or offsetting impacts to fish.
Fish or Aquatic Resources	802.0600.00	D.2	There are concerns that the Stream Function Analysis, developed for the Project as a tool to quantify compensatory mitigation, is a new unproven model that does not comply with NEPA's best available science requirement and that there are other proven models that have been used on the Payette and Boise National Forests as well as elsewhere in the Pacific Northwest to characterize impacts to streams. There are concerns that	The SFA tool was not used in the fisheries analysis for the DEIS to quantify compensatory mitigation; however, reaches defined by an SFA analysis were used in the DEIS.

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			the description and results of the Stream Function Analysis do not appear in the body of the DEIS and that the conceptual/compensatory mitigation is buried in Appendix D of the DEIS.	
Fish or Aquatic Resources	802.0600.00	E.1	There are concerns that the DEIS does not adequately address potential impacts to non-salmonid species, including fish, invertebrates, and algae and that there is a lack of macroinvertebrate data or analysis.	The DEIS required analyses on listed and protected species (Chinook salmon, steelhead, bull trout, and westslope cutthroat trout). An analysis on non-salmonid fish species was included in DEIS Sections 4.12.2.3.8, 4.12.2.4.8, 4.12.2.5.8, and 4.12.2.6.8. Benthic invertebrate data collected five times since 2012 (2012, 2013, 2014, 2016, 2018) were examined and this discussion has been incorporated in the SDEIS.
Fish or Aquatic Resources	802.0600.00	E.2	There are concerns that the DEIS analysis does not consider cumulative effects to the Pacific lamprey, Idaho giant salamander, western pearlshell mussel, other freshwater mussels, and aquatic invertebrates.	Earlier studies, including eDNA surveys did not show presence of Pacific lamprey in the Project Area, and there is no known documentation or likely presence of the Idaho giant salamander, western pearlshell mussel, other freshwater mussels based on annual site surveys conducted since 2012.
Fish or Aquatic Resources	802.0600.00	E.3	There are concerns that the DEIS analysis does not consider cumulative effects to resident Orca in the northwest U.S.	There are no predicted direct or indirect effects on orca associated with the Project. Therefore, there is no predicted change in cumulative effects
Fish or Aquatic Resources	802.0600.00	F.1	There are concerns that the proposed tunnel will not provide successful fish passage.	On Section 4.12.2.3.2.1, the DEIS stated that if the tunnel does not pass fish upstream or downstream, a truck and haul operation would be implemented as a mitigation measure if needed.
Fish or Aquatic Resources	802.0600.00	F.2	There are concerns that tailings will prevent fish passage into the upper watersheds.	As described in Section 4.12.2.3.1, streams would be constructed either close to existing locations or on top of the tailings storage facility (TSF) or development rock storage facilities (DRSF). Streams on top of the TSF or DRSF would be inaccessible to natural upstream and downstream migration. These stream channels would be a high gradient that would be impassable for fish passage. In order to compensate

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				for this loss, stream enhancement activities would occur downstream to improve and increase habitat conditions.
Fish or Aquatic Resources	802.0600.00	F.3	There are concerns that the barrier removals, including large wood jams, may not adequately characterize the impacts or improvements to the populations.	Removal of the barriers would provide access to additional stream habitat. The access to these habitats are included in the Intrinsic Potential model and the Occupancy Productivity tool. Table 4.12-4 of the DEIS, includes the changes in Watershed Condition Indicator, including Physical Barriers, that show changes from Functioning at Unacceptable Risks to either Functioning at Risk or Functioning Appropriately. These Watershed Condition Indicator characteristics are based on criteria established by the USFS.
Fish or Aquatic Resources	802.0600.00	F.4	There are concerns that the effects description of fish passage barrier removals inadequately characterize impacts and improvements and that the effects associated with fish passage barriers do not comply with standard 1301 in the PNF Forest Plan nor standards 2101, 1919, and 2005 in the Boise Forest Plan regarding degradation of aquatic resource conditions.	Perpetua proposes removing crossings or barriers, addressing those directly affected as well as other barriers. They would be required to provide passage into the upper watershed. The Project's compliance with the applicable Forest Plans and standards are provided in Appendix A of the DEIS.
Fish or Aquatic Resources	802.0600.00	F.5	A commentor stated that historic mining operations did not appear to limit fish migration and the local fish population was robust.	No response required. Conjectural in nature or not supported by scientific evidence.
Fish or Aquatic Resources	802.0600.00	G.1	There are concerns that the proposed stream restoration will not be maintained in perpetuity.	Perpetua Resources has committed to long-term maintenance through post-closure operations.
Fish or Aquatic Resources	802.0600.00	G.2	There are comments voicing support for the Project due to the restoration work proposed by Midas Gold because the site is currently degraded due to past mining activities and that private investment is needed to restore the site. Commenters state that the restoration activities included in the Project will improve fish passage, improve water quality by reducing erosion and	No response required. General in nature or position statement.

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			sediment input into waterways, and reprocess old tailings.	
Fish or Aquatic Resources	802.0600.00	H.1	There are concerns that the proposed salvage operations to move fish may result in injury or mortality.	All salvage operations would be conducted with agency approved and qualified biologists, under the supervision of the USFS to limit/avoid injury or mortality.
Fish or Aquatic Resources	802.0600.00	I.1	There are concerns that the DEIS does not include sufficient data nor adequately addresses the impacts from sediment input from roads and Project activities.	The DEIS used data from the long-term baseline aquatic study for stream habitat and for fish distribution and relative abundance. This data has been collected since 2012. Additional studies were conducted to fill in data gaps for the DEIS evaluation. Additionally, The DEIS described the potential effects regarding changes in flows (Sections 4.12.2.3.3.1, 4.12.2.3.4.2, 4.12.2.3.6.2, 4.12.2.3.7.2, 4.12.2.4.4.2, 4.12.2.4.5.2, 4.12.2.5.3.1, 4.12.2.5.4.2, 4.12.2.5.5.2, 4.12.2.6.4.2, 4.12.2.6.5.2, and 4.12.2.6.6.2) and road crossings and sedimentation (Section 4.12.2.3.3.1, 4.12.2.3.4, 4.12.2.3.8, 4.12.2.4.3.1, 4.12.2.5.3.1, and 4.12.2.6.4.4).
Fish or Aquatic Resources	802.0600.00	I.2	There are concerns that sediment runoff may exceed suitable conditions.	The DEIS described the potential effects regarding road crossings and sedimentation (Section 4.12.2.3.3.1, 4.12.2.3.4, 4.12.2.3.8, 4.12.2.4.3.1, 4.12.2.5.3.1, and 4.12.2.6.4.4).
Fish or Aquatic Resources	802.0600.00	I.3	There are concerns that mining activities will endanger fish by increasing sediment runoff into waterways. Additionally, there are concerns that the DEIS fails to adequately consider this by excluding data on stream sediment chemistry and failing to describe or depict conceptual models that include stream sediment.	The DEIS described the potential effects regarding road crossings and sedimentation (Section 4.12.2.3.3.1, 4.12.2.3.4, 4.12.2.3.8, 4.12.2.4.3.1, 4.12.2.5.3.1, and 4.12.2.6.4.4). The DEIS clarifies the soil metal levels used for reclamation and their protectiveness of public health and surface water in Section 4.18 and for recreational risk in Appendix M.
Fish or Aquatic Resources	802.0600.00	J.1	There are concerns that the water chemistry for surface and groundwater will exceed the approved criteria and impact fisheries.	The DEIS described the potential effects regarding chemical contaminants, including specific constituents (Section 4.12.2.3.3.1, 4.12.2.4.3.1, 4.12.2.5.3.1,

Resource	Comment Code	Comment Number	Concern Statement	Response
				4.12.2.6.3.1). The EPA, IDEQ, and Biotic Ligand Model-based criteria, were applied to describe the effects to fish.
Fish or Aquatic Resources	802.0600.00	J.2	There are concerns that the DEIS underestimates and/or insufficiently evaluates the effects of contaminants to fisheries such as antimony, arsenic, aluminum, mercury, cadmium, copper, selenium, and zinc.	The DEIS described the potential effects regarding chemical contaminants, including specific constituents (Section 4.12.2.3.3.1, 4.12.2.4.3.1, 4.12.2.5.3.1, 4.12.2.6.3.1). The EPA, IDEQ, and Biotic Ligand Model-based criteria, were applied to describe the effects to fish.
Fish or Aquatic Resources	802.0600.00	J.3	There are concerns that the food chain and dietary pathway for fish will be impacted and are not sufficiently addressed in the DEIS.	Benthic invertebrate data collected five times since 2012 (2012, 2013, 2014, 2016, 2018) were examined and this discussion has been incorporated in the SDEIS.
Fish or Aquatic Resources	802.0600.00	J.4	There are concerns that water chemistry impact predictions consider unjustifiably limited parameters of concern and the impacts described in the DEIS are largely minimized.	The DEIS described the potential effects regarding chemical contaminants, including specific constituents (Section 4.12.2.3.3.1, 4.12.2.4.3.1, 4.12.2.5.3.1, 4.12.2.6.3.1). The EPA, IDEQ, and Biotic Ligand Model-based criteria, were applied to describe the effects to fish.
Fish or Aquatic Resources	802.0600.00	J.5	Commenters note that information regarding toxicity of antimony is lacking and assert that laboratory toxicity testing (including of site-specific waters) should be required prior to permitting.	Based on published data for the site, dissolved antimony occurs predominantly in its oxidized form [Sb(V)] under baseline conditions. This would also be expected as the predominant species under the Project alternatives. Sb(V) is the antimony species on which toxicity criteria are based. Toxicity criteria and water quality standards for antimony have been adopted by regulatory agencies to be protective of human and ecological health. As noted in response to comment 802.0800 Comment C.8, water quality of surface flow (i.e., rivers) would be the same or better than baseline conditions. Therefore, observations from existing conditions provide site-specific toxicity information as opposed to reliance of laboratory testing.

Resource	Comment Code	Comment Number	Concern Statement	Response
Fish or Aquatic Resources	802.0600.00	J.6	There are concerns that multiple other contaminants/ metals of concern to salmonids and other aquatic life are not considered in the DEIS. These metals are likely to increase as a result of the Project and some may biomagnify, increasing toxicity concerns. The DEIS needs to include effects analysis regarding food chain pathways, toxicity for arsenic, antimony, mercury, and other contaminants in order to understand the effects of the Project on fisheries.	See Comment Responses 802.0600.00, Comment J.2 and Comment J.3.
Fish or Aquatic Resources	802.0600.00	J.7	Commenters discuss the potential impacts of the following metals of concern: Aluminum: Elevated aluminum levels occur in the Project Area; aluminum can kill salmonids and may also have sublethal impacts on physiology and behavior. Aluminum may also have negative impacts on zooplankton and insects that are important in salmonid diets and can have other negative effects on the salmonid food web. Cadmium: The Project Area exhibits occasional exceedances of cadmium standards; cadmium is extremely toxic to aquatic life, with salmonids exhibiting particular sensitivity. Like aluminum, cadmium may have negative impacts on the salmonid food web. Copper: Copper is highly toxic to aquatic life, including salmonids, and "has been documented at levels one to three orders of magnitude greater than background in mining areas" (Save the South Fork Salmon letter p. 123). Copper is known to have adverse impacts on species within salmonid food webs. Iron: Iron is frequently associated with mining activity and may have negative effects on salmonid individuals and their prey sources. Mercury: Mining has been known to increase mercury levels in aquatic environments and can be toxic to fish, particularly through chronic exposure to methylmercury via diet. Selenium: Selenium contamination can occur due to mining activities and successful methods of water treatment are not yet developed. Chronic selenium exposure can	See Comment Response 802.0600.00, Comment J.2.

Resource	Comment Code	Comment Number	Concern Statement	Response
			result in malformation of early life stages of fish and toxic effects occur primarily through dietary pathways. Selenium can bioaccumulate and biomagnify. Zinc: Zinc is a common contaminant associated with mining activity. Zinc can be toxic to fish and the effects can reverberate throughout the food web.	
Fish or Aquatic Resources	802.0600.00	K.1	There are concerns that the water temperatures will exceed the criteria as a result of Project activities and impact fisheries.	DEIS Sections 4.12.2.3.3.1, 4.12.2.3.4.3, 4.12.2.3.5.3, 4.12.2.3.6.3, 4.12.2.3.7.3, 4.12.2.4.3.1, 4.12.2.4.4.3, 4.12.2.4.5.3, 4.12.2.4.6.3, 4.12.2.4.7.3, 4.12.2.5.3.1, 4.12.2.5.4.3, 4.12.2.5.5.3, 4.12.2.5.6.3, 4.12.2.5.7.3, 4.12.2.6.4.3, 4.12.2.6.5.3, 4.12.2.6.6.3, and 4.12.2.6.7.3 described the water temperature effects over the life of the Project for each species and life stage under each alternative. This impact analysis will be updated in the SDEIS with the submittal of a revised mine plan by Perpetua.
Fish or Aquatic Resources	802.0600.00	K.2	There are concerns that there is insufficient mitigation to address water temperature increases and the impacts it would have on fisheries.	The SDEIS clarifies the descriptions of design features, best management practices, and mitigation measures and describes the effectiveness of the mitigation measures and discusses the uncertainty in the effective implementation of those measures. In addition, the impact analysis related to water temperature will be updated in the SDEIS with the submittal of a revised mine plan by Perpetua.
Fish or Aquatic Resources	802.0600.00	K.3	There are concerns that climate change will exacerbate water temperature impacts.	Per the Brown and Caldwell (2019) report (Stream and Pit Lake Network Temperature Model, Proposed Action and Proposed Action with Modifications Report): Sensitivity and uncertainty analyses were conducted for the SPLNT model based on agency input during a technical session. The sensitivity analyses use a constant degree of change (20 percent) to provide a direct comparison of the changes in model output compared to changes in model inputs. The results of the sensitivity analysis identify which estimated inputs have the most influence on the model

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>results. The uncertainty analyses use ranges of likely model inputs to evaluate the uncertainty associated with imperfect knowledge of the system being modeled, numerical approximations, and the inherent errors/variability in empirical data.</p> <p>Several model inputs were varied for these analyses, using scenarios during operations and post closure. Model runs evaluating shade values, diffuse flow rates and temperatures, NDPES discharge flow rate and temperature, and air temperature (for potential climate change impacts) were conducted on conditions during operations. The EOY12, summer, Proposed Action scenario was used for these evaluations. A set of analyses was also performed for post-closure conditions to evaluate the effects of altering discharge flow rate and temperature from the three pit lakes. The post-closure, summer, EOY18 model was used for these evaluations.</p>
Fish or Aquatic Resources	802.0600.00	K.4	There are suggestions that the preferred alternative should be selected based on water temperature impacts.	A new alternative has been developed and analyzed in the SDEIS that is expected to result in lower water temperatures.
Fish or Aquatic Resources	802.0600.00	K.5	There are concerns that there is missing information related to the analysis of stream temperature impacts to bull trout.	Evaluations on water temperature conditions with respect to bull trout were included in DEIS Sections 4.12.2.3.6.3, 4.12.2.4.6.3, 4.12.2.5.6.3, and 4.12.2.6.6.3.

Land Use Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Land Use	802.1100	Primary	Concerns are expressed that the DEIS does not adequately study or provide sufficient mitigation to address impacts associated with surrounding land uses. The concerns were broad ranging and include impacts to	Project design features were identified in the DEIS for many of the impacts of concern, such as those to reduce light pollution, traffic, noise, and erosion.

Resource	Comment Code	Comment Number	Concern Statement	Response
			night skies, views, and the natural setting of the area. Further, there are concerns that the DEIS does not adequately analyze or describe the impacts of vehicle lights, cell phone towers, transmission lines, or the introduction of noxious weeds.	The DEIS analyzed Project impacts to scenic resources (Section 4.20) and noxious weeds (Section 4.10). The cell phone tower and transmission line were described in DEIS Chapter 2, and analysis, in context to scenic resources, is found in the DEIS (Section 4.20.1).The SDEIS refines this analysis in response to comments received on the DEIS.
Land Use	802.1100	Primary	Commentors expressed concerns with the DEIS regarding the changes associated with increasing the intensity of the land use from the current natural setting to that of an active mine site. The items of concern include the new road impacts to biological resources, additional utility rights-of-way, and the increased potential for wildfires.	The land use associated with the Project and its alternatives was described in Chapter 2 of the DEIS with land use impacts (e.g., rights-of-way) analyzed in Section 4.15. Specific impacts to biological resources (i.e., vegetation, wetlands, fisheries, wildlife, and timber) were described in Sections 4.10 through 4.14 of the DEIS. The DEIS acknowledged the impact implications of past, current, and future wildland fires in Section 4.1, and this has been updated in the SDEIS. The SDEIS refines this analysis in response to comments received on the DEIS.
Land Use	802.1100	C.1	There are concerns regarding the impacts of a tailings dam failure and the analysis of that potential in the DEIS.	Based on the design of the tailings dam and its associated buttress, the Factor of Safety achieved by the design indicates that tailings dam failure would not be reasonably foreseeable (SDEIS Section 4.2.2.2/Geotechnical Stability/TSF and TSF Buttress). The DEIS did include an analysis of the potential for failure and it is found in the Geotechnical Hazards section of the DEIS (4.2.2.1.2).
Land Use	802.1100	C.2	There are concerns regarding the impacts of landslides and the analysis of that potential in the DEIS.	The DEIS described the landslide potential and impacts in Section 4.2. The SDEIS refines the analysis of the impacts and efficacy of design features.
Land Use	802.1100	C.3	There are concerns that the DEIS does not include adequate information regarding the borrow materials that would be used for mine closure and reclamation.	The SDEIS clarifies the requirements for borrow materials for mine closure and reclamation, along with acknowledging the role of borrow materials in

Resource	Comment Code	Comment Number	Concern Statement	Response
			There are concerns that the DEIS downplays the challenges and concerns related to the suitability and availability of borrow materials. There are concerns that inadequate characterization of borrow materials can lead to environmental impacts as a result of using unsuitable material for foundations and other needs and thus the DEIS should identify, physically and chemically characterize, and analyze borrow sources.	reclamation success. The selection and utilization of borrow materials for closure and reclamation would occur per methods identified in the agency-approved Reclamation Closure Plan that would be incorporated into the Project via its ROD.
Land Use	802.1100	C.4	There are concerns that detailed designs and technical information on the construction, operation, and closure of facilities and controls structures such as the tailings dam, underdrain/seepage water collection system, potential failure of the TSF underdrain, water treatment systems, and passive biotreatment systems (with their effects on methylmercury treatment and generation) are not presented in the EIS. Next, comments ask about the longevity and maintenance of control features such as liners and underdrains. Further, the analyses of the effectiveness of these controls are not presented in the EIS.	The DEIS analyzed the impacts of site facilities in Chapter 4 per their design description in Chapter 2. Detailed designs for construction are not necessarily required for the NEPA analysis that accounts for design requirements imposed by other regulatory agencies responsible for the issuance of permits to construct for these facilities. The SDEIS clarifies the description of environmental controls plus their maintenance and effectiveness.
Land Use	802.1100	C.5	There are concerns that there is not enough technical information and supporting data on the construction of the tailings storage facility and tailings dam to perform an adequate review. Commenters note that the DEIS and Prefeasibility Study do not provide enough information to answer such basic questions as (1) how will the dam be constructed in a downstream manner given the simultaneous development of the Hangar Flats DRSF, which will not be compacted to engineering standards; and, (2) will the proposed construction approach allow for expansion of the tailings facility in a downstream manner, or will dam expansion be limited to upstream-type development?	Updated information regarding the tailings storage facility was incorporated into SDEIS with the downstream construction of the TSF embankment depicted in Figures 2.4-10 and 2.4-11. Any proposal for expansion of the tailings facility would require an expansion design describing how the expansion would be constructed, and then additional NEPA analysis of that expansion plan.
Land Use	802.1100	C.6	There is a statement that the TSF design is compliant with IDEQ and Idaho Dam Safety requirements.	No further response required. Already decided by law, regulation, or policy.

Resource	Comment Code	Comment Number	Concern Statement	Response
Land Use	802.1100	C.7	<p>There are concerns that the Forest Service dismissed scoping comment requests to develop underground mining alternatives with no substantive explanation. Commenters cite AECOM 2020b, Table 1, as showing that an underground mining alternative was not considered. Commenters provide analysis to support their assertion that an underground mining alternative should be carried forward: An underground mining alternative would meet the purpose and need. Underground mining, when paired with the backfilling of underground workings, would reduce environmental effects to multiple resources (including wildlife, surface water, groundwater, visual resources, recreation, etc.). Underground mining is technically feasible. The Forest Service has a mandate to study in detail the question of whether the alternative is economically feasible. Commenters assert that it is insufficient to disregard underground mining simply because it is more expensive. Commenters state that a detailed study of several provided points must be carried out to determine whether or not underground mining would be economically feasible.</p>	<p>Underground mining as an alternative mining method is included in the alternatives evaluation in the SDEIS. Underground mining of the Stibnite orebody does not meet the purpose and need for the Project because metal grades are below the grades needed for the Project to be economically feasible. These ore grades are described in the proponent's public filings of the Project feasibility study in compliance with its status as a publicly traded company (available via www.sedar.com).</p>
Land Use	802.1100	C.8	<p>There are concerns that the long-term or perpetual treatment of water pollution described in the DEIS has not been adequately analyzed and that the public must have an opportunity to comment on final treatment issues before issuance of a Final EIS. Additionally, there are concerns that the need for perpetual water treatment means that the operation would never be fully reclaimed, in violation of the requirements of the Organic Act, National Forest Management Act, Clean Water Act, and agency regulations (36 CFR 228, 36 CFR 251, and 36 CFR 261). Commenters state that the costs associated with perpetual water treatment often make up the majority of the financial assurance bond and can often fall upon taxpayers; therefore, careful analysis of the potential liabilities is critical.</p>	<p>The SDEIS refines the description and analysis of Project water treatment. These clarifications will include the site water balance and the effects of active and passive treatments on methylmercury along with the expected flow and chemistry from sources requiring treatment (e.g., development rock storage facilities).</p> <p>The DEIS examined the role of climate change in Section 4.4 and carried through the analysis of impacts under different climate conditions (e.g., surface water flow and quality in DEIS Section 4.8.2.1.1 and Section 4.9.2.1.2).</p> <p>A Water Management Plan and Water Resources Monitoring Plan for operations and closure, including</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
			<p>Commenters provide examples in support of the assertion that the analysis is inadequate: Little technical information is provided on either the active or passive treatment methods. There is uncertainty related to the production of methylmercury in the passive system and no information is provided on methods to remove methylmercury if it is produced. A reliable water balance has not been put forth, calling into question the premise that the temporary storage facility is a zero-discharge facility during operations. Climate change is not considered in the water balance model for the temporary storage facility. While adaptive management would be used to allow for updating the temporary storage facility, not even a preliminary adaptive management plan is available. Neither the water treatment evaluation nor the water balance include an estimate of the volume and concentration of contact water that could escape capture. Perpetual water treatment has been omitted from alternatives 1, 3, and 4, but the DEIS does not elaborate on the rationale for this omission. The perpetual water treatment liabilities should be characterized for all alternatives. Commenters provide a list of information that they assert should be included for alternatives 1, 3, and 4. There are shortcomings in the characterization of water quality and quantity of the sources requiring treatment. The DEIS does not adequately discuss the treatment of post-closure flow from the development rock storage facilities</p>	<p>elements of adaptive management, will be incorporated into the Project based on the NEPA impact analysis as a requirement of the Project ROD.</p> <p>The SDEIS clarifies the temporal impacts of the proposed SGP; specifically, the length of active post-operation water treatment.</p> <p>It is clarified in the SDEIS that predicted active water treatment would be needed until year 40 (25 years after closure), rather than in perpetuity.</p> <p>The costs associated with water treatment could represent a substantial portion of the Project's reclamation costs and financial assurance, but that the purpose for that financial assurance would be to not burden taxpayers with those costs.</p>
Land Use	802.1100	C.9	<p>There are concerns that Alternative 4 does not adequately describe the Hangar Flats tailings storage facility liner configuration and the DEIS does not include a figure depicting the liner.</p>	<p>The tailings storage facility and its liner were described in DEIS Section 2.3.5.7. The description for Alternative 4 is the same as the description for Alternative 1.</p>
Land Use	802.1100	C.10	<p>There are concerns that the DEIS fails to adequately analyze the impacts of light pollution from the Project by failing to properly quantify the significant increase to</p>	<p>The impacts of the Project on nighttime lighting were described in DEIS (Sections 4.13, 4.19, 4.20. In Section 4.20, these impacts were analyzed through the</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
			<p>nighttime lighting. Commenters recommend that the Forest Service quantify effects by collecting baseline dark sky readings for a range of locations within the analysis area and then conducting modeling (similar in concept to what is done for air quality) to determine how each of the alternatives would affect the baseline. Additionally, there are concerns that the mitigation measures related to light pollution are insufficient and do not clearly address the three keys to reducing light pollution: comprehensive light shielding, selecting lights with the proper temperature and color, and the use of timers and/or motion sensors for all external lights. Commenters recommend that the guidelines identified in Midas Gold's Dark Skies Report be added to the EIS</p>	<p>use of three Key Observation Points to identify where Project lighting would be visible compared to baseline conditions. Preliminary design features discussed in the analyses and are found in the DEIS appendix D. Perpetua has proposed lighting design features which states "Lighting will be managed within active mining areas to avoid unintended lighting of natural, wildlife usage areas. External lighting will be kept to the minimum required for safety and security purposes. Lights will be directed down toward the interior of the mine site and shielded, where appropriate." (Appendix D, Table D-2).</p> <p>The SDEIS clarifies the discussion of project design features and mitigation measures incorporated to reduce light pollution.</p>
Land Use	802.1100	C.11	<p>There are concerns that the SODA materials to be used in the tailings impoundment embankment would release arsenic, antimony, and mercury when leached. Further, construction materials would leach arsenic and antimony.</p>	<p>The leaching characteristics of SODA materials were evaluated in geochemical characterization for the Project (Section 4.9).</p> <p>The SDEIS clarifies the leachability requirements for any construction materials that are utilized outside the containment infrastructure. With regard to the SODA materials, these requirements would be incorporated into an agency-approved Legacy Materials Management Plan and incorporated into the Project via its ROD.</p>
Land Use	802.1100	C.12	<p>Concerns were expressed that the DEIS did not adequately address, study, or provide sufficient mitigation to the impacts associated with surrounding land uses. The concerns were broad ranging and include items such as; night skies, views, and the natural setting of the area. Further, the DEIS did not adequately analyze or describe in sufficient detail the impacts of items such as: vehicle lights, cell phone towers, construction and maintenance of transmission lines, or the introduction of noxious weeds.</p>	<p>The DEIS discussed Project impacts to scenic resources (Section 4.20) and noxious weeds (Section 4.10). Preliminary design features to reduce impacts on surrounding land uses are included in the DEIS (Appendix D). The cell phone tower and transmission line were described in DEIS Chapter 2, with the impacts of those infrastructure elements incorporated into the analyses of specific resources in DEIS Chapter 4. The SDEIS refines the analysis and</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				clarifies the efficacy of design features to reduce impacts.
Land Use	802.1100	C.13	Commentors expressed dissatisfaction with the DEIS regarding the changes associated with increasing the intensity of the land use from the current natural setting to that of an active mine site. The items of concern included the new road impacts to biological resources, additional utility rights-of-way, and the increased potential for wildfires.	The land use associated with the Project and its alternatives was described in Chapter 2 of the DEIS with land use impacts (e.g., rights-of-way) described in Section 4.15. Specific impacts to biological resources (i.e., vegetation, wetlands, fisheries, wildlife and timber) were described in Sections 4.10 through 4.14 of the DEIS. The DEIS acknowledged the impact implications of past, current, and future wildland fires in Section 4.1, and this will be updated in the SDEIS.
Land Use	802.1100	C.14	There are concerns that radio and cell phone communication towers associated with the Project could have impacts on visual resources and could create new ground disturbance. Commenters note that additional visual studies should be conducted to ensure that towers are not located within sight of the Frank Church River of No Return Wilderness area.	Appendix O of the DEIS included a visual analysis of the communications towers. Although the towers could be visible from some high points in the Frank Church River of No Return Wilderness, due to distance, they would be unlikely to dominate the view. The SDEIS clarifies impacts of towers on site conditions including the potential for their visibility from within the Frank Church River of No Return Wilderness area.
Land Use	802.1100	C.15	Commenters also note that the locations of off-site maintenance facilities and tower locations at Meadow Creek Lookout and Thunderbolt Mountain associated with Alternative 4 have not been surveyed for cultural resources and should be. Commenters request that Midas Gold, the Forest Service, and the State Historic Preservation Office work on relocating structures that obstruct the Meadow Creek Lookout viewshed, as partial mitigation for adverse effects to historic resources.	The SDEIS updates and clarifies the status of cultural resource surveys. Mitigation measures would be incorporated into the Project via a Historic Properties Management Plan and Historic Properties Treatment Plan that would be supporting components of a Programmatic Agreement between the Project proponent, Forest Service, the Idaho State Historic Preservation Office, the Advisory Council on Historic Preservation, and other consulting parties.
Land Use	802.1100	C.16	There is a question regarding whether use of above ground fuel distribution pipelines is part of the proposal.	The Project utilized above ground fuel distribution pipelines exclusively.

Resource	Comment Code	Comment Number	Concern Statement	Response
Land Use	802.1100	C.17	Commenters suggest that the PAG analysis does not incorporate observations of acid-generation from legacy waste rock and ore material and does not account for exhaustion of neutralizing potential over time. Further, commenters note that pyrite encapsulation is the more likely inhibitor of acid generation than neutralization. Further, the Neutralization Potential of Stibnite waste and ore samples has been overestimated, potentially affecting PAG calculations. Further, only one HCT test of PAG waste rock generated acidity and was therefore used to represent acidic drainage across the site.	<p>The analysis of Potential Acid Generation (PAG) utilized accepted static and kinetic testing methodologies for characterizing the acid-generation and analyte leaching potential of mined materials. Two phases of material samples were tested, and the SDEIS incorporates the results of both phases.</p> <p>The kinetic testing included the use of humidity cell tests that were run for a sufficient length of time to exhaust acid-generation and neutralization potential of the samples collected. Therefore, utilization of the humidity cell tests to assess PAG classification does account for exhaustion of neutralization potential.</p> <p>Based on observation of historic mined materials and the recent test work, acid-generation from mined materials occurs infrequently in the lithologies mined at the Stibnite site. Because actual acid-generation from mined materials is not observed for most materials, the lone acid-generating HCT test was utilized as a surrogate for the acidic drainage chemistry.</p>
Land Use	802.1100	C.18	There are concerns that the TSF will need to be expanded in the future because of exploration efforts.	There are no currently identified mineral resources that would result in expansion of the TSF. If additional resources were identified in the future, the expansion of the TSF would require additional design, NEPA analysis, and other permitting prior to its approval and construction.
Land Use	802.1100	C.19	There is a statement that current design practices and mine operations will factor in environmental concerns better than past practice.	Chapter 2 (Table 2.4-12 and 2.4-13) and Chapter 4 of the SDEIS identify Forest Service requirements, best management practices, and environmental design features for the proposed Project that have been incorporated and analyzed to address environmental concerns.
Land Use	802.1100	C.20	There are concerns that the seismic analysis (URS 2013) uses outdated information and models and does not	SDEIS Section 4.2.2 utilizes and updates the 2013 seismic analysis.

Resource	Comment Code	Comment Number	Concern Statement	Response
			place enough weight on the potential for an earthquake on the Deadwood - Reeves Creek Fault	
Land Use	802.1100	C.21	There is a statement that recent use of the Project area has involved mining and exploration and it has not been utilized by tribes and is not a wilderness area.	The Project area is not designated as a wilderness area (DEIS Section 3.23). The utilization of the area by tribes was described in DEIS Section 3.24 based on ethnographic information provided to the Forest Service by tribal organizations.
Land Use	802.1100	C.22	There are concerns that the utility rights of way would be used by unauthorized off-highway and over-snow vehicles, resulting in negative impacts to numerous resources. There are concerns that the DEIS fails to adequately consider the impacts of unauthorized motor vehicle use along utility line corridors.	The majority of the transmission line ROW currently exists and likely some of the existing access routes are utilized by authorized and/or unauthorized OHVs. As Idaho Power Company's ROWs are non-prescriptive, the ROWs do not preclude other public uses consistent with agency management.
Land Use	802.1100	C.23	There are questions regarding the disposal of spent petroleum products and maintenance items.	Used petroleum products and maintenance items are and would be collected and transported from the mine site for recycling or disposal off-site as described in DEIS Section 2.3.5.18.
Land Use	802.1100	C.24	There are questions regarding the disposal of spent tires.	Light vehicle and equipment tires less than 54 inches in diameter would be returned to the vendor for recycling when no longer usable. Mining waste tires are exempted from Idaho's normal tire recycling and disposal requirements by IDAPA 58.01.06. A tire is considered a mining waste tire if it is greater than 54 inches in diameter and was used in mining operations. Mining waste tires may be disposed of by burial in mine pits and development rock piles in accordance with the Mining Waste Tire Burial Guidelines section of the IDL Minerals Regulatory Program Procedure.
Land Use	802.1100	C.25	There are concerns that the DEIS failed to address several concerns raised by the public during the scoping process. Commenters provide examples of issues raised during the scoping process that have not been addressed by the DEIS.	SDEIS revisions clarify the incorporation of scoping comments into the analysis per comments on the DEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Land Use	802.1100	C.26	There are concerns that a worst-case water balance was not incorporated into the temporary closure plan.	Water management requirements for the site would not be reduced under a temporary closure scenario. Therefore, the water balance conditions accounted for in the operating condition would be extended into any temporary closure.
Land Use	802.1100	C.27	Commenters request that Midas Gold and the Forest Service create a monetary mitigation fund to further address light and noise pollution impacts to wildlife.	In accordance with 36 CFR 228, compensatory mitigation cannot be required since the regulations only require to “minimize adverse environmental impacts.” Design features to reduce noise and light impacts to wildlife was addressed in the DEIS Section 4.13. See response to comments 802.0500. B.5 and B.6 (Wildlife Resources).
Land Use	802.1100	C.28	There are concerns that the Project documents do not adequately describe the potential sewage treatment facility. Specifically, where this treatment would be located and how large it would be.	The SDEIS clarifies the description of the sewage treatment facility within Section 2.4.5.11.
Land Use	802.1100	C.29	There are concerns that the DEIS Executive Summary Connected Actions is misleading because it does not incorporate the proposed dismantling and rebuilding of the existing Johnson Creek substation and the construction of a mine site substation.	The SDEIS clarifies the description of the proposed substation modifications in Section 2.4.4.7.
Land Use	802.1100	C.30	There are concerns that the DEIS failed to consider a reasonable range of alternatives and improperly dismissed feasible alternatives, thus violating NEPA. There are concerns that the DEIS does not define the terms "technically feasible" and "economically feasible", which were used as the basis for eliminating alternatives and that the DEIS relies entirely on Midas Gold to determine feasibility. Additionally, there are concerns that during scoping the public submitted comments recommending the development of additional alternative, but the Forest Service failed to do so and did not adequately respond to those comments. Commenters request that the Forest Service develop all reasonable alternatives to address concerns the public raises.	See response to comment 801.1002 C.3 (Alternatives Comparison Range).

Resource	Comment Code	Comment Number	Concern Statement	Response
Land Use	802.1100	C.31	There is a recommendation that the Project include a solar generation plant to supplement its electrical power consumption.	Comment noted. The sourcing for electrical power was described in Chapter 2 of the DEIS. On-site solar power generation is not a component of the plan of operations and has not been analyzed as part of this NEPA process.
Land Use	802.1100	C.32	There are concerns that the DEIS and supporting documents failed to adequately characterize geochemical conditions. Additionally, there are concerns that the DEIS fails to provide information on how development waste rock will be handled. Commenters note that waste rock management plans are typically included as part of the EIS because geochemical classification of waste rock is an important factor in determining the risk it poses to water quality. There are concerns that the lack of discussion of the different types of waste/development rock based on their geochemistry results in a lack of clarity in the DEIS on what waste disposal/storage strategies will be needed. Commenters raise the following specific concerns related to these issues: There are gaps in lithological characterization and application. Geochemical testing results contradict the DEIS's assumption that leaching characteristics across a given lithology are the same. Geoenvironmental units should have been identified before geochemical characterization began. Since this did not occur, the leaching potential from a given lithology could be under or overestimated. Geochemical tests on future waste materials are missing; no material went through field-scale testing looking at rates of acid generation or consumption and metal leaching under more realistic conditions expected during and after mining. Assumptions about acid-generation and contaminant leaching potential are not supported and the neutralization potential of waste and ore samples has been consistently overestimated. A number of existing sources of contamination (as identified by the EPA) are not adequately described. It is unclear if the drilling	Please see the responses regarding geochemical conditions and water quality included in the responses to Water Resources concern statements (e.g., responses to Water Resources concern statements A.16 and A.30).

Resource	Comment Code	Comment Number	Concern Statement	Response
			program sampling was spatially adequate and samples were not taken from exploration tunnels and faults, the West End pit (ore-grade samples), or the Bradley waste rock dump (surface samples).	
Land Use	802.1100	C.33	There is a request to include a figure to visualize the site after closure.	DEIS Section 4.20 describes the site's visual context. Visualizations of the Project at site closure are included in the proponent's Plan of Restoration and Operations submittals.
Land Use	802.1100	C.34	There are concerns that samples collected for geochemical testing omit some potential source lithologies such as the Stibnite stock and Bradley dump material. Further, two laboratory leach tests on legacy materials that represented the upper range of whole rock arsenic concentrations were not included. Next, there are an insufficient number of kinetic tests performed on legacy materials. Further, the waste rock generated and placed as backfill in the Scout Exploration Decline has not been characterized	Please see the responses regarding geochemical conditions and water quality included in the responses to Water Resources concern statements (e.g., responses to Water Resources concern statements A.10).
Land Use	802.1100	C.35	There are concerns that the number and location of geochemical samples selected for test work do not adequately characterize the legacy mine materials and proposed mine materials for the water quality analysis. Further, some test work was not performed on legacy materials (e.g., MWMP on legacy waste rock, mineralogy on legacy tailings, HCT tests on legacy waste rock or tailings).	Please see the responses regarding geochemical conditions and water quality included in the responses to Water Resources concern statements (e.g., responses to Water Resources concern statements A.10).
Land Use	802.1100	C.36	There are concerns that the EIS does not analyze potential impacts of discharge to Rapid Infiltration Basins (RIBs) on surface water flows.	The effect of RIBs discharge was incorporated into the predictive analysis of water quantity described in Section 4.8 of the DEIS. RIB infiltration provides a source of groundwater recharge in the groundwater flow model that was subsequently used to predict groundwater discharge to surface water flows.

Resource	Comment Code	Comment Number	Concern Statement	Response
Land Use	802.1100	C.37	There are concerns regarding the disposal of water and non-toxic drilling fluids utilized by exploration are not described in the DEIS.	Requirements for disposal of drilling fluids utilized by exploration are currently in place per the approved Golden Meadows Exploration Project. These requirements would be carried forward for the mining project.
Land Use	802.1100	C.38	There are concerns that the Fiddle Development Rock Storage Facility is unnecessary and the DEIS failed to consider an alternative that eliminates this facility.	The SDEIS considers an alternative where the Fiddle Development Rock Storage Facility is not constructed.
Land Use	802.1100	C.39	Commenters note that the TSF is described as a zero-discharge facility, but the reclamation and closure plan employs water treatment for tailings solution.	Comment noted. The SDEIS clarifies the description of water management at the TSF in Section 2.4.5.8.
Land Use	802.1100	C.40	There are concerns that the DEIS does not adequately address avalanche hazards and risk from the over 30 known avalanche paths within the mine site that pose significant hazards to worker safety. Additionally, there are concerns that the DEIS falsely assumes that avalanche hazards cannot be mitigated and thus fails to analyze the impacts that an avalanche control program would have. Commenters raise specific concerns regarding this issue, including the following: The DEIS fails to adequately identify avalanche hazards along the proposed Burntlog Road. Additionally, there are inconsistencies between the road alignment shown in Appendix E and that shown in the Executive Summary of the DEIS. The DEIS does not provide enough information to evaluate avalanche hazards along this access route and also does not provide a mitigation strategy to reduce risk to vehicles traveling along the road. Avalanche path identification techniques conflict with the recommendations of the avalanche hazard assessment reference cited by the DEIS. Additionally, the Mears and Wilbur Avalanche Hazard Assessment is a single seven-year-old map that does not contain information to ascertain what criteria were utilized to create it. Regardless of which road (Burntlog or Johnson Creek/Stibnite) is chosen for mine site access, an	<p>The DEIS discussed avalanche hazards as an existing concern in the in the analysis of primary routes in Chapter 3 (3.16.3.2). Use of the Burntlog Route was preferred on the basis safety considerations for avalanche zones (4.16.2.4.4).</p> <p>The Final Transportation Baseline Study (HDR 2017) included the high avalanche potential of other routes as criteria for their recommendations (HDR 2013).</p> <p>The baseline study and the DEIS refer to the Mears and Wilbur Avalanche Hazard Assessment (2013) as a reference. It was determined that the Burntlog Route option had the least road length containing steep vertical grades and least distance within avalanche and landslide potential areas (HDR 2013).</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
			avalanche forecasting and control/mitigation program will need to be implemented to ensure viable, safe, and open access to the Project site. Commenters note that avalanche forecast/mitigation programs are common at ski areas and along highway corridors throughout the western U.S. and have been analyzed in several recent NEPA documents. An avalanche forecast/mitigation program could result in impacts to a variety of resources and thus must be analyzed in the DEIS.	
Land Use	802.1100	C.41	There is a question regarding decontamination of equipment and vehicles that contact hazardous substances from previous mining activity.	The management of hazardous substances associated with previous mining activity is described in the Environmental Legacy Management Plan which would be incorporated into the Project via the ROD. Most planned legacy materials involve tailings, spent ore, and development rock. Equipment used in removal of these historical mined materials would be cleaned using the washbay or wash areas employed by the Project. Potential unplanned exposure of equipment to other legacy materials such as fuels, reagents, and mercury-contaminated materials would be addressed via decontamination procedures specific to that chemical exposure (e.g., response plans to petroleum spills, cyanide spills, and mercury material management).
Land Use	802.1100	C.42	There is a question as to whether there will be any additional hazardous materials used on site during the Project construction phase.	The hazardous materials that would be on site during the construction phase are included within the list described in the SDEIS Section 4.7.2.
Land Use	802.1100	C.43	There are questions about the application of erosion abatement, the placement and spacing of culverts, reduction of sediment in cut/fill slopes, specificity of erosion control and sediment BMPS, and road reclamation criteria.	The role of design features, best management practices, and mitigation measures in erosion abatement is clarified in the SDEIS Section 4.5.2. Erosion prevention and control are design features of the project, using best management practices, and are monitored as a requirement of the Stormwater Pollution Prevention Plan (SWPPP) process. This is an element of the EPA regulated NPDES permitting

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>process, which include the MSGP and the SWPPP, and are called out as Preliminary Mitigation Measure FS-48.</p> <p>Further, in the DEIS (Appendix D) Perpetua Resources has committed to a mitigation measure that road surfaces throughout the SGP will be stabilized and managed to minimize transport of sediment, dust, and other materials, especially near watercourses through appropriate road engineering, surface drainage, watering and application of dust control binding agents (magnesium chloride, lignin sulfonate, etc.), roadside ditching, road-cut stabilization, road surface maintenance, appropriate speed limits, and by limiting traffic.</p>
Land Use	802.1100	C.44	There are comments that the DEIS did not disclose the plan for infrastructure facilities and potential impacts.	DEIS Section 2.3.5.16 describes the infrastructure facilities that support the proposed mining operations. The predicted impacts of these facilities were presented in the environmental resource analyses in DEIS Chapter 4.
Land Use	802.1100	C.45	There is a concern that the DEIS did not contain information about employee housing during construction.	DEIS Section 4.21.2.1.1.3 describes the anticipated housing during the construction period
Land Use	802.1100	C.46	There are commenters that support moving the upgraded transmission lines out of residential areas.	No further response required. Comment general in nature.

Fire and Fuels Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Fire and Fuels	802.2102	Primary	There are concerns that increases in fire risk associated with the project including power transmission, fuel composition, and changes in plant species resulting from project disturbance have not been analyzed completely,	The DEIS described proposed new power transmission and fuel usage in Chapter 2. Effects of new surface disturbance were described in DEIS Section 4.10. The effects of wildfire risk were

Resource	Comment Code	Comment Number	Concern Statement	Response
			including any mitigation of these potential impacts. Further, there are concerns that the 2020 Buck Fire has burned through the area, leading to a changed baseline condition.	analyzed as cumulative impacts for resources including climate change (Section 4.4), soils (Section 4.6), water quality (Section 4.9), vegetation (Section 4.10), wetlands (Section 4.11), fisheries (Section 4.12), and wildlife (Section 4.13). The 2020 Buck Fire occurred concurrently with the publication of the DEIS. The DEIS disclosed the impact implications of past, current, and future wildland fires in Section 4.1, and the Final EIS updates that disclosure along with any implications for baseline conditions.
Fire and Fuels	802.2102	C.1	There are recommendations for fire safety and evacuation/refuge planning for personnel on the project site.	Evacuation and refuge procedures for an operating mine are outside the purview of the NEPA analysis and Project Decision.
Fire and Fuels	802.2102	C.2	There are concerns that the 2020 Buck Fire has burned through areas that are part of the Stibnite Gold Project area, leading to significant changed circumstances requiring a supplemental DEIS for public comment.	The 2020 Buck Fire occurred concurrently with the publication of the DEIS. The DEIS disclosed the impact implications of past, current, and future wildland fires in Section 4.1, and the Final EIS updates that disclosure along with any implications for baseline conditions.
Fire and Fuels	802.2102	C.3	There are comments that the presence of equipment on site would improve local fire-fighting capability.	Although not required, the proposed operations would include immediate fire and other emergency response capabilities for its own activities.
Fire and Fuels	802.2102	C.4	There are concerns that increases in fire risk associated with the project including power transmission, fuel composition, and changes in plant species resulting from project disturbance have not been analyzed completely, including any mitigation of these potential impacts.	The DEIS described proposed new power transmission and fuel usage in Chapter 2. Effects of new surface disturbance were described in DEIS Section 4.10. The effects of wildfire risk were analyzed as cumulative impacts for resources including climate change (Section 4.4), soils (Section 4.6), water quality (Section 4.9), vegetation (Section 4.10), wetlands (Section 4.11), fisheries (Section 4.12), and wildlife (Section 4.13).

Resource	Comment Code	Comment Number	Concern Statement	Response
				The DEIS listed management practices that reduce wildland fire risks and impacts. These management practices have been more explicitly identified in the Final EIS.

Transportation and Access Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Transportation and Access	802.1200.00	Primary	There are concerns that the addition or expansion of roads and their proposed usage rates by Project traffic would cause significant impacts with specific concerns regarding transport of hazardous materials along the access roads and the potential for accidents and impacts to fish, wildlife, water quality, recreation, and public safety. Commenters expressed concern regarding the methods used to estimate the potential for accidents. Next, there are concerns regarding the construction and durability of proposed access routes plus weather and construction schedule impacts to access and transportation. Lastly, there are concerns regarding how the alternatives account for both state and federal roadless area rules.	<p>Transportation and Access impacts were addressed in DEIS Section 4.16. This section directly addressed access to public lands, the location of potential new and improved roadways, changes in the intensity of road use, and the potential for accidental spills.</p> <p>Detailed information and analysis regarding the impacts associated with specific hazardous materials were addressed in the DEIS in Hazardous Materials (Section 4.7). That section also described potential responses to various scenarios of accidental spills on access roads (Section 4.7.2.4.2.5). Further, a series of regulatory requirements, best management practices, and environmental design features required by the Forest Service directly addressed the management of fuels and hazardous materials in Appendix D of the DEIS (FS-84, FS -85, FS 86, FS-87, FS-88, FS-89, FS-90 thru 102).</p> <p>The impacts of adverse weather conditions on construction related to access and transportation routes was addressed in the DEIS with a restriction on the construction season from May to November (Section 4.16.2.1.1). Perpetua would coordinate</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>with Valley County on the use and maintenance of the selected route for year-round access in accordance with Valley County's public road FRTA easement stipulations.</p> <p>The DEIS discussed both state and federal roadless areas and outlines both Direct and Indirect effects (Section 4.23.3.2).</p>
Transportation and Access	802.1200.00	C.1	There are concerns about hauling hazardous and flammable materials along the access roads, and that the DEIS did not adequately address the potential for accidents. The methods used to estimate the potential for accidents were not adequate according to some of the commentors.	<p>In DEIS Section 3.7.3.2, hazardous materials on the access roads were detailed and quantified (Section 3.7.3.2). As noted above, preliminary mitigation measures were included to address the potential for accidental spills.</p> <p>Additional information is available in the Transportation Baseline Report (HDR 2017).</p>
Transportation and Access	802.1200.00	C.2	There are questions regarding the routes that Project related traffic will take, including the amount of traffic on each route, anticipated impacts, and if any studies are being performed on these routes.	<p>The source of information in the DEIS included the Transportation Baseline Study which analyzed alternatives and the various routes (HDR 2017). The study and associated potential impacts were summarized in the DEIS by alternative in Section 4.16.2.</p>
Transportation and Access	802.1200.00	C.3	Concerns were that the DEIS failed to explain how the alternatives would comply with both state and federal roadless area rules. Further, there were concerns about the volume of the additional traffic and how it was accounted for in the analysis of alternatives.	<p>The DEIS addressed roadless rules in Special Designations and discussed both state and federal roadless areas and outlines both direct and indirect effects (Section 4.23.3.2).</p> <p>Traffic counts were taken in the field to determine the current baseline levels. The additional traffic volumes were estimated based on the Project design for each phase of the Project and included: mine construction, operations, and reclamation. Anticipated traffic volumes were then added to the historical average daily traffic volumes (Section 4.16.2.1.1.1).</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
Transportation and Access	802.1200.00	C.4	There is an opinion that increased levels of heavy vehicle traffic may necessitate improvements on the Warm Lake Highway.	<p>Depending on the alternative selected, traffic on Warm Lake Road (CR 10-579) is projected to increase 5.5% from an AADT of 1,174 to 1,239. No capacity improvements would be anticipated (Table 4.16-1).</p> <p>The maintenance of Warm Lake Road and the increased mine-related traffic is the subject of a Road Maintenance Agreement between Valley County and Perpetua.</p> <p>The intersection of Warm Lake Road with State Highway 55 would require improvements and those are discussed in the DEIS (Section 4.16.2.1.1)</p>
Transportation and Access	802.1200.00	C.5	There are questions regarding public access in the Project area during operations.	<p>Public Access was discussed in detail in the DEIS (Section 4.16.2). Under Alternatives 1 and 3, access through the mine site would be closed to the public. Public access would be restricted within the Operations Area Boundary during construction, operations, closure, and reclamation by fencing near the security-monitored gates, and signs warning the public against entry into the Operations Area Boundary. The Burntlog Route would provide public access to the Meadow Creek Lookout and Thunder Mountain area, when other public access is not available, throughout operations and closure and reclamation. Under Alternative 2 there would be a public access route through the mine site during the construction, operations, and closure and reclamation phases. There also would be a public access route through the mine site under Alternative 4. Under Alternative 4, the Burntlog Route would not be constructed, and the Yellow Pine Route would be used for both public and SGP-related access.</p>
Transportation and Access	802.1200.00	C.6	There are concerns that public and tribal access would be restricted during the lifespan of the Project.	See response to comment 802.1200 C.5.

Resource	Comment Code	Comment Number	Concern Statement	Response
Transportation and Access	802.1200.00	C.7	There are concerns that erosion events on roadways would impact wildlife including ESA-listed fish.	<p>The environmental consequences to wildlife were discussed in the DEIS in Sections 4.12 and 4.13.</p> <p>Erosion prevention and control are design features of the Project, using best management practices, and would be monitored as a requirement of the Stormwater Pollution Prevention Permit (SWPPP). This is an element of the EPA regulated NPDES permitting process, which include the MSGP and the SWPPP, and were called out as Preliminary Mitigation Measure FS-48 (DEIS Appendix D).</p> <p>Perpetua Resources has committed to a mitigation measure that road surfaces throughout the Project would be stabilized and managed to minimize transport of sediment, dust, and other materials, especially near watercourses through appropriate road engineering, surface drainage, watering and application of dust control binding agents (magnesium chloride, lignin sulfonate, etc.), roadside ditching, road-cut stabilization, road surface maintenance, appropriate speed limits, and by limiting traffic.</p>
Transportation and Access	802.1200.00	C.8	There are concerns that the DEIS does not adequately address avalanche hazards and risk from the over 30 known avalanche paths within the mine site that pose significant hazards to worker safety. Additionally, there are concerns that the DEIS falsely assumes that avalanche hazards cannot be mitigated and thus fails to analyze the impacts that an avalanche control program would have. Commenters raise specific concerns regarding this issue, including the following: The DEIS fails to adequately identify avalanche hazards along the proposed Burntlog Road. The DEIS provides no evidence that year round operation of the Burntlog Road is technically or economically feasible. Additionally, there are inconsistencies between the road alignment shown in Appendix E and that shown in the Executive Summary of	<p>The DEIS discussed avalanche hazards as an existing concern in the in the analysis of primary routes in Section 3.16.3.2. Use of the Burntlog Route was preferred on the basis of safety considerations for avalanche zones (Section 4.16.2.4.4).</p> <p>The Final Transportation Baseline Study (HDR 2017) included the high avalanche potential of other routes as a criteria to recommend the Burntlog Route as being a preferred option. It was determined that the Burntlog Route option had the least road length containing steep vertical grades and least distance within avalanche and landslide potential areas (HDR 2013).</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
			<p>the DEIS. The DEIS does not provide enough information to evaluate avalanche hazards along this access route and also does not provide a mitigation strategy to reduce risk to vehicles traveling along the road. Avalanche path identification techniques conflict with the recommendations of the avalanche hazard assessment reference cited by the DEIS. Additionally, the Mears and Wilbur Avalanche Hazard Assessment is a single seven-year-old map that does not contain information to ascertain what criteria were utilized to create it. Regardless of which road (Burntlog or Johnson Creek/Stibnite) is chosen for mine site access, an avalanche forecasting and control/mitigation program will need to be implemented to ensure viable, safe, and open access to the Project site. Commenters note that avalanche forecast/mitigation programs are common at ski areas and along highway corridors throughout the western U.S. and have been analyzed in several recent NEPA documents. An avalanche forecast/mitigation program could result in impacts to a variety of resources and thus must be analyzed in the DEIS.</p>	<p>Avalanche control and potential impacts from it, such as noise and vibration, were analyzed in the SDEIS.</p>
Transportation and Access	802.1200.00	C.9	<p>There are statements supporting selection of the Burntlog Route as a means to reduce impacts.</p>	<p>No further response required. Comment general in nature or a position statement.</p>
Transportation and Access	802.1200.00	C.10	<p>There is a question whether soils in road crossing areas have been assessed for arsenic and mercury contamination.</p>	<p>Hazardous materials were discussed in detail in the DEIS (Section 4.7) as waste materials. No sampling for metals was proposed in the road crossing areas in the DEIS.</p>
Transportation and Access	802.1200.00	C.11	<p>There are statements supporting the steps the Project is taking to accommodate public access.</p>	<p>No further response required. Comment general in nature or a position statement.</p>
Transportation and Access	802.1200.00	C.12	<p>There is a recommendation that newly proposed recreational opportunities undergo Travel Management Planning in a separate NEPA process.</p>	<p>No further response required. Unrelated to the decision being made.</p>
Transportation and Access	802.1200.00	C.13	<p>There are statements that Alternative 4 is inferior because the access route is along Johnson Creek.</p>	<p>No further response required. Comment general in nature or a position statement.</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
Transportation and Access	802.1200.00	C.14	There is opposition to Alternative 4 because this alternative would increase risks to the environment and safety.	No further response required. Comment general in nature or a position statement.
Transportation and Access	802.1200.00	C.15	There are statements supporting Alternative 4 because it does not involve new road development.	No further response required. Comment general in nature or a position statement.
Transportation and Access	802.1200.00	C.16	There is a statement regarding the dust control products that would be effective for the access roads.	No further response required. Comment general in nature or a position statement.
Transportation and Access	802.1200.00	C.17	There is a recommendation to utilize a public bus service to connect communities along the mine access route.	No further response required. Beyond the scope of the proposal.
Transportation and Access	802.1200.00	C.18	There are concerns that the Project will limit access to public lands and the community of Yellow Pine.	See response to comment 802.1200 C.5.
Transportation and Access	802.1200.00	C.19	Commenters request that the Forest Service verify that fuel haul will not be allowed along the South Fork Salmon River Road as a backup plan in the event that the Johnson Creek route is inaccessible. Commenters cite the July 1990 South Fork Salmon River Road EIS and the PNF Forest Plan as placing strict limits on fuel transportation on the South Fork Salmon River Road.	Appendix D of the DEIS provided a Preliminary Mitigation Measure (FS-95) that would require a fuel management plan that would control the delivery routes used to haul fuel. In the SDEIS and Final EIS fuel delivery is accounted for in the Transportation Management Plan which will be incorporated into the Project's ROD.
Transportation and Access	802.1200.00	C.20	There is a statement that the Project would limit traffic to the mine site to specific hours during construction.	See response to comment 802.1200 C.5.
Transportation and Access	802.1200.00	C.21	There are concerns that the DEIS fails to adequately analyze impacts caused by the Burntlog route to the wilderness characteristics of the Frank Church River of No Return Wilderness. Commenters note that the federal Wilderness Act and the Central Idaho Wilderness Act require the Forest Service to consider impacts to the Wilderness from activities outside the Wilderness area boundary and that the Forest Service has a legal duty to avoid activities outside the Wilderness that could degrade the area's wilderness characteristics. Specifically, commenters note concerns about noise, light, visual impacts, and water and dust pollution that are likely to affect the Wilderness through direct impacts and edge effects that will degrade the area's unique ecological	The DEIS, addresses both federal and state wilderness areas and the impacts and the environmental consequences resulting from the proposed Project (Section 4.23). The DEIS outlines both direct and indirect effects (Section 4.23.3.2). A detailed evaluation of the impacts of Project activities on roadless area characteristics by phase is included in the Stibnite Gold Projects Effects on Roadless Character (AECOM 2020b) report. See also response to comments 802.1002 C.1 through C.4 (Wilderness).

Resource	Comment Code	Comment Number	Concern Statement	Response
			values and reduce the solitude sought out by hikers in a wild, trailless area. There are concerns that the DEIS fails to adequately analyze the impacts related to these concerns.	
Transportation and Access	802.1200.00	C.22	There is a concern that the Project will create large amounts of heavy vehicle traffic which will have adverse impacts on public safety, wildlife, and road surface longevity. Additionally, there is a concern that the Plan of Restoration and Operations omits detailed discussion or data regarding traffic patterns, including estimated daily round trips for each type of vehicle, travel times, and level of traffic back-up along the Warm Lake Highway.	<p>Additional vehicle traffic was projected and then added to the measured existing traffic for each alternative, and then further broken down by Project phase. The percentage of heavy vehicles was also provided; for example, DEIS Table 4.16-1 shows the construction phase for Alternative 1. Impacts from this increase during construction of Alternative 1 were discussed in Section 4.16.2.1.1.1. Similar analysis by phase and alternative were in DEIS Section 4.16.</p> <p>Impacts to fish and wildlife were discussed in the DEIS Sections 4.12 and 4.13 respectively.</p> <p>Surface longevity and maintenance were included in the environmental design features proposed by Perpetua Resources as well as the preliminary regulatory requirements and/or best management practices required by the Forest Service (DEIS Appendix D, measure FS-50) and the Road Maintenance Agreement with Valley County.</p> <p>The detailed discussion and the data for the operations phase, including heavy vehicles, was presented under each alternative in DEIS Section 4.16; for example, Alternative 2 operations traffic volumes was presented in Table 4.16-4 of the DEIS. The Final EIS includes additional mitigation measures regarding traffic delays due to project road maintenance and construction activity.</p> <p>The intersection of Warm Lake Road with State Highway 55 would require improvements and those were discussed in the DEIS (Section 4.16.2.1.1). These would likely include acceleration lanes, turn</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				lanes, and capacity improvements for the intersection.
Transportation and Access	802.1200.00	C.23	There are general concerns that the Project, especially heavy truck traffic, will result in increased noise levels. There are concerns that the DEIS does not include adequate data regarding noise and thus fails to adequately analyze noise impacts.	The DEIS included an analysis of the Noise related to the Project in Section 3.6 and Chapter 4.6. The DEIS evaluated the existing conditions by presenting measured baseline ambient sound levels (Section 3.6.3) at selected noise-sensitive receptors. To understand the impacts of the various alternatives, the DEIS combined estimated standard sources of noise and added those to the baseline ambient for each alternative (Table 4.6-6 and others). In the Methodology of Analysis in Section 4.6.1, the methods used to estimate the additional (above current) noise expected were explained in detail.
Transportation and Access	802.1200.00	C.24	There are concerns that the limited geographic scope of the transportation corridor analyzed in the DEIS unreasonably limited the calculated trip lengths. This ultimately resulted in an underestimation of the hazardous material spill rate, providing an inadequate picture of the potential impacts of the Project. Additionally, there are concerns that the rate of hazardous material spills per truck mile was incorrectly determined, resulting in an underestimation of the probability of a hazardous material spill.	<p>The transportation corridor analyzed in the DEIS extended to SR 55. On the south, it covered from Warm Lake Road at Cascade 38 miles north to McCall. With the numbers of anticipated vehicles resulting from construction, operation, and reclamation, it encompassed an area large enough for Project related traffic to dissipate or blend with the baseline traffic.</p> <p>The AADT on SR 55 was 4,127 (AECOM 2019) and was projected to be 4,177 with the Project traffic (DEIS Table 4.16-4).</p> <p>Concerns related to the potential for spills and the need to be proactive lead to a list of preliminary mitigation measures that would be required by the Forest Service to directly address the management of fuels and hazardous materials, as presented in Appendix D of the DEIS (FS-84, FS -85, FS 86, FS-87, FS-88, FS-89, FS-90 thru 102).</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
Transportation and Access	802.1200.00	C.25	There are concerns that geological hazards have not been assessed for the existing roads that would be used during the construction phase of the Project.	Geological hazards along access roads were assessed in the Geology and Geotechnical section of the DEIS (Sections 3.2 and 4.2). Included in the section on access roads (Section 3.2.3.7.2) is the reference to the Geologic Hazard Assessment Burntlog Access Road Project, a free standing report on the geological hazards (STRATA 2016). Geological hazards on transportation routes were assumed to include weak or heaving soils, faults, and loose soils. The roadways to be improved or maintained would be in accordance with easement agreements and applicable Valley County Standards, which was included in the Preliminary Mitigation Measures as FS-20 in Appendix D of the DEIS.
Transportation and Access	802.1200.00	C.26	There are concerns that the Project, particularly roads, traffic, transmission line corridors, and soil disturbance, will introduce and spread non-native plant species and noxious weeds. Commenters request that the Forest Service and Perpetua do proactive work and also commit to best management practices to ensure that noxious weeds are not introduced and any potential weed spread is minimized. Commenters note that the Forest Service should create plans to replant disturbed areas with native plant species and establish a long-term monitoring program to ensure recovery of native vegetation. There are concerns that the DEIS does not adequately analyze the impacts of non-native species on the native plant community and the overall ecosystem.	The DEIS (Section 4.10.2.1.7) discussed the Midas Gold Idaho, Inc. (2015) Weed Management Plan which outlines measures preventing and controlling noxious weed infestations. Preliminary Mitigation Measures FS-57, FS-58, and FS-59, FS-60, FS-61, and FS-73 identified in Appendix D of the DEIS provide further mitigation on non-native plants and invasive weeds.
Transportation and Access	802.1200.00	C.27	There is a statement that the Project transportation planning has little effect on traffic impacts on the community of Cascade.	No further response required. Comment unrelated to the decision being made.
Transportation and Access	802.1200.00	C.28	There is a question regarding how the pits will be accessed and the dimensions of open pit benches and slope grades between them.	A preliminary discussion in the DEIS can be found in the discussion of the direct and indirect effects in Geology (Section 4.2.2). Application of appropriate

Resource	Comment Code	Comment Number	Concern Statement	Response
				engineering design features would be incorporated into all road construction, including in-pit haul roads. Additional detail regarding haul access and pit benches was provided in the Plan of Operations and Reclamation.
Transportation and Access	802.1200.00	C.29	There are concerns that the proposed Burntlog Road would fragment the Wilderness area from the adjacent inventoried roadless area, increasing edge effects on wildlife and flora. Commenters cite the 2020 paper Conservation Value of National Forest Roadless Areas as providing insights into the importance of roadless areas that are adjacent to Wilderness areas and recommend that the Forest Service evaluate this research.	The DEIS, addresses both federal and state wilderness areas and the impacts and the environmental consequences resulting from the proposed Project (Section 4.23). The DEIS outlines both direct and indirect effects (Section 4.23.3.2). A detailed evaluation of the impacts of Project activities on roadless area characteristics by phase is included in the Stibnite Gold Projects Effects on Roadless Character (AECOM 2020b) report. See also response to comments 802.1002 C.1 through C.4 (Wilderness).
Transportation and Access	802.1200.00	C.30	There are concerns that the Forest Service has arbitrarily constrained the temporal and/or geographic scope of its effects analysis, thus omitting disclosure and evaluation of significant effects caused by the Stibnite Gold Project. Commenters state that the Forest Service must expand the geographic and temporal scopes of analysis and disclose the potential impacts in a supplemental DEIS.	The analysis area was defined for each resource in its section of Chapter 3 in the DEIS. As noted in DEIS Section 3.16.1, the transportation and access analysis area corresponds with the area where activities associated with the Project would occur, as well as routes that pass through the area, serve adjacent lands, and provide access to or near the mine site.
Transportation and Access	802.1200.00	C.31	There are comments stating that Lick Creek Road to Yellow Pine should be used rather than Burnt Log Road. The commenters state that this would be a safer and shorter route that would avoid effects to wildlife, the South Fork of the Salmon River, and Warm Lake, as well as noise and pollution.	The Lick Creek Road access was considered in detail in the Transportation Baseline Study (HDR 2017). Further, in Section 3.16.3.2 of the DEIS, it was described and noted as a primary route to the area. However, the Lick Creek Road is closed during the winter due to high avalanche potential; therefore it was not carried forward in the analysis.
Transportation and Access	802.1200.00	C.32	There is a recommendation that the road network avoid impacts to wildlife where feasible and decommission unneeded roads and corridors.	Impacts to wildlife due to roads was addressed in Section 4.13 of the DEIS. Abandonment of roads

Resource	Comment Code	Comment Number	Concern Statement	Response
				was addressed in the preliminary mitigation measures (FS-156) in Appendix D of the DEIS.
Transportation and Access	802.1200.00	C.33	There are concerns about the risk of hazardous materials spills should the Project move forward and the hazardous material spill emergency response capacity of local communities. Additionally, there are questions about who would be responsible for treatment of the hazardous waste produced by the mine and how and where this waste would be transported for treatment. There are concerns that the DEIS contains inconsistencies and incomplete descriptions regarding the transport of hazardous materials, making it impossible to understand the risk of hazardous materials spills from Project related traffic.	<p>Discussion and analysis of the impacts associated with specific hazardous materials were addressed in the DEIS in Section 4.7. Various scenarios of accidental spills on access roads were described and potential responses analyzed (Section 4.7.2.4.2.5).</p> <p>The mine operator would be responsible and licensed in the use, production, and disposal of hazardous wastes. A solid and hazardous waste management plan would be in place to track and identify these chemicals.</p> <p>In Appendix D of the DEIS, a series of preliminary mitigation measures that would be required by the Forest Service directly address the management of fuels and hazardous materials (FS-84, FS -85, FS 86, FS-87, FS-88, FS-89, FS-90 thru 102).</p>
Transportation and Access	802.1200.00	C.34	There are statements regarding the increased traffic on public roadways is manageable.	No further response required. Comment general in nature or a position statement.
Transportation and Access	802.1200.00	C.35	There are concerns that mining activities will endanger fish by increasing sediment runoff from roads into waterways. Additionally, there are concerns that the DEIS fails to adequately consider this by excluding data on stream sediment chemistry and failing to describe or depict conceptual models that include stream sediment.	<p>The environmental consequences to wildlife were discussed in the DEIS in Sections 4.12 and 4.13.</p> <p>Erosion prevention and control are design features of the Project, using best management practices, and would be monitored as a requirement of the Stormwater Pollution Prevention Plan (SWPPP) process. This is an element of the EPA regulated NPDES permitting process, which include the MSGP and the SWPPP, and was called out as Preliminary Mitigation Measure FS-48.</p> <p>Further, in the DEIS (Appendix D) Perpetua Resources has committed to a mitigation measure that road surfaces throughout the Project would be stabilized and managed to minimize transport of sediment, dust, and other materials, especially near</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				watercourses through appropriate road engineering, surface drainage, watering and application of dust control binding agents (magnesium chloride, lignin sulfonate, etc.), roadside ditching, road-cut stabilization, road surface maintenance, appropriate speed limits, and by limiting traffic.
Transportation and Access	802.1200.00	C.36	There was a comment that that City of McCall, specifically Deinhard Lane and Boydsun Street (and therefore impacts to NF Payette River), and traffic impacts on Hwy 55 were excluded from analysis.	Existing conditions on SR 55 were assessed in the DEIS (Section 3.16.3.4) and the environmental consequences, both direct and indirect effects, were addressed (Section 4.16.2). Improvements to the intersection of Warm Lake Road and SR 55 would be anticipated as a result of the Project. Those were discussed in the DEIS (Section 4.16.2.1.1)
Transportation and Access	802.1200.00	C.37	There are concerns regarding engineering of roads (e.g., culvert sizing, placement of roads on slopes).	As noted in Section 4.16 of the DEIS, application of appropriate engineering design features would be incorporated into all road construction. Perpetua Resources has committed to design measures that road surfaces throughout the Project would be stabilized and managed, especially near watercourses through appropriate road engineering and culvert placement, surface drainage, roadside ditching, road-cut stabilization, and road surface maintenance.
Transportation and Access	802.1200.00	C.38	There are comments that mitigation for traffic impacts was not fully described, especially for potentially dangerous situations. Examples cited include potential for run-away truck accidents traveling down the gradient from Landmark, westward to Warm Lake. Further, how will ruts, blocked culverts, and the need for maintenance be monitored or how often maintenance will occur?	Preliminary mitigation measures for traffic impacts were included in Appendix D of the DEIS. For non-paved roadways FS-50 included: road rutting from traffic would be minimized by construction and maintenance of surface drainage structures, application of surfacing material, and by restricting road use when conditions are unacceptable due to moisture that is leading to the onset of rutting and concentrated turbid flow. Further, typical guidance is no road use if ruts deeper than 4 inches would be created. The SDEIS clarified Forest Service

Resource	Comment Code	Comment Number	Concern Statement	Response
				requirements, best management practices, and design features.
Transportation and Access	802.1200.00	C.39	A commenter suggested that the technical and economic feasibility of using the Old Thunder Mountain Road (FR 440) should be considered again.	Thunder Mountain Alternative was studied in detail in the Transportation Baseline Study (HDR 2017). As noted in Section 2.8.2 of the DEIS, it was not carried forward due to technical or economic infeasibility and/or it did not offer an environmental advantage over other alternatives.
Transportation and Access	802.1200.00	C.40	Commenters noted that construction of the Burntlog Route should be completed prior to mining activities to avoid impact to Johnson Creek/Stibnite Road, as this would eliminate heavy haulage and use of air transport.	As discussed in Section 2.3 of the DEIS, construction of the Burntlog Route would be concurrent with construction of mine facilities for the Project, occurring over a 1-2 year period.
Transportation and Access	802.1200.00	C.41	A commenter stated that stream crossings by roads are inadequately quantified in the DEIS; the number of streams are quantified but the number of crossings are not.	The number of stream crossings were clarified in the SDEIS.

Heritage Resources Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Heritage Resources	802.1500.00	Primary	Concerns expressed related to heritage resources include the need for additional inventory within the area of potential effect (APE), that the Project would adversely affect historic properties and traditional cultural resources, and adequacy of potential mitigation needed to reduce impacts. Commenters suggested that the existing mine features do not qualify for inclusion in the National Register of Historic Places and therefore should be reclaimed, while others state that all existing mine features should be recorded in full to exhaust their data potential.	The DEIS acknowledges that additional inventory would be required and presents potential impacts to historic properties (Section 4.17.2). Mitigation measures for known historic properties are being determined by the consulting parties of the Programmatic Agreement. The DEIS described the known sites and their eligibility for inclusion in the National Register of Historic Places (Section 3.17). The SDEIS incorporates information completed or available since the distribution of the DEIS to further support its analyses.

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Heritage Resources	802.1500.00	A.1	There are concerns that additional heritage resource inventory is needed.	Additional heritage resource inventory on uninventoried areas would be required prior to any Project disturbance. The requirement for and process to conduct additional heritage resources survey is included in the Programmatic Agreement (PA) for the Project. As part of the PA, a historic properties management plan (HPMP) details the procedures and process to carry out inventory and evaluation of heritage resources on previously uninventoried areas, as well as process to mitigate any unavoidable impacts to historic properties.
Heritage Resources	802.1500.00	A.2	There are concerns that the description of the pre-contact period in the DEIS is focused on the Great Basin and de-emphasizes the Columbia Plateau.	The Project Area is situated at the transition area between what is considered the Columbia Plateau and the Great Basin. As the Nez Perce tribe is affiliated with the Columbia Plateau rather than the Great Basin, Section 3.17 has been revised to reflect the Columbia Plateau pre-contact period as well.
Heritage Resources	802.1500.00	A.3	There are concerns that heritage resources discussion in the DEIS omits discussion of ethnographic resources specific to the three tribes.	The DEIS Sections 3.17 and 3.24 did not provide the specific ethnographic data provided by the tribes. Although the Nez Perce and Shoshone Paiute provided their ethnographies to the Forest Service prior to distribution of the DEIS, these are confidential documents, therefore this data was not included in the DEIS. The Shoshone Bannock had not provided their ethnographic report prior to distribution of the DEIS, but it has subsequently been received. The Forest Service is consulting with the tribes regarding what data may be included in the SDEIS.
Heritage Resources	802.1500.00	A.4	There are concerns that the DEIS does not completely evaluate built environment resources.	Archaeological inventory conducted in 2018-2019 (AECOM 2020) included recording and reevaluation of sixteen historic sites associated with the Stibnite Historic District. The Forest Service and SHPO deemed this work as exhaustive of data potential. The Stibnite Historic District has

Resource	Comment Code	Comment Number	Concern Statement	Response
				subsequently been determined no longer eligible for the National Register of Historic Places.
Heritage Resources	802.1500.00	B.1	There are concerns that the DEIS has inconsistencies related to the numbers of eligible/ineligible heritage resources within the area of potential effects. Additionally, there are concerns that the current heritage resources surveys are inadequate and indicate that a full analysis of the area of potential effects has not been completed.	Inconsistencies in the numbers of eligible and ineligible sites were not identified in DEIS Section 3.17 or 4.17. However, confusion may have occurred because the Thunderbolt Mountain Lookout has not been formally recorded, but is assumed to be an eligible site (i.e., historic property) for purposes of the analysis. Therefore, it was not included in the number of recorded sites in Section 3.17 or in the number of historic properties potentially impacted by the Project in Section 4.17, but rather was discussed separately. Regardless, the heritage resources affected environment and analysis have been revised, including numbers, to reflect the currently known sites and eligibilities. See also response to comment 802.1500 A.1.
Heritage Resources	802.1500.00	B.2	Commenters note that the programmatic agreement is still in progress.	The Programmatic Agreement has been drafted and components of it are still being coordinated with consulting parties. As part of the Section 106 process, work on the PA can be concurrent with the NEPA process. The PA would be finalized and signed prior to or in concert with the Project ROD.
Heritage Resources	802.1500.00	B.3	Commenters note that the Shoshone Bannock Tribe is still preparing ethnographic work for the Project. There are concerns that the DEIS is inadequate and cannot be considered complete until the ethnographic information from all three tribes are complete.	The Shoshone Bannock provided their confidential ethnographic report to the Forest Service in December 2020. Although the Nez Perce and Shoshone Paiute provided their ethnographies to the Forest Service previously, these are also confidential documents, therefore this data was not included in the DEIS. However, the Forest Service is consulting with the tribes regarding what data may be included in the SDEIS.
Heritage Resources	802.1500.00	C.1	There are concerns that the Project will result in noise impacts to a historic district at Warm Lake.	Warm Lake is approximately one mile from the Burnt Log Road (FR 447) and outside the APE. Noise from traffic would attenuate as a function of

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>distance, ground absorption, atmospheric conditions, topography, and vegetative cover. According to the noise analysis (DEIS Section 4.6), construction along the Burnt Log Road would be 91 dBA at a distance of 50 feet and would attenuate to 55 dBA at 0.57 mile from the noise source based on distance alone. Accounting for other factors, noise would attenuate to 55 dBA about 0.28 of a mile from the source of activity and would be limited to daytime hours (DEIS Section 4.6.2.1.1.2). As part of the noise study, two noise sensitive receptors (NSR) were analyzed at Warm Lake where the ambient background noise level is 34 dBA (Site 6 Warm Lake Recreation Areas) and 47 dBA (Site 7 Warm Lake Road/Camp). The SGP-attributed daytime and nighttime noise level would be well below those at 21 dBA daytime and 19 dBA nighttime for both locations (DEIS Section 4.6.2.1.1.5). During operations, SGP-attributed noise in the vicinity of Warm Lake would drop to less than 1 dBA at Site 6 and 5 dBA or less at Site 7 under any of the action alternatives (DEIS Section 4.6). Noise impacts at Warm Lake Historic District would be short-term and minor during construction in that vicinity to long-term and negligible. This has been clarified in the SDEIS.</p>
Heritage Resources	802.1500.00	C.2	<p>There is a statement that the draft EIS is not complete until requirements under Section 106 of the NHPA have been fulfilled.</p>	<p>The Section 106 process is ongoing and can be concurrent with the NEPA process. As part of the Section 106 process, the PA outlines the procedures for avoiding, minimizing, or mitigating adverse effects to known historic properties as well as the process for additional inventory, identification, and evaluation. The PA would be finalized and signed prior to or in concert with the Project ROD.</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
Heritage Resources	802.1500.00	C.3	There is a statement that the Project must comply with the Idaho State Historic Preservation Program.	Federal agencies are required to consult with the State Historic Preservation Office (SHPO). The Idaho SHPO is actively engaged in the Project. The SHPO has reviewed the inventory reports and concurred with site eligibility determinations. Further, the SHPO is actively participating as a consulting party in the Programmatic Agreement process and would be a signatory of the PA.
Heritage Resources	802.1500.00	C.4	There are concerns that the Project will cause adverse effects to pre-contact sites and/or traditional heritage resources.	Disturbances within the mine plan boundary would avoid directly disturbing the known pre-contact site (10VY1488). Specific traditional heritage resources, such as sacred sites or traditional use areas, have not been identified by the tribes within the mine plan boundary. If pre-contact sites and/or traditional cultural resources are identified in other areas of the APE (i.e., access roads, powerline right-of-way, etc.), they would either be avoided or if that is not feasible, they would be mitigated as outlined in the Programmatic Agreement and associated Historic Properties Management Plan, and as determined appropriate through consultation with the tribes.
Heritage Resources	802.1500.00	C.5	There are concerns that radio and cell phone communication towers associated with the Project could have impacts on visual resources and could create new ground disturbance. Commenters note that additional visual studies should be conducted to ensure that towers are not located within sight of the Frank Church River of No Return Wilderness area. Commenters also note that the locations of off-site maintenance facilities and tower locations at Meadow Creek Lookout and Thunderbolt Mountain associated with Alternative 4 have not been surveyed for heritage resources, and should be. Commenters request that Midas Gold, the Forest Service, and the State Historic Preservation Office work on relocating structures that obstruct the Meadow Creek	DEIS Appendix O included viewshed analysis for the communication towers associated with the Project under Alternative 1, which would be the same for each action alternative. Although the analysis indicates the towers could be seen from some high points in the FCRNRW, distance from the towers would preclude the towers dominating any view. Heritage resource inventories would be conducted on all areas of the selected alternative not previously inventoried for the Project, such as the Meadow Creek Lookout and Thunderbolt Mountain areas. The process and details for additional inventory, identification, and evaluation of heritage resources is in the Programmatic

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			Lookout viewshed, as partial mitigation for adverse effects to historic resources.	Agreement and the associated historic properties management plan. Mitigation for visual impacts to historic properties would be agreed upon by the consulting parties of the Programmatic Agreement.
Heritage Resources	802.1500.00	C.6	The existing mine features in the Stibnite Historic District do not qualify for inclusion in the NRHP and should be reclaimed.	The mine features and sites within the Stibnite Historic District have been recorded, evaluated, and determined not eligible for listing in the National Register of Historic Places. Those sites/features within areas of proposed disturbance would be removed/reclaimed as part of the Project. Others outside areas of proposed disturbance also may be removed/reclaimed if they pose a public health and safety risk.
Heritage Resources	802.1500.00	C.7	There are concerns that the USFS has not determined the cause for the loss of integrity at the Stibnite Historic District.	The Stibnite Historic District was originally listed in the National Register of Historic Places (NRHP) in 1987. At that time, the district's historical integrity was already minimal. Two years prior to listing, on August 1, 1985, Lee Bennett, Forest Archaeologist noted that "The Stibnite Mining District is eligible for the National Register of Historic Places for its historic values associated with World War II antimony and tungsten mining. These historic values are preserved in the written record and in oral histories and are not present on the ground" (Bennett, Letter to Minerals Program Manager for Stibnite Mining Project (CRM-PY-132)). Natural deterioration, materials salvaging, forest fires, erosion, and modern mining and remediation activities have impacted the district's ability to convey its significance with the production of essential metals for WWII. Given the minimal physical presence of resources within the historic district when it was originally listed and the above-mentioned considerations, the district's integrity has diminished such that it no longer conveys its historical significance.

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Heritage Resources	802.1500.00	C.8	There are concerns that the Project will cause adverse effects to historic properties.	Adverse effects to historic properties would be avoided where possible and feasible. Heritage resources that have been determined to be historic properties (i.e., NRHP-eligible heritage resources) that cannot be avoided would be mitigated (if avoidance is not possible) per a site-specific agency-approved historic properties treatment plan (HPTP).
Heritage Resources	802.1500.00	C.9	The Stibnite Historic District should be fully documented.	The mine features and sites within the Stibnite Historic District have been fully documented. The most recent evaluation occurred in 2019 (AECOM) as part of an overall reevaluation of the eligibility of the Stibnite Historic District itself. The individual sites have been recorded, evaluated, and determined not eligible for listing in the National Register of Historic Places. Due to lack of integrity of the sites and therefore the Stibnite Historic District, Forest Service, with SHPO concurrence, has determined the District is no longer eligible for listing on the National Register of Historic Places.
Heritage Resources	802.1500.00	C.10	There are concerns regarding mitigation for impacts to historic properties (i.e., NRHP-eligible heritage resources).	A Programmatic Agreement has been drafted and would be finalized and signed prior to or in concert with the Project ROD. As part of the PA, a historic properties treatment plan would detail the mitigation required for known historic properties, while a historic properties management plan would detail the process of inventory, identification, and evaluation of heritage resources in areas not yet inventoried. Identified heritage resources that are determined to be historic properties (i.e., NRHP-eligible heritage resources) would then be mitigated (if avoidance is not possible) per a site-specific HPTP.
Heritage Resources	802.1500.00	C.11	There is a statement that pre-contact population density of tribes in the area is not relevant to the Project.	The ethnohistoric section of the EIS has been revised to reflect the data provided by the tribes. the Forest Service is consulting with the tribes

Resource	Comment Code	Comment Number	Concern Statement	Response
				regarding the ethnographic content that will be in the SDEIS

Public Health Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Public Health	802.1800	Primary	There are concerns that the waste management, water treatment, and sewage treatment aspects of the Project have not been fully analyzed, including secondary effects of off-site transport of wastes. Further, there are concerns that there has been insufficient assessment and planning around potential health effects of the Project that could lead to negative impacts on public health services.	<p>The DEIS describes the impacts of waste management (Section 4.7), water treatment, sewage treatment (Section 4.9), and transportation of wastes (Section 4.16). Impacts to health effects were described in DEIS Section 4.18.</p> <p>Operators must comply with all applicable federal and state standards for the disposal and treatment of solid waste (36 CFR 228.8 (c)).</p> <p>While Project impacts to public health services were analyzed, they were described as residual impacts of the Project because they would not be enforceable by the Forest Service.</p>
Public Health	802.1800	C.1	There are concerns that the DEIS does not build upon previous human health risk assessments conducted in the Stibnite area and does not include a quantitative health assessment.	The analysis of environmental impacts does not yield conditions that would result in a negative modification to the conditions and assumptions used in the previous human health risk assessments.
Public Health	802.1800	C.2	There are concerns that the use of International Council on Mining and Metals guidelines to evaluate health risks is inappropriate and the DEIS should instead follow federal and state methods and requirements.	The ICMM guidelines provide definitions for assessment terminology such as “Positive Effect”, “Negative Effect” and risk likelihood. These definitions are typical of risk rating methods utilized, but for which there is no standardized Federal requirement.
Public Health	802.1800	C.3	There are concerns that the human health risk assessment scenario in the DEIS does not consider uncertainty and there	Risk assessments incorporate uncertainties through conservatism in the development of threshold values for each constituent of potential

Resource	Comment Code	Comment Number	Concern Statement	Response
			are no assumptions of a reasonable maximum or worst case exposure.	concern. The exposure scenario used (i.e., 14 days of recreational site use annually for the entirety of a human lifespan) represents a reasonable maximum exposure.
Public Health	802.1800	C.4	Commenters note that the Forest Service should provide information on the current contaminants at the site and how they may be mobilized by the Project and then use this information to complete the exposure pathway/toxicity assessment to provide a risk characterization under various scenarios at the site.	The characterization and mobility of current contaminants were described in DEIS Sections 3.5 and 3.9. A risk characterization for these conditions was performed in 2003 by the Idaho Department of Health and Welfare. Proposed scenarios for the site do not result in negative impacts exceeding current conditions that affect human health exposure or toxicity as analyzed for the baseline condition.
Public Health	802.1800	C.5	There are concerns regarding the lack of preparation for potential health risks and injuries for travelers, recreationalists, and employees associated with Project-related incidents.	Site and transportation safety risks are addressed via Project Health & Safety Plans and the Traffic Risk Management Plan.
Public Health	802.1800	C.6	There are concerns about the impacts of the Project on the local hospital system. Specifically, commenters mention risk due to accidental spills and employee substance abuse.	Spill risks are addressed via the Project Surface Water Pollution Protection Plan, Spill Response Plan, and the Traffic Risk Management Plan. While Project impacts to public health services were analyzed, they were described as residual impacts of the Project because they would not be enforceable by the Forest Service.
Public Health	802.1800	C.7	There are concerns about the risk of hazardous materials spills should the Project move forward and the hazardous material spill emergency response capacity of local communities.	Spill risks are further addressed in the SDEIS via the Project Surface Water Pollution Protection Plan, Spill Response Plan, and the Traffic Risk Management Plan. The Spill Response Plan identifies respondents for spill emergencies.
Public Health	802.1800	C.8	There are questions about who would be responsible for treatment of the hazardous waste produced by the mine and	Per Valley County, federal, and State regulations, hazardous waste would be transported off-site for treatment and disposal at facilities with the

Resource	Comment Code	Comment Number	Concern Statement	Response
			how and where this waste would be transported for treatment.	required licensing to receive and dispose of that waste.
Public Health	802.1800	C.9	There are concerns that the DEIS contains inconsistencies and incomplete descriptions regarding the transport of hazardous materials, making it impossible to understand the risk of hazardous materials spills from Project related traffic.	The SDEIS clarifies the description of transportation of hazardous waste per comments on the DEIS and incorporates the Traffic Risk Management Plan into that description.
Public Health	802.1800	C.10	There are concerns that the Project documents do not adequately describe the potential sewage treatment facility. Specifically where this treatment would be located and how large it would be.	The SDEIS clarifies the description of the sewage treatment facility.
Public Health	802.1800	C.11	There are concerns that the impacts of temporary construction camps have not been analyzed in the EIS.	Project construction for the alternatives analyzed was described in DEIS Chapter 2. The impact analyses for the construction period were included in DEIS Chapter 4 alongside the impact analyses for operations and closure activities. As examples, construction activities were included in the Air Quality analyses in Section 4.3, traffic in the Transportation analysis in Section 4.16, and employee in-migration in Section 4.21.
Public Health	802.1800	C.12	There is an opinion that the positive effects of the removal of legacy materials should be attributed to the No Action Alternative rather than the action alternatives.	Removals of legacy materials as proposed by the Project would be contingent on Project approval, and therefore, constitute components of action alternatives. A recent ASAOC defines site remediation requirements. The activities under the first phase of the ASAOC are incorporated into the SDEIS as a reasonably foreseeable future action for all alternatives because its first phase of actions are scheduled for the period between 2021 and 2025. Subsequent phases are contingent on the completion of a ROD approving the mining Project.

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Public Health	802.1800	C.13	Commenters note that current site conditions do not conform to regulatory standards for environmental quality.	Comment noted. Current site conditions were described in DEIS Chapter 3.
Public Health	802.1800	C.14	There are concerns that waste management from collection systems and water treatment plants are not analyzed in the EIS.	The SDEIS clarifies the descriptions of waste management collection systems and water treatment plans, and their incorporation into the impact analysis.
Public Health	802.1800	C.15	There are questions regarding site housing and industrial recycling programs.	<p>The site housing facility is described in the Final EIS under Section 2.4.5.9 with effects of the worker housing analyzed for each affected environmental resources in Chapter 4 and summarized in Table 2.8-1.</p> <p>In response to the Request for Additional Information 116, Perpetua describes the recycling plan to include plastics, aluminum, cardboard, mixed paper, used oil, print cartridges, batteries, fluorescent lamps, tires (less than 54 inches in diameter), empty drums, and scrap metal. These materials would not be separated from site waste and recycled .</p>
Public Health	802.1800	C.16	There are concerns that the domestic wastewater produced by the mining facility will be discharged into the river system. There are concerns that the Project does not identify either an irrigation site for domestic wastewater or an off-site location that would accept the wastewater.	The Project includes a facility for the treatment of domestic wastewater (DEIS Section 2.4.5.6). The SDEIS clarifies the description of the wastewater treatment system that would comply with applicable effluent standards for discharge to surface waters.
Public Health	802.1800	C.17	There are concerns that the DEIS does not adequately characterize or analyze river related recreational use such as whitewater paddling and fishing. Additionally, there are concerns that the scope of analysis is too narrow, excluding portions of the East Fork South Fork Salmon River, and the South Fork Salmon River that would be impacted by the action alternatives. Commenters note several specific concerns related to this issue, including: Mining related	Additional information has been incorporated into the SDEIS to further support and expand the recreation analyses. There could be indirect short-term impacts to access and setting (i.e., visual changes and noise) of river related recreation most of which would be short term during construction of the Burntlog Route, while mine traffic is utilizing Warm Lake and Johnson Creek roads. As

Resource	Comment Code	Comment Number	Concern Statement	Response
			traffic and access roads may negatively impact river recreation resources and users by decreasing river access points, decreasing water quality, and degrading the whitewater experience. All action alternatives may negatively impact public river access; however, the DEIS does not adequately analyze this. Impacts to water quality and fisheries will negatively impact recreation resources and are underestimated in the DEIS.	noted in Section 4.16.2.1.1 of the DEIS, the 83-mile South Fork Salmon River Route, which is currently used for winter access to the mine site, would not be used as part of the Project; therefore, those river segments are not within the area of analysis. Under planned operating and closure conditions, water quality of surface flow departing the Project site would be the same or better than baseline conditions (DEIS Section 4.9). Therefore, there would be no change in potential human health impacts from ingestion of river water downstream (DEIS Section 4.18).
Public Health	802.1800	C.18	The DEIS does not adequately analyze the potential health impacts of degraded water quality on downstream recreational users.	Please see response to Comment 802.1800 C.17.
Public Health	802.1800	C.19	There are questions regarding the supply of drinking water to workers during construction and operations.	Drinking water would be supplied to the construction and operations work forces from a groundwater well using a water treatment system to meet drinking wat.
Public Health	802.1800	C.20	There are concerns that public safety infrastructure associated with highway road access, water and sewer, snow removal, road maintenance, telecommunications, and waste collection have not been included in the Project analysis.	The descriptions for water management (DEIS Section 2.4.5.6), road access and maintenance (Section 2.4.3.1), telecommunications (Section 2.3.5.16), and waste management (Sections 2.3.5.6, 2.3.5.7 and 2.3.5.10) have been incorporated into the EIS analysis. The SDEIS clarifies the descriptions of these Project components per comments received on the DEIS.
Public Health	802.1800	C.21	There are concerns that the secondary environmental effects of wastes hauled to off-site transfer and disposal facilities have not been analyzed.	Secondary effects of waste haulage were incorporated into the analysis of air quality (DEIS Section 4.3.2) and transportation (DEIS Section 4.3.16). The off-site disposal of these wastes would be conducted per Valley County, State, and federal requirements (DEIS Section 2.3.5.10). Additional description of these waste disposal activities is included in the SDEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Public Health	802.1800	C.22	There are concerns regarding placement or generation of wastes in open pit, and how those substances would affect groundwater quality and human health.	Under the proposal, placement of rock in the open pits would be limited to development rock generated by mining activity (DEIS Section 2.3.5.7). This placement was incorporated into the water quality analysis (DEIS Section 4.9.2).
Public Health	802.1800	C.23	There are general statements that wastes will be handled per applicable regulations.	DEIS Section 2.3.5.10 described waste handling per applicable regulations. Operators must comply with all applicable federal and state standards for the disposal and treatment of solid waste (36 CFR 228.8 (c)).
Public Health	802.1800	C.24	There are concerns that materials selected for reclamation covers would have the potential to pose public health risks.	Human exposure to reclamation covers was described in DEIS Appendix M. Material selected and utilized for reclamation covers would have metal concentrations at lower levels than those that would pose risks to post-closure recreational site users.
Public Health	802.1800	C.25	There are concerns that the EIS does not fully describe the utilization and maintenance of portable toilets.	The utilization and maintenance of portable toilets would continue per the current process where contractors perform scheduled maintenance on the portable toilets and remove their contents to a permitted treatment facility.
Public Health	802.1800	C.26	There is a recommendation that the Project address existing maintenance issues with the Yellow Pine municipal water system.	The maintenance of the Yellow Pine municipal water system is outside the scope of the Forest Service decision on the proposed Project.
Public Health	802.1800	C.27	There is an opinion that the positive impacts of mine employees trained in emergency response has not been included in the EIS.	The description of mine employees trained in emergency response was described in the DEIS Section 4.18.2.1.3.3. The positive impacts of these emergency responders was analyzed as an indirect Project impact where the presence of additional responders improves the potential for local access to response services.
Public Health	802.1800	C.28	There are comments that local first responders do not have the equipment or training to address accidents involving heavy vehicles or hazardous materials.	The Project will include a Hazardous Materials Handling and Emergency Response Plan that will identify and locate resources and responders

Resource	Comment Code	Comment Number	Concern Statement	Response
				required for responses to accidents involving heavy vehicles and hazardous materials.

Recreation Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	Primary	There are concerns that the DEIS focuses on certain types of recreational use while overlooking impacts to others, such as fishing and whitewater paddling/boating. Additional comments include concerns that the Project could result in increased unauthorized motor vehicle use, proliferation of unauthorized motorized trails, impacts to water that would negatively affect river recreation, plus new over-snow vehicle (OSV) routes that would impact other resources. Further, additional public outreach and education regarding travel management on the Forest would need to occur and designation of any new OSV routes would need to be compliant with the Travel Management Rule.	The DEIS described recreation opportunities, developed facilities, access for recreation, recreation uses/users, and recreation-related special use permits (Section 3.19). Recreational use of this area is not tracked by the Forest Service and user data is incidental. The DEIS discussed unauthorized motor vehicle use impacts in Section 4.19.2. Impacts to water quality were addressed in Section 4.9 of the DEIS. Impacts to other resources from the proposed OSV routes are discussed under the respective resource sections in Chapter 4 of the DEIS. The Travel Management Rule was presented in Section 3.16 (Access and Transportation). Additional information compiled or made available since the distribution of the DEIS has been incorporated into the SDEIS to further support and expand its recreation analyses.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.1	There are concerns that the Project would have negative impacts on recreational resources provided by the South Fork of the Salmon River and the public land surrounding the mine. There are concerns that the DEIS fails to adequately consider impacts to recreation resources.	The DEIS disclosed impacts to recreation resources. As disclosed in Section 4.19.2 of the DEIS, all action alternatives would result in impacts to recreation access, opportunities, use, facilities, recreation-related special use permits, and recreational setting (i.e., visual changes and noise) most of which would be short term during construction of the Burntlog Route and long term within the mine plan boundary. The South Fork of the Salmon River and its developed facilities

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>could have short-term impacts from access delays and noise during transmission line construction/upgrade and may see increased use from recreationists displaced from other areas. As disclosed in Section 4.23.2 (Wild and Scenic Rivers), the transportation routes that would be used during construction, operation, and closure/reclamation would all cross the South Fork Salmon River; this section provides additional impact analysis to recreation for the South Fork Salmon River. Forest Service regulatory requirements, best management practices, and environmental design features committed to as part of the Project were taken into consideration to lessen potential impacts.</p>
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.2	There are concerns that remote areas would get more recreational use in the future due to COVID-19.	No further response required; unrelated to the decision being made.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.3	<p>There are concerns that the Project would damage the wild character and outstandingly remarkable values of Wild and Scenic Rivers and the DEIS does not include sufficient mitigation measures to address these impacts. There are concerns that the DEIS fails to adequately characterize and consider Project impacts (and associated mitigation measures) to Wild and Scenic Rivers Act eligible streams within the vicinity of the Project Area. Additionally, there are concerns that the scope of analysis is not sufficient to consider impacts to other eligible and congressionally designated waterways outside of the Project Area that may be impacted. Commenters specifically note the following designated, eligible, and suitable waterways that may potentially be impacted: South Fork of the Salmon River, Middle Fork Salmon River, Main Salmon River, Burntlog Creek, Johnson Creek, North Fork Payette River and Main Payette River.</p>	<p>As noted in Section 3.23.2 of the DEIS, there are three wild and scenic river segments within the area of analysis: Burntlog Creek (eligible), Johnson Creek (eligible), and South Fork Salmon River (suitable). All have a classification of recreational. If there would be impacts to an eligible river then a suitability study would be required. Further, a fish passage design feature would provide upstream and downstream fish passage in the East Fork South Fork Salmon River to promote recreation opportunities such as fishing. Under planned operating and closure conditions, water quality of surface flow departing from the Stibnite Gold Project site would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (DEIS Section 4.9). The area</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				of analysis is appropriate as it encompasses potential impacts.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.4	There are concerns that the DEIS failed to consider and analyze the impacts to river recreation users, emphasizing the value of the EFSFSR to river recreational users.	The DEIS acknowledged recreational river use (Sections 3.19 and 4.19); however, user data for this area is not tracked by the FS and is therefore incidental. The proposed Project would not directly impact river recreation. There could be indirect short-term impacts to access and setting (i.e., visual changes and noise) most of which would be short term during construction of the Burntlog Route, while mine traffic is utilizing Johnson Creek road. Additional information compiled or made available since the distribution of the DEIS has been incorporated into the SDEIS to further support and expand its recreation analyses.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.5	There are concerns that the utility rights of way would be used by unauthorized off-highway and over-snow vehicles, resulting in negative impacts to numerous resources and the DEIS fails to adequately consider these impacts.	The majority of the transmission line ROW currently exists and likely some of the existing access routes are utilized by authorized and/or unauthorized OHVs. As Idaho Power Company's ROWs are non-prescriptive, the ROWs do not preclude other public uses consistent with agency management.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.6	There are concerns that the Forest Service failed to follow the requirements of Subparts B and C of the Travel Management Rule when designating new motorized recreational routes for the Project. Commenters note that in order to designate the two proposed new OSV routes or the proposed new off-highway vehicle route, the Forest must follow the requirements of the Travel Management Rule and comply with minimization criteria. There are concerns that the DEIS does not mention the travel management requirements and does not apply them to the new proposed routes nor adequately analyzes the impacts. Additional	The Travel Management Rule was presented in DEIS Section 3.16 (Access and Transportation). Alternative OSV routes were developed to mitigate conflicts of use. The Alternative OSV routes would be temporary for the life of the Project. After reclamation, the Cabin Creek OSV route would not be used as OSV access to the Landmark area. The Burntlog Route would also be temporary during the life of the Project and the newly constructed segments would be reclaimed. Any changes in travel management such as

Resource	Comment Code	Comment Number	Concern Statement	Response
			public outreach and education regarding travel management on the Forest would need to occur.	temporary OSV routes would be presented to the public.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.7	There are concerns that the DEIS does not adequately analyze the impacts of the proposed new OSV routes nor consider ways to minimize impacts, specifically harassment to wildlife and disruption of habitat.	Impacts to wildlife from the OSV route were discussed in Section 4.13 of the DEIS; specifically, discussion of the OSV route impacts to wildlife were included in the access roads subsections. In DEIS Appendix D, Mitigation Measure FS-136 would require monitoring of habitat and evaluation of recreational activities in relation to wolverine use of the landscape in areas of winter recreation use.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.8	There are concerns that the DEIS does not adequately characterize or analyze river related recreational use such as whitewater paddling and fishing. Additionally, there are concerns that the scope of analysis is too narrow, excluding portions of the East Fork South Fork Salmon River and the South Fork Salmon River that would be impacted by the action alternatives from mining related traffic and access roads decreasing river access points, decreasing water quality, and degrading the whitewater experience. Impacts to water quality and fisheries would negatively impact recreation resources and are underestimated in the DEIS. The DEIS does not adequately analyze the potential health impacts of degraded water quality on downstream recreational users.	Additional information has been incorporated into the SDEIS to further support and expand its recreation analyses. There could be indirect short-term impacts to access and setting (i.e., visual changes and noise) of river related recreation most of which would be short term during construction of the Burntlog Route, while mine traffic is utilizing Johnson Creek road. As noted in Section 4.16.2.1.1 of the DEIS, the 83-mile South Fork Salmon River Route, which is currently used for winter access to the mine site, would not be used as part of the Project; therefore, those river segments are not within the area of analysis. Under planned operating and closure conditions, water quality of surface flow departing the Project site would be the same or better than baseline conditions (DEIS Section 4.9). Therefore, there would be no change in potential human health impacts from ingestion of river water downstream (DEIS Section 4.18).
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.9	There are concerns that the Project would negatively affect the local tourism industry based around outdoor recreation by polluting the waterways and lands that tourists recreate on. There are opinions that the Project would provide only short-term jobs while the tourism industry provides long-	As noted in response to comment 802.0800 C.8, water quality of surface flow (i.e., rivers) would be the same or better than baseline conditions. Section 4.21.2 of the DEIS provided the

Resource	Comment Code	Comment Number	Concern Statement	Response
			term jobs and economic benefits. There are concerns that the DEIS fails to adequately analyze the economic impacts to the recreation and tourism-based industry.	socioeconomic impacts of the Project to recreation and tourism.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.10	Warm Lake Road and Johnson Creek Road have been wintertime snowmobile routes for decades. Snowplowing to provide wheeled vehicle access for mining related traffic would disrupt and eliminate snowmobile trail use.	Alternative OSV routes are proposed to provide OSV recreation opportunities. Impacts to OSV recreation would be short term during construction of the Burntlog Route, while mine traffic is utilizing Johnson Creek road. Once constructed, mining traffic would switch to the Burntlog Route and the use of Johnson Creek Road as an OSV route would resume.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.11	The proposed temporary seven-mile OSV route does not appear to be a well-designed or thought-out mitigation.	As noted in Section 4.19 of the DEIS, due to year-round access to the mine site along Warm Lake Road, the existing groomed OSV route from Warm Lake to Landmark would be closed. In order to provide alternative OSV access between Warm Lake and Landmark, a new OSV route along other existing transportation routes (Cabin Creek Road [FR 467] and adjacent to Johnson Creek Road [FR 413]) would be established. Portions of Cabin Creek Road (FR 467) would require creek crossing improvements, localized widening of the road, and may require blading the road surface and the addition of aggregate. This portion of the groomed OSV route would originate from a new 2-acre parking area west of the intersection of FR 467 and South Fork Road (FR 50674). The Forest Service Warm Lake Project Camp would be used to store the groomer when not in use. The precise location of this route is not yet determined and, in areas where topography and vegetation prevent using the wing attachment to establish the groomed OSV route, short sections of the route would merge with Johnson Creek Road.

Resource	Comment Code	Comment Number	Concern Statement	Response
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.12	The temporary OSV trail would be costly and is not justified as it would likely get little use.	The temporary OSV route would provide additional recreational opportunities during construction of the Burntlog Route and mine traffic use of the Johnson Creek Road. It is noted that some recreationists may be displaced to other areas of the forest rather than use the temporary OSV route.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.13	The mining company should fund hauling the groomer to Landmark Station 5-6 times during the season. Doing a good job of grooming the remaining trails south and east of Landmark is of more value than a temporary OSV trail along Johnson Creek.	Maintaining access to current trails was evaluated. In order to provide safe alternative OSV access between Warm Lake and Landmark, a new OSV route along other existing transportation routes (Cabin Creek Road [FR 467] and adjacent to Johnson Creek Road [FR 413]) would be established. See also comment response 802.0800; C.11.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.14	A transportation alternative should be diverting mining traffic to the South Fork road during the wintertime construction period to address displaced snowmobile trails.	The South Fork Route was initially considered; the route would utilize the Warm Lake Road to the South Fork Salmon River Road, and then the EFSFSR Road to Stibnite Road. While this route already exists and is plowed during winter, dangerous curves pose potential safety problems for heavy truck traffic. The route is juxtaposed to the South Fork of the Salmon River, which is designated as critical habitat for anadromous fish, and heavy truck traffic is not desirable on this route. The proximity of vehicle traffic immediately adjacent to a substantial salmon fishery would increase risk of negative impacts from sedimentation from dust and runoff and would increase risk of vehicle incidents impacting the South Fork or EFSFSR (for a longer distance) and spills entering the South Fork and/or EFSFSR. Further, use of this route would increase potential conflicts with local residents and recreationists that use this route.

Resource	Comment Code	Comment Number	Concern Statement	Response
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.15	There are concerns that industrial traffic associated with the Project would negatively impact bicyclists and that the DEIS does not include adequate analysis related to this issue.	Use of the Yellow Pine Route (now called the Johnson Creek Route) during construction could result in temporary impacts to bicyclists that use these roads, due to potential delays, traffic, and safety-related issues from mine-related traffic (Section 4.19.2 of the DEIS). Potential impacts to biking events was disclosed in Section 4.19.2 under each of the alternatives Recreation Special Use Permits subsections. These would be temporary impacts while the Burntlog Route is being constructed. Once constructed, mining traffic would switch to the Burntlog Route.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.16	Commenters provide accounts of their use of the EFSFSR, SFSR, and Salmon River.	No further response required. General in nature.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.17	By omitting outfitter and guide information the Forest Service is not acknowledging the impacts that would face outfitters/guides if the Project is permitted. As an important user group operating within the current analysis area, they should also be included in the user groups listed in Recreation; along with Kayaking/boating/floating, bicycling, and aviation.	Outfitter and guide information was not omitted from the DEIS. DEIS Section 3.19.3.7 provides details about the number and types of outfitters and guides in the recreation area of analysis. Impacts to outfitters and guides are presented under each alternative in the Recreation Special Use Permits sections of DEIS Section 4.19. Further, Section 4.21.2 of the DEIS provides the socioeconomic impacts of the Project to recreation including outfitters and guides. Impacts to the recreation setting of airstrips is analyzed in Section 4.19 within the Recreation Opportunities, Facilities, Access, and Use subsections of each alternative.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.18	There are concerns that designating an OHV trail from Horse Heaven/Powerline to Meadow Creek Lookout road would impact the character of the Meadow Creek IRA and degrade the value of this area as wildlife habitat.	In the DEIS, the OHV trail was proposed to provide alternate access to Meadow Creek Lookout under Alternative 1, as there could be half-day to multiple day closures of Thunder Mountain Road during construction of the Burntlog Route. As noted in the DEIS Section

Resource	Comment Code	Comment Number	Concern Statement	Response
				4.23.3.2.1.1, the OHV trail would remove vegetation and modify wildlife habitat within the Meadow Creek IRA. The OHV trail would lead to an increase in motorized public use in the IRA. For this reason, the OHV route has subsequently been dropped from the Project and is not included in the SDEIS.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.19	The DEIS fails to consider additional backcountry skier access points, such as keeping Landmark open, since existing trail heads likely won't serve this purpose.	Landmark would not be closed. Access delays due to construction and mine traffic would affect recreation sites/areas along the roads comprising the Yellow Pine Route (e.g., Johnson Creek Road, Stibnite Road), as well as sites and areas accessed from these roadways. If these are access points for skiers, the short-term impacts to backcountry skier access would last seasonally until the Burntlog Route is constructed, when mine traffic would be redirected to that road.
Recreation	802.0800.00; 802.0801; 802.0804.01; 802.0804.02	C.20	The DEIS fails to disclose how limited public access through the mine site and/or on the Burntlog Route would impact access to the Pistol Lake Trailhead, Mudlake Campground, Burnt Log Campground, or Thunder Mountain/Riordan Trailhead.	As stated in the DEIS (Section 4.19.2.1.1.1), there would be temporary delays and road closures restricting access to the Mud Lake and Burnt Log camping areas and Pistol Lake Trailhead into the FCRNRW. These impacts would be temporary during construction of the Burntlog Route while working in those particular areas. Access to Thunder Mountain/Riordan Trailhead, Meadow Creek/Summit Trailhead, Meadow Creek Lookout, and Landmark would not be restricted but visual and audible impacts may affect the recreation setting (DEIS Section 4.19.2.1.1.1). Public access through the mine site has been analyzed in the SDEIS.

Social and Economic Conditions Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Socioeconomics	802.1600	Primary	There are differences in opinion regarding the positive and negative socioeconomic impacts of the Project. Potential positive impacts of increased employment, use of local suppliers, and tax revenues are noted, but are potentially offset by negative impacts to tourism, recreation opportunities, housing, and public services/schools. There are concerns regarding the distribution of tax revenues, the planning for mitigation of socioeconomic impacts, and the effects of mine closure on the local economy.	<p>Socioeconomic impacts were described in DEIS Section 4.21 and included analyses of Project employment, tourism employment, use of local suppliers, taxation, and public services along with the effects of mine closure. Analysis of impacts to recreation opportunities was presented in DEIS Section 4.19.</p> <p>The distribution of taxes between State and local governments and economic planning for closure are outside the purview of the Forest Service. Therefore, while these Project impacts were analyzed, they are described as residual impacts of the Project because they would be without mitigation measures enforceable by the Forest Service.</p>
Socioeconomics	802.1600	A.1	There are concerns that the socioeconomic analysis does not accurately reflect the current population growth of McCall.	The growth rate for McCall was ascertained from U.S. Census data. These data may not reflect near-term variability in population growth, but are reflective of the long-term growth trend.
Socioeconomics	802.1600	A.2	There is a recommendation that the tourism analysis be based on the 2020 tourism usage of outdoor recreation during the COVID-19 pandemic.	Increased tourism usage attributable to the COVID-19 pandemic may not persist into or throughout the lifespan of the proposed Project. Further, published COVID-related tourism usage data is not expected to be available for use by the SDEIS analysis.
Socioeconomics	802.1600	B.1	There are concerns that the socioeconomic assessment methodology applied does not model the economic costs associated with the Project or include the values of current residents.	The socioeconomic impact analysis methodology was described in DEIS Section 4.21. This analysis did account for the economic costs and benefits of the proposed Project. Impacts to resources valued by current residents were described in the sections related to those specific resources (e.g., recreation in DEIS Section 4.19, noise in Section 4.6).

Resource	Comment Code	Comment Number	Concern Statement	Response
Socioeconomics	802.1600	B.2	There are concerns that the IMPLAN socioeconomic model misses the dynamic aspects of a local rural economy, and thereby, does not accurately predict its baseline productivity.	IMPLAN was used to estimate regional or local economic impacts and the data used are compliant with the Data Quality Act (Section 515 of Public Law 106-554). IMPLAN is based on well-established input-output modeling methods that had been developed for and have been used to successfully describe economic contributions and impacts, over more than two decades, for hundreds of projects and management plans on National Forest system lands most of which are located in rural areas. IMPLAN has gone from a system employed by a few Federal agencies to one that is embraced by economists throughout the U.S, including 250 academic institutions, as well as over 200 federal, state, and local government agencies. IMPLAN data is well-suited for rural areas given the use of proprietary methods to estimate trade flows and industry characteristics that are not available from public sources (proprietary techniques are used to estimate data that cannot be disclosed because of federal confidentiality requirements). These methods allow for estimates of trade flows for 440 commodities between all U.S. counties that are key to the creation of credible, local models.
Socioeconomics	802.1600	B.3	There are opinions that the social impacts analysis does not address concerns in a substantive manner and does not appropriately include concepts such as time value of money and the demographics of in-migrating workers.	<p>DEIS Section 4.20 provided an analysis of the socioeconomic impacts of the Project as identified via NEPA scoping, including results from a quantitative economic model.</p> <p>As described in DEIS Section 4.21, the demographics of in-migrating workers was assumed to resemble current state and local workforce demographics.</p> <p>Quantitative financial results of the economic analysis were reported in 2014 U.S. dollars. Readers can apply their specific time-value-of-</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				money concepts to those reported dollars as needed. The Forest Service's utilization of quantitative socioeconomic predictions does not require a time-value-of-money calculation.
Socioeconomics	802.1600	B.4	There is a recommendation that embodied energy costs for each major commodity used be applied to the Project analysis.	The DEIS provided estimates on the major commodity usage for the Project in Section 2.3.5.18 and Table 2.3-6. The NEPA analysis does not rely on embodied energy costs for these commodities.
Socioeconomics	802.1600	C.1	There are concerns that the baseline characterization of the Valley County economy misses some key areas of economic activity such as remote workers, light manufacturing, and private schools.	DEIS Tables 3.21-4 through 3.21-6 described economic activity in Valley County based on the Idaho Department of Labor data. These data capture employees that work away from the area and those who work in manufacturing and education.
Socioeconomics	802.1600	C.2	There are concerns that the Project would negatively affect the local tourism industry based around outdoor recreation by polluting the waterways and lands that tourists recreate on. There are opinions that the Project would provide only short-term jobs while the tourism industry provides long-term jobs and economic benefits. There are concerns that the DEIS fails to adequately analyze the economic impacts to the recreation and tourism based industry.	<p>The DEIS described Project impacts on water quality (Section 4.9), the tourism industry (Section 4.21), and recreation (Section 4.19). Under planned operating and closure conditions, water quality of surface flow departing the site would be the same or better than baseline conditions. Therefore, there would be no change in the chemistry of river water downstream.</p> <p>The durations of Project related employment were described in DEIS Table 4.21-1, and the analysis included tourism employment as a baseline condition. As described in DEIS Section 4.21.2.1.1.6, the Project could have access implications to recreational or tourist use of specific areas, but access and use of major portions of operating areas for outfitters and other tourism businesses would not be impacted by the Project.</p>
Socioeconomics	802.1600	C.3	There are concerns that the Project will have negative impacts on recreational resources provided by the South	The DEIS describes Project impacts on recreation in Section 4.19 and water quality in Section 4.9.

Resource	Comment Code	Comment Number	Concern Statement	Response
			Fork of the Salmon River and the public land surrounding the mine. There are concerns that the DEIS fails to adequately consider impacts to recreation resources.	<p>Under planned operating and closure conditions, water quality of surface flow departing the site would be the same or better than baseline conditions. Therefore, there would be no change in recreational use of river water downstream.</p> <p>As described in DEIS Sections 4.19 and 4.21, the Project could have access implications to recreational use of specific areas associated with the mine, but access and use of major portions of areas open for recreation would not be impacted by the Project.</p>
Socioeconomics	802.1600	C.4	There are opinions that the Project will not create long-term jobs and that the company will hire from outside the local region.	<p>The durations of Project related employment were described in DEIS Table 4.21-1, indicating that mine employment would last approximately 15 years with some employment extended up to 20 additional years.</p> <p>Anticipated local hiring and in-migrant labor were described in DEIS Table 4.21-3, indicating that the Project's initial reliance on in-migration of labor for its construction phase would decrease over time.</p>
Socioeconomics	802.1600	C.5	There are concerns that the DEIS does not adequately analyze the potential negative socioeconomic impacts of the Project. There are concerns regarding the potential for wage disparity in the local community and that the mine would lead to a "boom and bust" cycle.	<p>The Project impacts – both positive and negative – on employment, income, housing, demographics, social impacts, public services, schools, government, transportation, and infrastructure were described in DEIS Section 4.21.2. The effects of the Project on wages were presented in DEIS Section 4.21.2.1.1.2 and reflected the difference in wages between Project employment and baseline local employment.</p> <p>The potential implications of the boom and bust cycle associated with Project employment were described in DEIS Section 4.21.2.1.3. While these Project impacts were analyzed, they were described as residual impacts of the Project</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				because they would be without mitigation measures enforceable by the Forest Service.
Socioeconomics	802.1600	C.6	There are concerns that the DEIS does not include a plan for any temporary closure periods, which are a common occurrence. In particular, there are concerns that temporary closures would have impacts on water treatment needs, and this should be described in an Interim Emergency Water Management Plan. Additionally, there are concerns that the Project does not provide a buffer to the typical boom and bust cycle of a mine, caused by temporary closures and the eventual permanent closure.	Temporary closure of mine operations would not reduce the water treatment requirements associated with the Project approval. The potential implications of the boom and bust cycle associated with reductions in Project employment were described in DEIS Section 4.21.2.1.3. While these Project impacts were analyzed, they are described as residual impacts of the Project because they would be without mitigation measures enforceable by the Forest Service.
Socioeconomics	802.1600	C.7	There are concerns that the adverse effects of wage inflation were mentioned in the EIS but no mitigation was proposed.	The effects of the Project on wages were presented in DEIS Section 4.21.2.1.1.2 and reflected the difference in wages between Project employment and baseline local employment. While these Project impacts were analyzed, they were described as residual impacts of the Project because they would be without mitigation measures enforceable by the Forest Service.
Socioeconomics	802.1600	C.8	There are concerns that adverse effects on affordable housing were mentioned in the EIS but no mitigation was proposed.	The effects of the Project on housing were presented in DEIS Section 4.21.2.1.1.3 and reflected the difference in housing demand between Project and baseline local conditions. While these Project impacts were analyzed, they were described as residual impacts of the Project because they would be without mitigation measures enforceable by the Forest Service.
Socioeconomics	802.1600	C.9	There are concerns that adverse effects related to population growth were mentioned in the EIS but no mitigation was proposed.	The effects of the Project on population and demographics were presented in DEIS Section 4.21.2.1.1.3 and reflected the difference in

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>population and demographics between Project and baseline local conditions.</p> <p>While these Project impacts were analyzed, they were described as residual impacts of the Project because they would be without mitigation measures enforceable by the Forest Service.</p>
Socioeconomics	802.1600	C.10	There are concerns that adequate planning related to the disposition of the workforce at mine closure has not been performed.	The reduction in workforce at mine closure was described in DEIS Section 4.21.2.1.3. Planning regarding workforce disposition is outside the purview of the Forest Service.
Socioeconomics	802.1600	C.11	There are concerns that there is a disparity in distribution of tax revenues and that the local area will bear a disproportionate burden of the economic cost of mine closure compared to its tax revenue during mine operation. Further, there is no mitigation proposed regarding the issue.	<p>The distribution of taxes between state and local governments is outside the purview of the Forest Service. Therefore, while these Project impacts were analyzed, they were described as residual impacts of the Project because they would be without mitigation measures enforceable by the Forest Service.</p> <p>The costs of mine closure were estimated by an approved Forest Service administrative process and a financial surety for that amount would be required prior to initiation of Project construction. This financial surety represents the mitigation measure for the risk of burdening local, state, and federal governments with closure costs.</p>
Socioeconomics	802.1600	C.12	There are concerns that in-migrating student population will not be manageable by school districts, and that the adverse impact was not analyzed	The impacts of in-migrating student population was discussed in DEIS Section 4.21.2.1.1.3. Project-related in-migration was projected to increase enrollment in local school districts by six percent overall. However, new enrollments would not likely be evenly distributed over grade levels and school districts indicating that higher levels enrollment increases would likely occur in specific instances.

Resource	Comment Code	Comment Number	Concern Statement	Response
Socioeconomics	802.1600	C.13	There are concerns that tourism will be impacted by Project related traffic on Highway 55, and that the potential impact was not evaluated.	Impacts to traffic were described in DEIS Section 4.16. Traffic volume on Highway 55 is expected to increase by 1.6% compared to baseline conditions. These effects on tourism were described in DEIS Section 4.21.2.1.1.6. No net loss in recreation use and visitation for the overall National Forest area would be anticipated, however, use and visitation of the mine site area would be curtailed.
Socioeconomics	802.1600	C.14	There are concerns that rapid in-migration associated with the Project will be difficult to manage and that the rapid increase in forest visitation will have impacts to wildlife, fisheries, recreation, heritage resources, tribal resources, and wildfires.	The implications for Project-related population changes were described in DEIS Section 4.21.2.1.1.3. Implications of in-migration on forest visitation would be minor initially as construction phase workforce would consist primarily of employees commuting from outside the area and returning to their home areas off-shift. Over time, conversion to a mixed resident and commuting workforce would be gradual and would resemble recent population growth. The management of increased forest visitation associated with population growth is a component of Forest Service management planning.
Socioeconomics	802.1600	C.15	There are comments voicing general opposition to the Project.	No further response required. General in nature or position statement.
Socioeconomics	802.1600	C.16	There are opinions that the Project will have positive impacts on the local economy by 1) creating new jobs that offer higher wages than the average salary in the local area, 2) providing job training programs, and 3) establishing afterschool programs at local schools to develop a future workforce.	The implications of the Project on local wages were incorporated into the analysis in DEIS Section 4.21.2.
Socioeconomics	802.1600	C.17	There are opinions that Midas Gold and the Project would have positive economic impacts by investing in Idaho, generating tax revenue, and purchasing from local suppliers.	The implications of the Project on tax revenue and local purchasing were incorporated into the analysis in DEIS Section 4.21.2.

Resource	Comment Code	Comment Number	Concern Statement	Response
Socioeconomics	802.1600	C.18	There are comments voicing general support for the Project and Midas Gold.	No further response required. General in nature or position statement.
Socioeconomics	802.1600	C.19	There are concerns that the proposed mitigation measures are not adequate to offset the negative impacts of the Project. Additionally, there are concerns that the DEIS assumes that mitigation and restoration efforts are possible and effective, while experience shows that habitat restoration and mitigation are difficult, expensive, and often ineffective. There are concerns that the DEIS violates NEPA by failing to provide analytical data and discussion about the effectiveness of the mitigation measures.	The SDEIS clarifies the effectiveness of mitigation measures in offsetting Project impacts. In many instances, socioeconomic impacts are described as residual impacts of the Project because they would be without mitigation measures enforceable by the Forest Service.
Socioeconomics	802.1600	C.20	There are comments voicing support for the Project due to the restoration work proposed by Midas Gold. Commenters state that the Project site is currently degraded due to past mining activities and that private investment is needed to restore the site. Specifically, commenters state that the restoration activities included in the Project will improve fish passage, improve water quality by reducing erosion and sediment input into waterways, and reprocess old tailings. Commenters cite tree planting already completed by Midas Gold as a demonstration of the company's commitment to restoration.	No further response required. General in nature or position statement.
Socioeconomics	802.1600	C.21	There are concerns over who would be responsible for reclamation should Midas Gold go out of business, and that financial bonds will not be adequate to cover the true costs of reclamation. There are additional concerns and questions about whether a cash bond will be required. There are concerns that the DEIS does not include an adequate discussion about financial assurance for restoration/reclamation, particularly for perpetual water treatment.	As described in DEIS Section 2.3.7, the reclamation financial assurance would be determined by the U.S. Forest Service to address all Forest Service costs that would be incurred in taking over operations in the case of operator default. Provisions for future adjustment of the value of bond instruments utilized for financial assurance would be incorporated into a final plan approval. The U.S. Forest Service allows utilization of different types of financial assurance that include, but do not require, cash bonds.

Resource	Comment Code	Comment Number	Concern Statement	Response
Socioeconomics	802.1600	C.22	There are concerns that Midas Gold is not focused on restoration and that more mining is not the solution for an area already degraded due to past mining activities. There are concerns that Midas Gold is not able to provide relevant or comparable examples of successful stream mitigation or restoration over tailings or waste rock storage areas. There are concerns that the DEIS does not adequately disclose the complexities associated with stream reconstruction/creation of this large spatial extent and does not provide the performance standards that would be used to determine success.	Under the proposed Project, mining and restoration activities would be conjoined for predominantly economic reasons where the mining activity funds the restoration activity. The SDEIS describes the uncertainty associated with stream restoration and the effectiveness of the associated design features, best management practices, and mitigation measures.
Socioeconomics	802.1600	C.23	There are concerns that the reprocessing of legacy materials will not actually occur because it is not economically driven.	Gold production associated with reprocessing of legacy materials is included in the Project proponent's resource statements filed in compliance with Securities and Exchange Commission requirements for publicly traded companies. This indicates that reprocessing would be economic within the context of the proposed Project.
Socioeconomics	802.1600	C.24	There are concerns that the Project will damage the wild character and outstandingly remarkable values of Wild and Scenic Rivers and the DEIS does not include sufficient mitigation measures to address these impacts. There are concerns that the DEIS fails to adequately characterize and consider Project impacts (and associated mitigation measures) to Wild and Scenic Rivers Act eligible streams within the vicinity of the Project area. Additionally, there are concerns that the scope of analysis is not sufficient to consider impacts to other eligible and congressionally designated waterways outside of the Project area that may be impacted. Commenters specifically note the following designated, eligible, and suitable waterways that may potentially be impacted: South Fork of the Salmon River, Middle Fork Salmon River, Main Salmon River, Burntlog Creek, Johnson Creek, North Fork Payette River and Main Payette River.	See response to comment 802.0800 C.2 (Recreation).

Resource	Comment Code	Comment Number	Concern Statement	Response
Socioeconomics	802.1600	C.25	There are opinions that the length and density of the DEIS, combined with errors and inconsistencies, are deterrents to public engagement in the comment process. Additionally, there are concerns that the structure and terminology used in the DEIS are misleading to the reader. Commenters note that typical EISs include the No Action Alternative as Alternative 1, but the Stibnite Gold Project DEIS has developed the No Action Alternative as Alternative 5. This has led to the DEIS comparing the impacts of all the alternatives to Alternative 1 (an action alternative), rather than the No Action Alternative, which is misleading to the reader. For example, page 16 of the Technical Memorandum for the Stibnite Gold Project Chinook Salmon Flow-productivity Analysis only compares Alternatives 1, 2, and 3, and does not even include the No Action Alternative in the comparison, in violation of NEPA. Commenters cite the term "development rock storage facilities" as an example of misleading terminology that should be replaced by the more transparent and accurate term "waste rock dumps".	Every EIS document includes evaluation of a No Action Alternative. The order that alternatives were presented is not standardized but the descriptions of each alternative were provided in the EIS text (DEIS Sections 2.3 through 2.7). The DEIS document compared all alternatives to baseline conditions as summarized in the DEIS Executive Summary, Table ES4-1. SDEIS revisions address errors and inconsistencies identified by public comments on the DEIS.

Environmental Justice Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Environmental Justice	802.1700	Primary	There are concerns that the DEIS does not describe the Environmental Justice issues related to climate change and impacts to fisheries, specifically as they pertain to tribal treaty rights and co-management of resources. Further, there are concerns that the EIS does not specify whether the FS is meeting the requirements of its environmental justice strategy.	Climate change effects are described in individual resource sections in the SDEIS, e.g., fisheries (Section 4.12.2) and their implications for tribal treaty rights are described in Section 4.24.2. The Environmental Justice evaluation applies the Forest Service's methodology for analyzing Project effects per its Environmental Justice Policy and associated regulations, orders, and guidelines.

Resource	Comment Code	Comment Number	Concern Statement	Response
Environmental Justice	802.1700	C.1	There are concerns that the DEIS does not describe the Environmental Justice issues related to climate change and impacts to fisheries, specifically as they pertain to tribes treaty rights and co-management of resources. Further, there are concerns that the EIS does not specify whether the FS is meeting the requirements of its environmental justice strategy.	Climate change effects are described in individual resource sections in the SDEIS, e.g., fisheries (Section 4.12.2) and their implications for tribal treaty rights are described in Section 4.24.2. The Environmental Justice evaluation applies the Forest Service's methodology for analyzing Project effects per its Environmental Justice Policy and associated regulations, orders, and guidelines.

Special Designations Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Special Designation Areas	802.1000 and 802.1004	Primary Statement	There are concerns that the Project would impact areas with special designations such as Historic Sites and Research Natural Areas and how potential impacts would be mitigated.	Potential impacts to historic sites were analyzed under heritage resources in DEIS Section 4.17, while potential impacts to Research Natural Areas were analyzed under Special Designations, DEIS Section 4.23.4.
Special Designation Areas	802.1000 and 802.1004	C.1	There is a concern that the Project would irreversibly degrade Warm Lake, a National Historic Site.	The Warm Lake area has not been formerly designated as a National Historic Site. Regardless, Warm Lake and its associated cabins and structures are greater than 0.5 mile away from the heritage resources Area of Potential Effect (Section 3.17.1). There would be no physical impacts to any potential historic property at Warm Lake. As presented in DEIS Section 4.6, Project-attributed daytime and nighttime noise level during the construction phase would be well below ambient background daytime and nighttime noise levels (DEIS Section 4.6.2.1.1.5). During operations, Project-attributed noise in the vicinity of Warm Lake would drop to less than 1 dBA at Site 6 and 5 dBA or less at Site 7 under any of the action alternatives (DEIS Section 4.6). Noise impacts at Warm Lake would be short-

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>term and minor during construction in that vicinity to long-term and negligible during operations.</p> <p>According to the viewshed analysis (DEIS Section 4.20 and Appendix O), there would be short-term visual impacts to the Warm Lake Road from increased construction traffic and associated dust. There would be no visual impact to Warm Lake itself.</p>
Special Designation Areas	802.1000 and 802.1004	C.2	This is a concern on how the Project will impact the Chilcoot Peak Research Natural Area and how impacts will be mitigated.	Potential Project impacts to Research Natural Areas were analyzed in DEIS Section 4.23.4. As noted in DEIS Section 4.23.4.2, portions of the Chilcoot Peak RNA would be within 100 to 3,100 feet of FR 447 (Burnt Log Road) and therefore in proximity to the Burntlog Route. The potential establishment of non-native invasive plant species and increased potential of human-ignited fires could indirectly change the composition and structure of vegetation communities within the RNA. The SDEIS (Sections 2.4.9) clarifies the application of Project design features and best management practices to minimize or preclude impacts of the Project on the Chilcoot Peak RNA.

Wilderness Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Wilderness	802.1002	Primary Statement	There are concerns that the DEIS does not adequately analyze the impacts of the Project on wilderness; specifically, the wilderness characteristics of the Frank Church River of No Return Wilderness (FCRNRW).	The analysis presented in Section 4.23.1.2 of the DEIS was based on the five qualities of wilderness character. The DEIS provided a detailed analysis of impacts to the FCRNRW per alternative based on the five qualities.

Resource	Comment Code	Comment Number	Concern Statement	Response
Wilderness	802.1002	A.1	A commentor stated that the maps in the DEIS are too small to determine impacts on the Wilderness	Due to the large area covered by the Project, many of the DEIS Project maps were small scale. However, there are close up maps of the mine area, such as DEIS Figure 2.3-2, that better show the Project disturbances in relation to the FCRNRW. Cites to larger scale maps will be added to the SDEIS.
Wilderness	802.1002	C.1	There are concerns that the DEIS fails to adequately analyze impacts to the wilderness characteristics of the FCRNRW. Commenters note that the federal Wilderness Act and the Central Idaho Wilderness Act require the Forest Service to consider impacts to the Wilderness from activities outside the Wilderness area boundary and that the Forest Service has a legal duty to avoid activities outside the Wilderness that could degrade the area's wilderness characteristics. Specifically, commenters note concerns about noise, light, visual impacts, and water and dust pollution that are likely to affect the Wilderness through direct impacts and edge effects that will degrade the area's unique ecological values and reduce the solitude sought out by hikers in a wild, trailless area.	The analysis presented in Section 4.23.1 of the DEIS did include analysis of impacts to the FCRNRW from activities outside the Wilderness Area boundary. Utilizing the five qualities of wilderness character, impacts from noise, light, visual impacts, and water and dust pollution were disclosed.
Wilderness	802.1002	C.2	There are concerns that the development of roads from the Project will increase access adjacent to the FCRNRW or intrude into the FCRNRW.	As stated in Section 4.23.1 of the DEIS, construction of the Burntlog Route, although not within the FCRNRW, would increase access into adjacent remote areas and also may result in additional users of the FCRNRW. The public could use the Burntlog Route to access this area for 18 years, after which the Burntlog Route would be reclaimed.
Wilderness	802.1002	C.3	There are concerns that the Project will impact air quality and create noise impacts in the FCRNRW and the impacts will be attenuated by the mountainous topography and distance.	Air quality impacts were disclosed under the Natural wilderness character quality subsections of DEIS Section 4.23, as well as in Section 4.3 (Air Quality). As stated in DEIS Section 4.23.1.7, the SGP would result in emissions that could affect air quality in the FCRNRW. However, emissions would be below NAAQS thresholds under all

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>alternatives. The predicted regional haze from operations outside the Operations Area Boundary to 31 miles, which is within the FCRNRW, would be less than a 5 percent change in current conditions. Noise impacts to the FCRNRW were disclosed for each alternative under the Untrammled wilderness character quality subsections in Section 4.23 of the DEIS. Section 4.6 (Noise) of the DEIS states that noise from the mine site would attenuate to the threshold of 55 dBA approximately 0.8 of a mile from the source of the activity based on distance alone. Accounting for ground and atmospheric absorption, noise from the mine site would attenuate to 55 dBA at about 0.38 mile from the activity source. Once completed, traffic noise levels on the Burntlog Route (adjacent and near the FCRNRW) would be approximately 49 dBA at 50 feet from the roadway, below the impact threshold of 55 dBA. As noted in Section 4.6.7 of the DEIS, construction of access roads under all four action alternatives would impact areas of the FCRNRW; noise would gradually attenuate to not noticeable at about 8,000 feet into the wilderness.</p>
Wilderness	802.1002	C.4	There are concerns that the Project would have impacts on wildlife within the Wilderness due to edge effects.	<p>Wildlife impacts to the FCRNRW were disclosed under the Untrammled and Natural wilderness character qualities subsections for each alternative in Section 4.23 of the DEIS. The Untrammled quality of wilderness character would be impacted when noise and lights change wildlife species distribution and behaviors. Noise from mine activities, vehicles on Burntlog Route, and changes to natural dark skies during proposed construction, operation, and closure and reclamation activities could result in a long-term change in wildlife species natural distribution. The duration could be short-term as some individuals of wildlife</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				populations become habituated to noise, lights, and human activity.
Wilderness	802.1002	C.5	There are concerns that there is no alternative that does not have viewsheds of the mine from within the FCRNRW.	In Section 4.20 (Scenic Resources) of the DEIS, Key Observation Points (KOPs) 2 and 3 represent the views of high sensitivity recreation users from the FCRNRW. Under Alternative 3, views of the mine site (TSF and DRSF) would be visible from KOP 3, which is not the case for Alternatives 1, 2, or 4. Simulations in Appendix O of the DEIS indicate there would be visibility from some high elevation locations within the FCRNRW, however, distance would preclude it from dominating the view. Although not visible from KOP 2 or 3, under Alternatives 1, 2, and 3, construction of the Burntlog Route near the FCRNRW boundary could be visible in adjacent wilderness areas depending on topography and vegetative cover (DEIS Appendix O).
Wilderness	802.1002	C.6	There are concerns that the Project will result in the storage of mining waste/by-products/tailings on public lands, resulting in negative effects to wildlife and the FCRNRW.	Wildlife impacts and impacts to FCRNRW were disclosed in Sections 4.13 and 4.23 of the DEIS, respectively. The SGP would be outside of and downstream of the FCRNRW; on-site storage would not impact the FCRNRW. See also responses to comments 802.1002 C.1 and C.4.

Wild and Scenic Rivers Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Wild & Scenic Rivers	802.1003.00	Primary Statement	There are concerns that the Project would damage the wild character and outstandingly remarkable values of Wild and Scenic Rivers (WSRs), specifically noting the following designated, eligible, and suitable waterways that may potentially be impacted: South Fork of the Salmon	As noted in Section 3.23.2 of the DEIS, there are three WSR segments within the area of analysis: Burntlog Creek (eligible), Johnson Creek (eligible), and South Fork Salmon River (suitable). All of these segments have a classification of recreational.

Resource	Comment Code	Comment Number	Concern Statement	Response
			River, Middle Fork Salmon River, Main Salmon River, Burntlog Creek, Johnson Creek, North Fork Payette River, and Main Payette River.	Under planned operating and closure conditions, water quality of surface flow departing from the Project site would be the same or better than baseline conditions; therefore, there would not be impacts to waterways outside the area of analysis (DEIS Section 4.9), including South Fork Salmon River, Middle Fork Salmon River, Main Salmon River, North Fork Payette River, or Main Payette River. The area of analysis is appropriate as it encompasses potential impacts.
Wild & Scenic Rivers	802.1003.00	C.1	Commentor is asking if suitability and eligibility studies will be conducted through the NEPA process.	Eligibility studies have already been conducted. In 1997, the need for a WSR eligibility study on forest lands based on new information and changed conditions was identified and then conducted. The WSR Act states that, in order to be eligible, a river segment must be free-flowing (free of impoundments or diversions) and contain at least one outstandingly remarkable value (ORV). During this process it was determined that Burntlog Creek and Johnson Creek were eligible. The South Fork Salmon River was determined as suitable and recommended for designation as a WSR by the BNF Forest Plan revision decision in 2003 (Boise NF Forest Plan ROD, p. ROD-24).
Wild & Scenic Rivers	802.1003.00	C.2	Commentors note that if the Project might jeopardize the eligibility for WSR designation for a certain river, and the WSR evaluation was not already completed as part of land use planning, a site-specific analysis is required.	See response to comment 802.1003.00 C.1. Eligibility studies for the analysis area streams and rivers have been conducted. If an eligible river would be impacted, then a suitability study would be required.
Wild & Scenic Rivers	802.1003.00	C.3	Commentors state that a Section 7 analysis under the WSR Act is required to determine whether the Project would impair the free-flowing character of any impacted WSR.	A Section 7 analysis is only completed for a designated WSR; none of the streams or rivers in the analysis area are designated WSRs. Further, a Section 7 analysis is conducted for federal projects related to water resources (i.e. within the bed and

Resource	Comment Code	Comment Number	Concern Statement	Response
				bank of a river); therefore it is not applicable to the Project.
Wild & Scenic Rivers	802.1003.00	C.4	Commentors state that suitability studies of affected potential WSRs must be conducted prior to approval of any action alternatives associated with the Project.	See response to comment 802.1003.00 C.2.
Wild & Scenic Rivers	802.1003.00	C.5	There are concerns that hazardous materials spills along mine access routes have the potential to impact the outstandingly remarkable values of potential and designated WSR. There are concerns that the DEIS fails to address the risk of hazardous materials spills along mine access routes and its relationship to WSR values.	Potential impacts from hazardous materials spills were analyzed in DEIS Section 4.7. Impacts specifically to waterways was analyzed in Section 4.7.2.4.5. The Yellow Pine Route, to be used during construction under Alternatives 1, 2, and 3, and used during all phases under Alternative 4, includes greater proximity to water resources including the eligible segment of Johnson Creek and a crossing of the suitable South Fork Salmon River segment. The Warm Lake Road that crosses the South Fork Salmon River segment is an existing road that already carries truck traffic; the risk of hazardous materials spills existed when it was determined a suitable river segment. The increase in risk associated with the Project would not impact the associated ORVs. The Burntlog Route constructed under Alternatives 1, 2, and 3 would be in proximity to the eligible segment of Burntlog Creek. Design features, best management practices, and mitigation measures required for the Project would minimize the potential for hazardous materials spills to waterways.
Wild & Scenic Rivers	802.1003.00	C.6	There are concerns that the Project will damage the wild character and outstandingly remarkable values of WSRs, including the water quality of the WSRs and the DEIS does not include sufficient mitigation measures to address these impacts. There are concerns that the DEIS fails to adequately characterize and consider Project impacts (and associated mitigation measures) to Wild and Scenic Rivers Act eligible streams within the vicinity of the Project Area. Additionally, there are concerns that the scope of	As noted in Section 3.23.2 of the DEIS, there are three WSR segments within the area of analysis: Burntlog Creek (eligible), Johnson Creek (eligible), and South Fork Salmon River (suitable). All of these segments have a classification of recreational. Under planned operating and closure conditions, water quality of surface flow departing from the Project site would be the same or better than baseline conditions; therefore, there would not be

Resource	Comment Code	Comment Number	Concern Statement	Response
			analysis is not sufficient to consider impacts to other eligible and congressionally designated waterways outside of the Project Area that may be impacted. Commenters specifically note the following designated, eligible, and suitable waterways that may potentially be impacted: South Fork of the Salmon River, Middle Fork Salmon River, Main Salmon River, Burntlog Creek, Johnson Creek, North Fork Payette River and Main Payette River.	impacts to waterways outside the area of analysis (DEIS Section 4.9). The area of analysis is appropriate as it encompasses potential impacts.
Wild & Scenic Rivers	802.1003.00	C.7	There is a recommendation that the EIS include analysis of an alternative that minimizes impact to WSR values.	As presented in DEIS Section 2.8, an adequate range of potential alternatives and component/subcomponent options for the Project were evaluated. Each was screened based on four criteria: does it meet purpose and need of the Project; does it potentially reduce environmental effects to at least one resource; is it technically feasible; and/or is it economically feasible. DEIS Section 2.8.2 describes the 19 potential transportation and access road options that were evaluated.
Wild & Scenic Rivers	802.1003.00	C.8	There was a concern that the three WSRs each would have a forest plan standard that would likely be violated by the Project.	The Forest Service conducted a forest plan consistency review for the Project. No forest plan standards related to WSRs would be violated.

Idaho Roadless Rule Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Idaho Roadless	801.0305.01	Primary	Commenters state that the Idaho Roadless Rule does not apply to roads used and needed to support mineral activities on lands open to mineral entry under the U.S. Mining Law.	No further response required. Already decided by law, regulation, or policy.
Idaho Roadless	801.0305.01	A.1	There are concerns about new roads (particularly the Burntlog Road) that would be built in roadless areas and whether or not it would be feasible to remove the new	As described in Section 4.23.3.2 of the DEIS, during closure and reclamation, the Burntlog Route would be decommissioned, structures removed, and

Resource	Comment Code	Comment Number	Concern Statement	Response
			<p>roads upon completion of the Project, in accordance with the Idaho Roadless Rule. Commenters note that Alternatives 1, 2, and 3 include significant new road construction in four different roadless areas. Additionally, commenters state that it is not clear how much roadless area will be permanently changed. There are concerns that the DEIS fails to explain how the alternatives comply with the Idaho Roadless Rule's prohibition on road construction and why the road construction is needed to access the mine area.</p>	<p>slopes graded to blend with adjacent slopes where possible. After decommissioning, approximately 1.5 miles of soil nail walls, some slopes, and rock cuts along local areas of Burntlog Route would remain. Soil nail walls and rock cuts would continue to be evidence of human alterations in localized areas. The criteria used to analyze proposed road construction and use were described in DEIS Sections 4.16 and 4.23.3.</p> <p>The construction and maintenance of temporary roads is not prohibited by the Idaho Roadless Rule and is consistent with 36 CFR Section 294.23(e) which states that maintenance of temporary and forest roads is permissible in Idaho Roadless Areas, and 36 CFR Section 294.21 which defines road maintenance as the ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.</p> <p>Temporary road construction and reconstruction within areas managed as Backcountry/Restoration is permissible where the Regional Forester determines a</p> <p>road is needed pursuant to statute, treaty, reserved or outstanding rights, or other legal duty of the United States. Temporary roads must be decommissioned upon completion of the Project or expiration of the contract or permit, whichever is sooner.</p> <p>The Burntlog Route would avoid having mine traffic share the same road as the public during operations.</p>
Idaho Roadless	801.0305.01	C.1	<p>There are concerns that the Forest Service has included minimizing road construction and use in areas subject to the Idaho Roadless Rule as one of the criteria used to develop and analyze the configuration of the Project roads</p>	<p>The criteria used to analyze proposed road construction and use were described in DEIS Sections 4.16 and 4.23.3. Impacts to Idaho</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
			in the various Project alternatives. Commenters state that the Idaho Roadless Rule does not apply to roads used and needed to support mineral activities on lands open to mineral entry under the U.S. Mining Law.	Roadless Areas were identified in Section 4.23.3 of the DEIS. Also see response to comment 801.0305.01 A.1.

Inventoried Roadless Areas Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Inventoried Roadless Area	802.1001	Primary Statement	There are concerns that the Project will impact Inventoried Roadless Areas (IRAs) and that the DEIS fails to analyze these impacts, including the importance of IRAs as buffers to protected areas. Commenters specifically note diminishing values and qualities with pristine wild lands and in areas with very primitive or no roads. Concerns were also expressed on how the Project would comply with the Idaho Roadless Rule.	Impacts to IRAs were described in Section 4.23.3 of the DEIS. As cited in the DEIS, a separate report was prepared that provides a detailed evaluation of the Project on roadless area characteristics by each phase of the Project. A summary of the analysis of that report was provided in the DEIS. The construction and maintenance of temporary roads is not prohibited by the Idaho Roadless Rule and is consistent with 36 CFR Section 294.23(e) states that maintenance of temporary and forest roads is permissible in Idaho Roadless Areas, and 36 CFR Section 294.21 defines road maintenance as the ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.
Inventoried Roadless Area	802.1001	A.1	Commenters reference a recently published article on Conservation Value of National Forest Roadless Areas that provides insights into the importance of IRAs that should be reviewed.	No further response required. Unrelated to the decision being made.
Inventoried Roadless Area	802.1001	C.1	Commenter states that the EIS needs to explore all possible measures, boundary adjustments, and mitigations to reduce impacts to IRAs from the Project and to preserve them.	Impacts to Idaho Roadless Areas were described in Section 4.23.3 of the DEIS. As cited in the DEIS, a separate report was prepared that provides a detailed evaluation of the Project on roadless area characteristics by each phase of the Project. A summary of the analysis of that report

Resource	Comment Code	Comment Number	Concern Statement	Response
				was provided in the DEIS. Further, a variety of design features and mitigation is included as part of the Project that would minimize impacts to IRAs.
Inventoried Roadless Area	802.1001	C.2	There are concerns about new road construction in IRAs and how the Project would comply with the Idaho Roadless Rule.	The construction and maintenance of temporary roads is not prohibited by the Idaho Roadless Rule and is consistent with 36 CFR Section 294.23(e) states that maintenance of temporary and forest roads is permissible in Idaho Roadless Areas, and 36 CFR Section 294.21 defines road maintenance as the ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.
Inventoried Roadless Area	802.1001	C.3	There are concerns that the Project utility upgrades and ROWs will pass through and either directly or indirectly impact IRAs by diminishing the associated values and qualities.	Impacts to Idaho Roadless Areas were described in Section 4.23.3 of the DEIS. As cited in the DEIS, a separate report was prepared that provided a detailed evaluation of the Project on roadless area characteristics by each phase of the Project. A summary of the analysis of that report was provided in the DEIS. Further, a variety of design features and mitigation is included as part of the Project that would minimize impacts to IRAs.
Inventoried Roadless Area	802.1001	C.4	Commenter states that the OHV trail connecting Meadow Creek Lookout and Horse Heaven/Powerline violates the Idaho Roadless Rule.	The OHV trail was dropped from consideration in the SDEIS.
Inventoried Roadless Area	802.1001	C.5	Commenter states that allowing public access on roads built through IRAs for mineral purposes violates the Idaho Roadless Rule.	The construction and maintenance of temporary roads is not prohibited by the Idaho Roadless Rule and is consistent with 36 CFR Section 294.23(e) states that maintenance of temporary and forest roads is permissible in Idaho Roadless Areas, and 36 CFR Section 294.21 defines road maintenance as the ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.

Resource	Comment Code	Comment Number	Concern Statement	Response
				The Idaho Roadless Commission has approved of the Project, and the Project would be in compliance with the applicable Roadless rule/laws.

Tribal Rights and Interests Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Tribal Concerns and Treaty Obligations	801.0300.00	Primary	<p>Government-to-government consultation and coordination with the Nez Perce, Shoshone-Bannock, and Shoshone-Paiute Tribes has been ongoing throughout the NEPA process. The Tribes submitted comments pertaining to the DEIS as well as the consultation process. The Tribes stated that the Project disregards the treaty agreement between the Tribes and the United States. Tribal concerns include loss of tribal treaty rights, impacts to traditional resources, and restriction of access to resources and areas of importance. The Tribes stated that additional ethnographic information is forthcoming and the analysis of impacts cannot be complete until that information is included. The Tribe stated that extensive tribal restoration of fisheries would be jeopardized and set-back by the Project. There is also tribal concern regarding impacts to pre-contact sites and areas of importance. The Tribes requested ongoing consultation as well as transparent and ongoing public communication and accountability for the life the Project. There is concern that the Project would disproportionately affect local Tribes. As a result, the Tribes oppose the Project.</p> <p>Other commenters also provided comments on tribal treaty rights and traditional resources, reiterating some of the tribal concerns summarized above.</p>	<p>The government to government tribal consultation process was presented in DEIS Section 1.6 and further detailed in DEIS Sections 3.24, 4.24, and 5.1.2. Intergovernmental consultation serves as the primary means for federal agencies to carry out their trust obligations. Ethnographic information was summarized in Section 3.24 of the DEIS. Analysis of tribal rights and resources was presented in Section 4.24.</p> <p>Ethnographies have been received from all three of the tribes; additional data was added to the SDEIS. Impacts to fisheries were presented in DEIS Section 4.12. Impacts to heritage resources were in DEIS Section 4.17. Environmental Justice impacts were analyzed in DEIS Section 4.22.</p> <p>Additional data relevant to tribal treaty rights and concerns available since publication of the DEIS was added to the SDEIS.</p>
Tribal Concerns	801.0300.00	A.1	There is a statement that ethnographic studies from the tribe will be forthcoming.	The Nez Perce and Shoshone Paiute provided their ethnographies to the Forest Service prior to

Resource	Comment Code	Comment Number	Concern Statement	Response
and Treaty Obligations				distribution of the DEIS; however, these are confidential documents, therefore this data was not included in the DEIS. The Shoshone Bannock had not provided their ethnographic report prior to distribution of the DEIS, but it has subsequently been received. The Forest Service consulted with the tribes regarding what data may be included in the SDEIS.
Tribal Concerns and Treaty Obligations	801.0300.00	A.2	There is a request for inclusion of a list of irretrievable and irreversible impacts in the EIS document.	Irretrievable and irreversible impacts were provided in the DEIS for all resources towards the end of each Chapter 4 resource section, including tribal rights and interests (Section 4.24.5).
Tribal Concerns and Treaty Obligations	801.0300.00	A.3	There are concerns that the Native American use of land around the project area is not correctly described in the DEIS.	Although tribal use of the area was mentioned in several resource sections of the DEIS (such as Sections 3.4 and 3.17), Section 3.24 (Tribal Rights and Interests) contained the detail regarding traditional use of land around the Project area and many resources on the Forest utilized by the tribes for traditional and spiritual purposes. Additional details from the ethnographic reports was added to the SDEIS.
Tribal Concerns and Treaty Obligations	801.0300.00	A.4	There are concerns that traditional ecological knowledge is not incorporated into the DEIS.	Each tribe provided an ethnographic report for the Project; however, much of the data is confidential in nature. Ethnographic information was summarized in Section 3.24 of the DEIS. Analysis of tribal rights and resources was presented in Section 4.24.
Tribal Concerns and Treaty Obligations	801.0300.00	A.5	There is a request that the USFS provide a list of project specific Forest Plan amendments along with an assessment of impacts of those amendments to tribal treaty rights.	Project specific Forest Plan amendments are listed in DEIS Appendix A. Impacts of amendments were described in the SDEIS.
Tribal Concerns	801.0300.00	A.6	There is a statement that the project area was utilized by numerous tribes prior to historical mining.	The DEIS Section 4.24 acknowledged that the Project area is the ancestral homeland of the tribes.

Resource	Comment Code	Comment Number	Concern Statement	Response
and Treaty Obligations				
Tribal Concerns and Treaty Obligations	801.0300.00	A.7	There is a statement that the Shoshone-Bannock Tribes have been active in their off reservation reserved rights and land use.	The DEIS acknowledged that the tribes continue to utilize the area for traditional resources and uses (DEIS Sections 3.17, 3.18). The SGP is within the traditional subsistence range of the Shoshone-Bannock, Nez Perce, and Shoshone-Paiute tribes. The area of analysis in the DEIS (Section 4.24) included the South Fork Salmon River watershed.
Tribal Concerns and Treaty Obligations	801.0300.00	A.8	There are concerns that Native American trails have been mischaracterized as historical roads during the archeological survey process.	Section 4.17 (Cultural Resources) of the DEIS noted potential impacts to a Native American trail route. Additional information regarding Native American trails in the analysis area has been added to the Heritage Resources and Tribal Rights and Interests sections of the Final EIS.
Tribal Concerns and Treaty Obligations	801.0300.00	B.1	There is a recommendation to conduct a Habitat Equivalency Analysis to determine the total value of habitat lost due to the project.	The Forest Service is utilizing the NEPA analysis and associated Biological Assessments to determine Project impacts to habitat.
Tribal Concerns and Treaty Obligations	801.0300.00	B.2	There are concerns that NHPA Section 106 regulations were developed without a tribal perspective.	No further response required. Beyond the scope of the proposal.
Tribal Concerns and Treaty Obligations	801.0300.00	B.3	There are concerns that the survey corridor width is not sufficient to identify all archaeological resources that could be disturbed by road construction, maintenance, and public access.	The archaeological survey corridor along the Burntlog route was 200 meters (100 meters on either side of the road/centerline) to account for any incidental construction ground disturbance or slight shifts in the alignment. If final engineering of road design indicates disturbance outside of the inventoried corridor, an additional intensive-level pedestrian archaeological inventory would be conducted.
Tribal Concerns	801.0300.00	B.4	There are concerns that the survey corridor width is not adequate to identify noise and visual impacts.	Noise and visual impacts were analyzed in Sections 4.6 and 4.20 of the DEIS, respectively. The area of

Resource	Comment Code	Comment Number	Concern Statement	Response
and Treaty Obligations				analysis for noise was a 5-mile radius of the major SGP components; noise levels attenuate as a function of the distance from the sources, ground absorption, atmospheric conditions, and physical barriers.
Tribal Concerns and Treaty Obligations	801.0300.00	C.1	There are concerns that the project disregards a treaty/agreement between the Nez Perce and the U.S. government and would impede tribal uses of the land to which they have treaty rights. There are concerns that the Forest Service fails to acknowledge the primacy of the 1855 Treaty and fails to take action to safeguard treaty-reserved rights. There are concerns that the Stibnite Gold Project will undo some of the Tribe's work to protect, manage, and restore its treaty-reserved resources, such as air, wildlife, and fisheries. There are concerns that the DEIS does not identify and fully evaluate/disclose impacts to the Nez Perce Tribe's 1855 Treaty-reserved rights and access to Tribal cultural resources as post-mining land uses.	The DEIS put forth the government to government tribal consultation process in Section 1.6 and detailed it in Section 5.1.2, specifically noting that intergovernmental consultation serves as the primary means for federal agencies to carry out their trust obligations. Further, tribal treaty rights were presented and described in Section 3.24 of the DEIS. Analysis of tribal rights and resources was presented in Section 4.24. Impacts to air, wildlife, and fisheries were further analyzed in their respective sections of DEIS Chapter 4.
Tribal Concerns and Treaty Obligations	801.0300.00	C.2	There are concerns that the EIS does not measure impacts specific to Native American or tribal use of the region for fishing and hunting.	The Forest Service does not track tribal fishing and hunting use of the area; therefore, impacts were analyzed qualitatively rather than quantitatively.
Tribal Concerns and Treaty Obligations	801.0300.00	C.3	There is a statement that specific tribes are not mentioned in the DEIS.	Specific tribes were first presented in DEIS Section 1.6 with further details provided in Section 5.1.2. DEIS Sections 3.24 and 4.24 presented the affected environment for the Nez Perce, Shoshone Bannock, and Shoshone Paiute tribes and analyzed potential impacts to tribal treaty rights and interests, respectively.
Tribal Concerns and Treaty Obligations	801.0300.00	C.4	There is a statement that the Shoshone-Bannock Tribes do not concur with the loss of Trust Resources that the USFS identifies as irreversible and irretrievable commitments of public resources.	No further response required. Position statement.

Resource	Comment Code	Comment Number	Concern Statement	Response
Tribal Concerns and Treaty Obligations	801.0300.00	C.5	There is a request that all project documentation be entered into a public-access website during project construction, operation, and monitoring.	Project documentation that is part of the public record is available from the Forest Service via established request processes.
Tribal Concerns and Treaty Obligations	801.0300.00	C.6	There are concerns that action alternatives would cause disturbance that would impact tribal resources and affect tribal rights and interests.	Analysis of tribal rights and resources was presented in Section 4.24. Impacts to specific resources were further analyzed in their respective sections of DEIS Chapter 4.
Tribal Concerns and Treaty Obligations	801.0300.00	C.7	There are concerns that the Forest Service has failed to minimize all adverse environmental impacts and protect public resources, in violation of agency regulations (36 CFR 228.8, 36 CFR 228.4(c)(e)), the Organic Administration Act of 1897 (Organic Act), the Clean Water Act, the Executive Order on Wetlands Protection, and other laws. Commenters claim that the DEIS does not show, or properly analyze, that all aspects of the project will fully protect "fisheries and wildlife habitat." Specifically, there are concerns that the project will adversely affect/eliminate public waters (e.g., critical wetlands, riparian areas, groundwater dependent ecosystems), in violation of the Organic Act and the Executive Order on Wetlands Protection. Commenters claim that the Forest Service has not considered whether approval of the project would be consistent with one of the primary purposes of the Payette National Forest, enhancing and preserving water conditions/flow, and that the project is not consistent with this purpose.	The Project effects on environmental resources present in its vicinity have been re-examined for the revised mine plan in the SDEIS. The SDEIS analyses include water quantity (Section 4.8.2), water quality (Section 4.9.2), wetlands (Section 4.11.2), and fisheries (Section 4.12.2).
Tribal Concerns and Treaty Obligations	801.0300.00	C.8	There are concerns that the DEIS lacks an adequate analysis of water rights. Commenters note the following concerns related to this issue: All alternatives may completely dry up Meadow Creek for years at a time; it is unclear if the DEIS proposes any mitigation for this complete dewatering or the consumptive loss of water in all the scenarios. It is unclear what the DEIS means by "change in water rights availability." If Midas Gold intends to try to acquire additional existing water rights,	See also responses to Water Rights comment C.1 through C.4. Since the DEIS, Perpetua has applied for the water rights that would be needed to support the Project. These applications and those water uses are described in SDEIS Section 4.8.2.

Resource	Comment Code	Comment Number	Concern Statement	Response
			<p>any changes in point of diversion, place of use, of beneficial use must be advertised. This issue needs to be explained. It is unclear what the DEIS means by "new water rights needed." It is not clear if new water rights have been applied for and if a water availability analysis has occurred. The DEIS does not acknowledge that water rights would be needed for forced evaporation of contact water, and that the Idaho Department of Water Resources would likely require a mitigation plan for all proposed uses of contact water. The DEIS does not appear to address the contamination that would be in contact water before it would be used for dust abatement. The potable water estimate of 50 gallons/person/day is an underestimate. Regarding minimum stream flow (MSF), "Table 3.8.8 lists actual minimum flows allowed during certain times of year, but then confusingly lists a 'total diversion' amount of 2,269 cfs for the EFSFSR MSF right (No. 77-14190). This either needs to be explained or corrected." (Save the South Fork Salmon letter p. 148). The DEIS water rights section does not provide flow data for either MSF water right nor does it provide usage periods and affiliated diversion rates for the SFSR MSF water right. The DEIS water rights section does not mention the potential impact the project may have on federally protected treaty fishing rights of the Nez Perce Tribe.</p>	
Tribal Concerns and Treaty Obligations	801.0300.00	C.9	<p>There are concerns that the project would disproportionately affect local tribes and that the plan has no mechanisms for specific inclusion of tribal governments, or a measure of impacts specific to Native American people or tribes who utilize the region for fishing and hunting.</p>	<p>Disproportionate impacts to the tribes were analyzed in Section 4.22 of the DEIS. It specifically stated, "Tribal members are more likely to be impacted by local area resource changes. Due to the long-standing cultural significance and importance of these resources for the Tribes, many of the resource impacts would likely be perceived by Tribal members to have a greater and more long-term adverse impact than that for non-tribal users. Due to the wider range of their affected interests and use, Tribal members</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				would likely be more broadly impacted. For these reasons, Tribal members have a greater potential to be disproportionately impacted than the general population.” Because specific information from the tribes regarding the nature, duration, and location of impacts to the tribes is unknown, a measure of impacts was not possible. Government to government consultation with the tribes is on-going.
Tribal Concerns and Treaty Obligations	801.0300.00	C.10	There are concerns that the DEIS executive summary does not specifically mention any tribes or the need to maintain the hunting and fishing lands of the Nez Perce tribe.	DEIS executive summary section ES 5.0 specifically mentioned Forest Service government-to-government consultation with the Nez Perce, Shoshone Bannock, and Shoshone Paiute tribes. In DEIS Section 6.0, the list of significant issues included access to reserved tribal rights which including hunting and fishing. In DEIS ES 8.0, the summary and comparison table of potential environmental impacts associated with significant issues by alternative summarized potential impacts to tribal rights and interests. Because the Executive Summary is a summary, the terms tribal rights and interests includes hunting, fishing, and resources utilized by the tribes.
Tribal Concerns and Treaty Obligations	801.0300.00	C.11	The Tribe requests ongoing government-to-government consultation. The Tribe requests an opportunity to review the written responses to the Tribe's comments prior to the issuance the Final EIS or draft decision.	Government to government consultation is ongoing.
Tribal Concerns and Treaty Obligations	801.0300.00	C.12	There is a statement that the Forest is part of the lands over which the Tribe has treaty-reserved rights. The treaty secures the continued existence of the biological conditions necessary for those resources to exist. Harm to habitat for treaty-reserved resources directly harms the Nez Perce people. The Tribe is concerned that the Project will further degrade habitat and treaty-reserved resources in the Forest.	The DEIS put forth the government to government tribal consultation process in Section 1.6 and detailed it in Section 5.1.2, specifically noting that intergovernmental consultation serves as the primary means for federal agencies to carry out their trust obligations. Further, tribal treaty rights were presented and described in Section 3.24 of the DEIS. Analysis of tribal rights and resources was presented in Section 4.24. Impacts to air, wildlife,

Resource	Comment Code	Comment Number	Concern Statement	Response
				and fisheries were further analyzed in their respective sections of DEIS Chapter 4. DEIS Section 4.12.2 and 4.13.2 describe predicted impacts to wildlife habitat.
Tribal Concerns and Treaty Obligations	801.0300.00	C.13	There are concerns that the project will undo the Tribe's restoration efforts.	DEIS Section 4.12.2 describes the predicted impacts to fisheries. The principle area affected by Project activities is the vicinity of the historic Stibnite mining area which has not been subject to previous fisheries restoration.
Tribal Concerns and Treaty Obligations	801.0300.00	C.14	There is a statement that the Tribe has devoted substantial time, effort, and resources to the recovery and management of threatened resources within its treaty territory, including on the Forest.	This is acknowledged in the DEIS and the DEIS utilized resource data generated through tribal efforts (DEIS Section 3.12).
Tribal Concerns and Treaty Obligations	801.0300.00	C.15	There are concerns that air pollution reduces visibility which can impair cultural and ceremonial practices and reduce enjoyment of these special places.	The air quality analysis in the DEIS included the Nez Perce Requested Area of Analysis (NPRAA) (Section 4.3). As stated in DEIS Section 4.3.2.1.3.1, the stringent Class criteria of less than 5 percent change in visibility was used for wilderness area including the NPRAA; impacts were predicted to be less than 3 percent for the NPRAA. Haze would be below the threshold under any of the action alternatives.
Tribal Concerns and Treaty Obligations	801.0300.00	C.16	There is a statement that the Forest provides a range of habitats suitable for bighorn sheep and gray wolf populations, which the Tribe has worked hard to restore and sustain.	As stated in DEIS Section 4.13.2.2.4.3, there would be approximately 560 acres of direct impacts to summer modeled habitat and 128 acres of winter modeled habitat under Alternative 1 at the mine site. Bighorn sheep are mobile and would be able to avoid localized direct threat of injury or mortality. Alternatives 2, 3, and 4 would generally have the same impacts on summer and winter habitat.
Tribal Concerns and Treaty Obligations	801.0300.00	C.17	There is a statement that Forest Service must protect all bighorn sheep habitat on the Forest.	Less than 1 percent of summer modeled habitat and about 1.3 percent of summer modeled habitat would be impacted by the SGP within the analysis

Resource	Comment Code	Comment Number	Concern Statement	Response
				area. This would be long-term until reclamation is complete.
Tribal Concerns and Treaty Obligations	801.0300.00	C.18	There is a statement that Forest Service must protect wolf habitat, which includes minimizing human disturbance.	DEIS Section 3.13.3.3.4 discussed wolf habitat. Gray wolves are habitat generalists with large pack territories of up to 150 square miles. Their range is related to availability of prey species. Although there would be some general habitat loss and therefore displacement, they would follow their prey species who would also be displaced into other areas.
Tribal Concerns and Treaty Obligations	801.0300.00	C.19	There are concerns that the forest lands and waters provide irreplaceable habitat for tribal fisheries resources, which are at risk.	No response required. General in nature or position statement.
Tribal Concerns and Treaty Obligations	801.0300.00	C.20	There is a statement that the mission of the Tribe's DFRM is to protect and restore aquatic resources and habitats. The Tribe's mission will be accomplished consistent with the Nimiipuu way of life and beliefs, which have the utmost respect for the Creator, for all species, and for past, present, and future generations to come. The Tribe's mission will be consistent with the reserved rights stated within the 1855 Treaty.	No response required. General in nature or position statement.
Tribal Concerns and Treaty Obligations	801.0300.00	C.21	There is a statement that the Tribal harvest in the SFSR and its tributaries (including the Secesh River, Johnson Creek, and the EFSFSR) typically occurs from mid-June through August. Because the Tribe manages its harvest in a manner protective of ESA-listed fish returns, it closes these fisheries when either fish population numbers are low or the shared harvest allocation (between the state of Idaho and the Tribe) is met.	No response required. Unrelated to the decision being made.
Tribal Concerns and Treaty Obligations	801.0300.00	C.22	There is a statement that the Nez Perce Tribe has taken an active role in restoring salmon runs for over 20 years, spending conservatively \$2.5 million annually on	This was described in Section 3.24.3.4 of the DEIS. This is acknowledged in the DEIS and the DEIS utilized resource data generated through tribal efforts (DEIS Section 3.12).

Resource	Comment Code	Comment Number	Concern Statement	Response
			hatchery supplementation, fishery research, and watershed restoration.	
Tribal Concerns and Treaty Obligations	801.0300.00	C.23	There is a statement that the EFSFSR has culturally-significant resources, and important fisheries and wildlife resources, all of which are critical to the Tribe and its treaty-reserved rights.	Section 3.24 of the DEIS included discussion that the South Fork Salmon River watershed, that includes the EFSFSR, is traditionally used for fishing, hunting, and plant gathering, among other activities, consistent with tribal treaty rights.
Tribal Concerns and Treaty Obligations	801.0300.00	C.24	There is a statement that the Tribe's way of life is intrinsically place-based, and once adversely impacted or destroyed, these cultural lifeways are also irreplaceable.	No further response required. General in nature.
Tribal Concerns and Treaty Obligations	801.0300.00	C.25	There are concerns that mining projects are an intense land use and are intrinsically destructive; therefore, the Project in the proposed location will cause substantial and irreparable multi-generational adverse impacts on the Tribe and its members that cannot be mitigated or restored.	Disproportionate impacts to the tribes were analyzed in Section 4.22 of the DEIS where it states that the SGP area is within the traditional subsistence range of Tribal minority and low-income populations from the Nez Perce Tribe, Shoshone-Bannock Tribes, and Shoshone-Paiute Tribes. Tribal members are more susceptible and likely to be impacted by local area resource changes due to both their use of the SGP area and their long-established cultural connections and attitudes to the local area resources. As a result, many of the SGP-related resource impacts would likely be perceived by Tribal members to have a greater and more long-term adverse impact than that by non-tribal users. For these reasons, Tribal members have a greater potential to be affected than the general population under all four action alternatives.
Tribal Concerns and Treaty Obligations	801.0300.00	C.26	There are concerns that the USFS did not consider whether the need for the proposed project is essential and whether it conflicts with Tribal treaty-reserved rights.	The Forest Service does not determine the need for the minerals proposed to be produced by the proponent. The Forest Service's purpose is to consider approval of the SGP plan of operations and the need is to respond to the plan, ensure that the selected alternative minimizes adverse effects

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>where feasible, ensure measures are included that provide mitigation of adverse effects and reclamation of NFS disturbance, and ensure the selected alternative would comply with other applicable federal and state laws and regulations (DEIS Section 1.4.1).</p>
Tribal Concerns and Treaty Obligations	801.0300.00	C.27	<p>There are concerns that the DEIS fails to develop any reasonable alternatives that protect Nez Perce treaty rights and resources. There are concerns that the existing alternatives are unreasonably narrow because none avoid or minimize harm to the Tribe's treaty rights and resources. Additionally, there are concerns that the proposed Forest Plan amendments are inconsistent with the Agency's treaty-based and trust obligations to the Tribe and will result in harm to the Tribe's treaty-reserved rights and resources; therefore, the Forest Service must develop new reasonable alternatives that protect the Tribe's rights.</p>	<p>Section 2.2.2 of the DEIS described the alternatives development process. Potential alternatives were screened based upon four criteria: does it meet the purpose and need; does it reduce environmental effects to at least one resource; is it technically feasible; and is it economically feasible. Alternatives not meeting the purpose and need were the first ones eliminated. The remaining were then evaluated for technical and economic feasibility and potential environmental impacts using the significant impact issues identified during scoping, which included impacts to tribal treaty rights (Section 1.8 of the DEIS).</p> <p>The SDEIS describes the Project effects on environmental resources which would be made consistent with Forest Plan requirements and guidance via project-level amendments. Therefore, the amendment would allow a Forest Service decision on the Project, leading to the analyzed Project effects.</p>
Tribal Concerns and Treaty Obligations	801.0300.00	C.28	<p>There are concerns that the project will directly and indirectly impact tribal resources.</p>	<p>Impacts to tribal treaty rights and concerns were analyzed in Section 4.24 of the DEIS. Tribes with interests in the area have identified resources of concern within the analysis area; however, specific locations for traditional cultural properties, cultural landscapes, sacred sites, and resource collection areas have not been disclosed. The Forest Service is continuing to work in consultation with the tribes to develop ways to avoid, minimize, and mitigate</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				effects to tribal rights and resources that would be impacted by the SGP.
Tribal Concerns and Treaty Obligations	801.0300.00	C.29	There are concerns that Tribal access to treaty resources would be restricted for the life of the project.	Access to the Plan boundary would be restricted during construction, operations, and reclamation of the mine; this is estimated to be 20 years. However, access to adjacent lands and resources would not be restricted.
Tribal Concerns and Treaty Obligations	801.0300.00	C.30	There are concerns that Project impacts to fish, wildlife, and their habitat impact the availability and harvestability of these resources by tribes.	Impacts to fish and fish habitat were analyzed in Section 4.12 of the DEIS. Impacts to wildlife and wildlife habitat were analyzed in Section 4.13 of the DEIS. As noted in DEIS Section 4.24, harm to fish, wildlife, and habitat would in turn impact availability and harvestability of these resources by tribes at their usual and accustomed fishing, hunting, and gathering areas if they are within the area of analysis. Although the action alternatives differ in the acres of habitat affected for fish and wildlife, there would be an impact to the availability and harvestability of tribal resources caused by the SGP.
Tribal Concerns and Treaty Obligations	801.0300.00	C.31	There are concerns that the proposed Burntlog Road would damage cultural resources significant to the Nez Perce Tribe. There are concerns that the 100 meter wide archaeological survey corridor is not sufficient to identify all of the potentially affected cultural resources and does not capture all possible noise and visual impacts. There are concerns that the DEIS inaccurately asserts that increased public access would be a net benefit to tribal members, contrary to oral and written comments provided by the Tribe.	<p>No pre-contact sites were documented in the survey corridor during the inventory of the Burntlog Route (AECOM 2020). Two isolated flakes have been previously recorded outside the area of potential effect. Any proposed disturbance outside of previously inventoried areas would require an archaeological inventory. Although the Burntlog Route would provide easier access to tribal resources in that area, increased public access to that area may counter that advantage.</p> <p>The archaeological survey corridor along the Burntlog route was 200 meters (100 meters on either side of the road/centerline) to account for any incidental construction ground disturbance or slight shifts in the alignment. If final engineering of road</p>

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>design indicates disturbance outside of the inventoried corridor, an additional intensive-level pedestrian archaeological inventory would be conducted.</p> <p>As described in DEIS Section 4.24.4.1, the Project impacts on increased public access are characterized as a potentially negative impact on Tribal traditional practices and resources of concern.</p>
Tribal Concerns and Treaty Obligations	801.0300.00	C.32	There are concerns that methylmercury will impact tribal members ability to harvest and consume fish.	<p>For risks associated with the consumption of fish, the Idaho human health fish tissue criterion for methylmercury is 0.3 mg/kg. Under baseline site conditions, fish tissue concentrations have not exceeded that criterion (MWH Americas 2017). The current EPA water quality standard (12 ng/l) and a NMFS proposed standard (2 ng/l) for total mercury are based on human consumption of fish. Site baseline total mercury concentrations range between 2.4 and 5.7 ng/l and methylmercury concentrations are less than 0.1 ng/l. Water treatment would be required to under any action alternative in order to not exceed baseline conditions. Proposed water treatment associated with Alternative 2 would maintain methylmercury concentrations below 0.1 ng/l and, at that concentration, would not modify fish tissue concentrations compared to the baseline condition.</p>
Tribal Concerns and Treaty Obligations	801.0300.00	C.33	There is a statement that the Shoshone-Bannock and Shoshone-Paiute do not have legal right title to the project area.	No further response required. Unrelated to the decision being made.

Effects Analysis Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Effects Analysis	801.1100	Primary	There are concerns that there are data gaps and missing analyses such as impacts of multiple ecosystem stressors, to native anadromous fish and other wildlife, on scenic values, Idaho's value of remote places, recreation, and public land use in the effects analysis of the proposed Project.	The DEIS contained descriptions of the analyses and expected impacts on the overall environment (Chapter 4), native anadromous fish (Section 4.12.2), wildlife (Section 4.13.2), scenic value (Section 4.20.2), remote places (Section 4.23), recreation (4.19.2) and land use (4.15.2). The DEIS acknowledged information that was incomplete or unavailable for its analyses (DEIS Section 4.1.2). The SDEIS incorporates information completed or available since distribution of the DEIS to further support its analyses.
Effects Analysis	801.1100	C.1	There are comments that the effects analyses should include impacts to native anadromous fish and other wildlife, on scenic values, Idaho's value of remote places, and recreation activities.	The DEIS contained descriptions of the analyses and expected impacts on native anadromous fish (Section 4.12.2), wildlife (Section 4.13.2), scenic value (Section 4.20.2), remote places (Section 4.23) and recreation (4.19.2).
Effects Analysis	801.1100	C.2	There is a concern that the analysis does not take into account the current uses of the public land by public land users.	The DEIS analyses included current uses of public land in general in Section 4.15, and for specific uses such as access (Section 4.16), recreation (Section 4.19), and activity under tribal treaty rights and interests (Section 4.24). The DEIS also analyzed effects of the proposed Project on public use of lands as they pertain to Public Health & Safety (Section 4.18) and Socioeconomics (Section 4.21).
Effects Analysis	801.1100	C.3	There is a recommendation that the data gaps in the effects analysis be filled and the suitability of individual components outlined in Section 2.8 re-evaluated.	The DEIS acknowledged information that was incomplete or unavailable for its analyses (DEIS Section 4.1.2). The SDEIS incorporates information completed or available since distribution of the DEIS to further support its analyses in Section 2.8 and Chapter 4.

Resource	Comment Code	Comment Number	Concern Statement	Response
Effects Analysis	801.1100	C.4	There is a recommendation that if an ASAOC/SOW under CERCLA is completed prior to the Final EIS, then that SOW should be considered as a reasonably foreseeable future action for effects analysis by the EIS.	The SDEIS describes the ASAOC Statement of Work in Chapter 1 and includes those activities in the cumulative impacts analyses in Chapter 5.
Effects Analysis	801.1100	C.5	There are concerns that the DEIS assumes no interactions among impacts to fisheries. By considering fish species, stream reaches, and limited habitat impacts separately, the "DEIS fails to acknowledge the broad ecological understanding that multiple stressors will amplify one another's effects on the ecosystem." (Save the South Fork Salmon letter p. 129). This results in the DEIS seriously underestimating impacts to fish and their habitats	The best available tools were applied in the DEIS evaluation, including the intrinsic potential model and SPLNT model include multiple environmental/habitat factors. (802.0600 C.1)
Effects Analysis	801.1100	C.6	There are concerns that the DEIS lacks detailed analysis on how the proposed fish diversion tunnel would impact the surrounding landscape and vegetation. Additionally, there are concerns that the description of the diversion tunnel inadequately characterized impacts and improvements and that the DEIS presents little rationale to support the success of a diversion tunnel.	The DEIS analyzed impacts of disturbance associated with the diversion tunnel on vegetation (Section 4.10.2) and the landscape (Section 4.20.2). The rationale supporting utilization of a diversion tunnel was described in DEIS Section 4.12.

Mitigation Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Mitigation Measures	801.1503	Primary	There are concerns that the relationships between resource impacts and mitigation measures are difficult to ascertain and that the effectiveness of mitigation measures is not provided in the DEIS. Further, there are specific concerns regarding the effectiveness of proposed mitigation measures to offset impacts to resources like wildlife habitat, air quality, water quality, and tribal rights.	The SDEIS clarifies the relationship between proposed activity, the affected environment, and predicted impacts, plus Forest Service regulatory requirements, best management practices, and environmental design features and their effectiveness. Specifically, Forest Service regulatory requirements, best management practices, and environmental design features to offset impacts were described in Appendix D of the DEIS.

Resource	Comment Code	Comment Number	Concern Statement	Response
Mitigation Measures	801.1503	C.1	There are concerns that the details of mitigation efforts and modern mining techniques that would produce a different environmental outcome from past mines are not provided.	The SDEIS clarifies the descriptions of Forest Service regulatory requirements, best management practices, and environmental design features (Section 2.4.9), including any additional mitigation measures identified after analysis of impacts, and how they address Project impacts.
Mitigation Measures	801.1503	C.2	There are concerns regarding the availability of surface water and groundwater supplies to support compensatory mitigation of wetlands.	The SDEIS clarifies the sourcing of water for mine construction, operations, closure, and mitigation efforts which were included in water rights applications filed since the DEIS.
Mitigation Measures	801.1503	C.3	There are concerns that environmental containments and mitigation measures have not been designed to accommodate effects of climate change such as extreme precipitation, anomalous wind events, drought, and wildfire.	The impacts of climate change were described in the DEIS Section 4.4 with specific effects of precipitation included in Sections 4.8.2 and 4.9.2 and wildfire in Section 4.1.
Mitigation Measures	801.1503	C.4	There is a recommendation that the 200-yr 24-hr event be utilized as the stormwater design standard.	The 100-yr 24-hr storm event was utilized for the stormwater designs to align with requirements for IDEQ permitting.
Mitigation Measures	801.1503	C.5	There are concerns that the Forest Service pledge to enter into a binding agreement between the Forest Service and affected tribes regarding impacts to tribal rights does not satisfy NEPA.	Intergovernmental consultation serves as the primary means for federal agencies to carry out their trust obligations with the tribes. The government to government tribal consultation process was presented in Section 1.6 and further detailed in Sections 3.24, 4.24, and 5.1.2 of the DEIS. The SDEIS clarifies the Forest Service regulatory requirements, best management practices, and environmental design features adopted by the Forest Service including those that related to tribal rights.
Mitigation Measures	801.1503	C.6	There are concerns that dust abatement plans as proposed are not adequate for mitigation of dust impacts	The Final EIS includes a monitoring requirement for dust emission that would be incorporated into Project via the ROD to confirm the effectiveness of dust abatement measures.

Resource	Comment Code	Comment Number	Concern Statement	Response
Mitigation Measures	801.1503	C.7	There are recommendations that the EIS should discuss mitigation measures that achieve stable landforms.	The SDEIS clarifies the Forest Service regulatory requirements, best management practices, and environmental design features for constructing and closing stable facilities (e.g., see Sections 4.2.2 and 4.5.2).
Mitigation Measures	801.1503	C.8	There are concerns that the mitigation measures presented in Appendix D do not offset impacts, are not analyzed for effectiveness, and do not include implementation monitoring – and therefore, appear optional.	The SDEIS clarifies the relationships between Project activities, the affected environment, and predicted impacts with the Forest Service regulatory requirements, best management practices, and environmental design features that address those impacts. The clarifications include the effectiveness of the measures and reference associated operating and monitoring plans. The Forest Service regulatory requirements, best management practices, and environmental design features analyzed in the SDEIS, as well as any additional mitigation measures identified after analysis of impacts, will be incorporated into the Project approval via the ROD, and therefore, will not be optional.
Mitigation Measures	801.1503	C.9	Commenters suggest that the Forest Service Mitigation Measures (as presented in Appendix D, Table D-1) are design features that are designed to lessen the degree of environmental degradation but do not provide ecological uplift over the current conditions.	The effectiveness of Forest Service regulatory requirements, best management practices, and environmental design features is described in the SDEIS. These descriptions address the extent to which these features, practices, and measures address impacts to the Project. The SDEIS compares the net result of these activities to the site baseline condition. That comparison can be utilized to ascertain the extent of ecological uplift over current conditions.
Mitigation Measures	801.1503	C.10	There are concerns that the mitigation measures are not sufficient to compensate for impacts to wildlife habitat.	The SDEIS clarifies the Forest Service regulatory requirements, best management practices, and environmental design features adopted by the Forest Service including those that related to wildlife habitat.

Resource	Comment Code	Comment Number	Concern Statement	Response
				<p>The SDEIS clarifies the relationships between Project activities, the affected environment, and predicted impacts with the Forest Service regulatory requirements, best management practices, and environmental design features that address those impacts. The clarifications include the effectiveness of the measures and reference associated operating and monitoring plans. The Forest Service regulatory requirements, best management practices, and environmental design features analyzed in the SDEIS, as well as any additional mitigation measures identified after analysis of impacts, will be incorporated into the Project approval via the ROD, and therefore, will not be optional.</p>
Mitigation Measures	801.1503	C.11	There are concerns that mining reclamation and mitigation efforts will not be successful.	<p>The SDEIS clarifies the relationships between Project activities, the affected environment, and predicted impacts with the Forest Service regulatory requirements, best management practices, and environmental design features that address those impacts. The clarifications include the effectiveness of the measures and reference associated operating and monitoring plans. The Forest Service regulatory requirements, best management practices, and environmental design features analyzed in the SDEIS, as well as any additional mitigation measures identified after analysis of impacts, will be incorporated into the Project approval via the ROD, and therefore, will not be optional.</p> <p>The Final EIS has added some mitigation measures to address the uncertainty regarding reclamation effectiveness and durability.</p>
Mitigation Measures	801.1503	C.12	There are recommendations that Midas and the USFS continue to enhance environmental protections and	The SDEIS incorporates the analysis of additional Forest Service regulatory requirements, best management practices, and environmental design

Resource	Comment Code	Comment Number	Concern Statement	Response
			mitigation measures and be responsive to public comments on those activities.	features advanced by the Forest Service, project proponent, and public comments on the DEIS.
Mitigation Measures	801.1503	C.13	There are statements citing Midas' commitment to investment in environmental protection and mitigation measures.	Comment noted.
Mitigation Measures	801.1503	C.14	There are concerns that the mitigation measures are not sufficient to compensate for impacts to water temperature.	The SDEIS clarifies the Forest Service regulatory requirements, best management practices, and environmental design features adopted by the Forest Service including those that related to water temperature. Alternative 2, now the 2021 MMP, has been modified, in part to address specific water temperature impacts.
Mitigation Measures	801.1503	C.15	There are concerns regarding the compensatory mitigation proposed for the project. One concern is that there is a temporal deficit, specifically that negative effects of the project will outweigh compensatory mitigation measures until at least year 16 of operations. Another concern is that the DEIS fails to explain how continued or expanded mining operations would affect the compensatory mitigation program. Another concern is that the DEIS has not conducted a thorough review of the ratios needed to fully offset impacts, and the Forest Service needs to describe the failure rate for the different wetland types being restored and adjust the mitigation ratios and long term monitoring and enforcement plans accordingly. Lastly there are concerns about the durability of the site protection instruments.	Please refer to the responses to concern statements in the Wetlands section. In 2023, the Compensatory Mitigation Plan submitted to the U.S. Army Corps of Engineers proposed measures to account for the temporal delay in completing on-site wetland measures. Continued or expanded mining operations beyond the currently analyzed plan would require additional NEPA analysis and permitting beyond this Forest Service decision and U.S. Corps of Engineers permit.
Mitigation Measures	801.1503	C.16	There are concerns that mitigation measure effectiveness has not been evaluated in the EIS.	The SDEIS includes an evaluation of Forest Service regulatory requirements, best management practices, and environmental design features effectiveness.

Resource	Comment Code	Comment Number	Concern Statement	Response
Mitigation Measures	801.1503	C.17	There are statements that correlating mitigation measures in Appendix D to resource impacts is difficult, and also the effectiveness of the mitigation measures can not be ascertained.	The SDEIS clarifies the relationships between Project activities, the affected environment, and predicted impacts with the Forest Service regulatory requirements, best management practices, and environmental design features that address those impacts. The clarifications include the effectiveness of the measures and reference associated operating and monitoring plans. The Forest Service regulatory requirements, best management practices, and environmental design features analyzed in the SDEIS, as well as any additional mitigation measures identified after analysis of impacts, will be incorporated into the Project approval via the ROD, and therefore, will not be optional.
Mitigation Measures	801.1503	C.18	There are concerns that the mitigation measures are not sufficient to compensate for impacts associated with fugitive mercury emissions.	The SDEIS clarifies the Forest Service regulatory requirements, best management practices, and environmental design features adopted by the Forest Service including those that related to fugitive mercury emissions. These Forest Service regulatory requirements, best management practices, and environmental design features interact with controls and permit limitations placed on the project by IDEQ's air quality permit.
Mitigation Measures	801.1503	C.19	There are concerns that the mitigation measures are not sufficient to compensate for impacts associated with blasting and noise.	The SDEIS clarifies the Forest Service regulatory requirements, best management practices, and environmental design features adopted by the Forest Service including those that related to blasting and noise.
Mitigation Measures	801.1503	C.20	There are concerns that the mitigation measures are not sufficient to compensate for impacts associated with cyanide transportation by truck.	The SDEIS clarifies the Forest Service regulatory requirements, best management practices, and environmental design features adopted by the Forest Service including those that related to cyanide transport by truck. The SDEIS incorporates the Project's Travel Risk Management Plan into its analysis of design

Resource	Comment Code	Comment Number	Concern Statement	Response
				features and operating measures to limit transportation risks.
Mitigation Measures	801.1503	C.21	There are recommendations that the mitigation plan be updated to be applicable to Alternative 2.	The Forest Service requirements, best management practices, environmental design features, and mitigation measures for all resources will be applied to the Forest Service's Preferred Alternative per the SDEIS analysis and the Project ROD.
Mitigation Measures	801.1503	C.22	There are concerns that mitigation measures were only applied to the analysis of Alternative 2.	The SDEIS clarifies the application of Forest Service regulatory requirements, best management practices, and environmental design features (e.g., water treatment) to the analyzed alternatives.
Mitigation Measures	801.1503	C.23	There is an opinion that the effects of expanded mining will create or expand a temporal mitigation gap, and the DEIS does not explain how compensatory mitigation would be affected by continuation or expansion of mining beyond the PRO.	Please refer to the responses to concern statements in the Wetlands section. Continued operation beyond the current authorization would require additional NEPA analysis and approval of modifications to the site's plan of operations.
Mitigation Measures	801.1503	C.24	There are concerns that the mitigation measures presented are not sufficient to address the adverse effects presented in the DEIS Chapter 4, and that the mitigation measures presented as optional or dropped from further consideration should be reconsidered, ranked in terms of effectiveness and discussed.	The SDEIS clarifies the relationships between Project activities, the affected environment, and predicted impacts with the Forest Service regulatory requirements, best management practices, and environmental design features that address those impacts. The clarifications include the effectiveness of the measures and reference associated operating and monitoring plans. The Forest Service regulatory requirements, best management practices, and environmental design features analyzed in the SDEIS, as well as any additional mitigation measures identified after analysis of impacts, will be incorporated into the Project approval via the ROD, and therefore, will not be optional.
Mitigation Measures	801.1503	C.25	There are recommendations to include an explanation of the decision-making process by which mitigation measures are incorporated into analyzed alternatives,	Forest Service regulatory requirements, best management practices, and environmental design features are analyzed via the NEPA process. They

Resource	Comment Code	Comment Number	Concern Statement	Response
			considered separately as mitigation measures, or removed from consideration. Further, there are opinions that it is not clear how potential mitigation measures are to be considered in the project decision.	are selected by the Forest Service and applied to predicted impacts for environmental resources when their application reduces the residual impact of the proposed project and its design features. The Forest Service selects its Preferred Alternative from the alternatives analyzed in the SDEIS, including any additional mitigation measures identified after analysis of impacts, and presents the requirements for project approval in its ROD.
Mitigation Measures	801.1503	C.26	There are concerns that the proposed mitigation measures are not adequate to offset the negative impacts of the project. Additionally, there are concerns that the DEIS assumes that mitigation and restoration efforts are possible and effective, while experience shows that habitat restoration and mitigation are difficult, expensive, and often ineffective. There are concerns that the DEIS violates NEPA by failing to provide analytical data and discussion about the effectiveness of the mitigation measures.	The SDEIS clarifies the relationships between Project activities, the affected environment, and predicted impacts with the Forest Service regulatory requirements, best management practices, and environmental design features that address those impacts. The clarifications include the effectiveness of the measures and reference associated operating and monitoring plans. The Forest Service regulatory requirements, best management practices, and environmental design features analyzed in the SDEIS, as well as any additional mitigation measures identified after analysis of impacts, will be incorporated into the Project approval via the ROD, and therefore, will not be optional.
Mitigation Measures	801.1503	C.27	There is a comment that would like to see mitigation identified for the significant changes to local communities, such as intersection improvements on the Deinhard/Bordstun route and provide HazMat response resources in nearby communities.	Improvements to access routes are described in DEIS Section 2.3.4.3. Potential road improvements not associated with the access route are outside the scope of the Forest Service's decision on the proposed Project. HazMat response capabilities are described in the Project's Hazardous Materials Handling and Emergency Response Plan that locates responders and resources for response situations.
Mitigation Measures	801.1503	C.28	There is a question regarding the sediment reduction practices for borrow sites.	The SDEIS clarifies the Forest Service regulatory requirements, best management practices, and

Resource	Comment Code	Comment Number	Concern Statement	Response
				environmental design features associated with sediment reduction.

Monitoring Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Monitoring	801.1502	Primary	There are requests for more detailed information on project monitoring and requests to publish monitoring reports.	The SDEIS text includes descriptions of Project environmental monitoring objectives and references to current monitoring plans. Upon submittal, monitoring reports and information are available through requests to the U.S. Forest Service.
Monitoring	801.1502	C.1	There is a request for posting of project monitoring reports on a web-site for real-time public access.	Project documentation is, and future monitoring data would be, available from the Forest Service via established processes.
Monitoring	801.1502	C.2	There is a recommendation to include detail related to proposed monitoring in the final EIS.	The SDEIS text includes descriptions of Project environmental monitoring objectives and references to current monitoring plans.
Monitoring	801.1502	C.3	There is an opinion that the financial burden for monitoring activities should be assumed by the Project operator, and not funded by public monies.	Project monitoring paid for by the Operator would be required under an approval for the Plan of Operations. The Environmental Monitoring and Management Plan (EMMP) provides an overview of the actual or anticipated monitoring for each of the regulatory permits and establishes Perpetua's commitments to environmental monitoring and management of mine facilities and environmental resources.
Monitoring	801.1502	C.4	There are concerns that the DEIS does not adequately address long-term monitoring and maintenance. Commenters note that several points within the DEIS section on Reclamation Monitoring require clarification. Additionally, commenters state that the DEIS description of	Long-term monitoring is a requirement of the Reclamation Closure Plan focusing on the physical and chemical stability of closed Project facilities plus the success of reclamation and revegetation in meeting reclamation standards

Resource	Comment Code	Comment Number	Concern Statement	Response
			maintenance activities is incomplete. Commenters state that the proposed project would require extensive monitoring, including water quantity, water quality, fish, wildlife, aquatic biota, revegetation, erosion, dam stability, and other monitoring to ensure that reclamation and closure measures are performing as intended and within acceptable standards.	and objectives. The associated costs of long-term monitoring and maintenance would be included in the reclamation cost estimate for the Project.
Monitoring	801.1502	C.5	There are concerns that construction period use of the Johnson Creek Road will alter the road and impair use for other purposes as well as threaten its biology.	The impacts of site construction access via the Johnson Creek Road on other road usage is described in DEIS Section 4.16.2 with the associated impacts to vegetation, wildlife, and fisheries described in DEIS Sections 4.10.2, 4.11.2, and 4.12.2, respectively.
Monitoring	801.1502	C.6	There is a comment that monitoring should be done by those not affiliated with the mining company.	Project monitoring requirements are established through the approval of the Project and the incorporation of its monitoring plans via the ROD. Site monitoring would be conducted by qualified personnel and would be subject to review and inspection by the Forest Service. Typically, qualified personnel may be associated with the mine operator or external contractors.

Cumulative Effects Analysis Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Cumulative Effects Analysis	801.1101	Primary	There are concerns that the cumulative effects analysis does not provide a useful analysis of the cumulative impacts of past, present, and future projects. Further, there are recommendations that the effects of historic mining in the Project Area be included in the cumulative impact analysis for comparison to the native site condition.	Effects of historic mining were incorporated into the NEPA analysis as part of the description of baseline conditions. The analysis recognizes that baseline conditions are not reflective of natural conditions for many resources. As described in DEIS Section 4.1.5.1, historic mining was included as a past and present action for the purposes of analyzing cumulative effects.

Resource	Comment Code	Comment Number	Concern Statement	Response
				SDEIS revisions reflect specific comments on the cumulative effects analysis presented in the DEIS. Most notably, the recent ASAOC that schedules removal actions for some legacy materials between 2021 and 2024 has been incorporated into the SDEIS as a reasonably foreseeable future action.
Cumulative Effects Analysis	801.1101	C.1	There are concerns that the cumulative effects analysis does not provide a useful analysis of the cumulative impacts of past, present, and future projects.	SDEIS revisions reflect specific comments on the cumulative effects analysis presented in the DEIS. Most notably, the recent ASAOC that schedules removal actions for some legacy materials between 2021 and 2024 has been incorporated into the SDEIS as a reasonably foreseeable future action.
Cumulative Effects Analysis	801.1101	C.2	There are concerns that the cumulative effects areas analyzed are too small and should be extended to include all access routes and the Salmon River beyond the SFSR analysis area.	The areas considered in cumulative effects analysis for each environmental resource in the DEIS were determined by examining the combined areas of direct effects of the proposed Project along with direct effects of other area activities and reasonably foreseeable future actions.
Cumulative Effects Analysis	801.1101	C.3	There is a recommendation that a description of the effects of each fire in the study area be included in the cumulative effects analysis.	The impacts of wildfires were incorporated into the cumulative effects analysis as past and present actions as described in DEIS Section 4.1.5.1.
Cumulative Effects Analysis	801.1101	C.4	There are concerns that comparing impacts on fisheries to current habitat conditions drastically underestimates the cumulative impacts of mining. Commenters state that current conditions within the site have been severely impacted by historic mining and thus impacts to fisheries should be predicted relative to estimated habitat conditions prior to mine development.	Effects of historic mining on fisheries were incorporated into the DEIS as part of the description of baseline conditions. The analysis recognizes that baseline conditions are not reflective of natural conditions. As described in DEIS Section 4.1.5.1, historic mining was included as a past and present action for the purposes of analyzing cumulative effects.
Cumulative Effects Analysis	801.1101	C.5	If the ASAOC/SOW is signed before publication of the final EIS, include the work outlined in the ASAOC/SOW as a RFFA and evaluate cumulative impacts accordingly.	See response to comment 801.1101 C.1.
Cumulative	801.1101	C.6	Comment requesting climate change cumulative impacts be presented.	Cumulative impacts analyses were related to the projects identified in DEIS Section 4.1.5. The

Resource	Comment Code	Comment Number	Concern Statement	Response
Effects Analysis				application of the cumulative effects analysis to climate change was described at the beginning of DEIS Section 4.4.2. As described, the cumulative effects of the Project regarding greenhouse gas emissions were summarized in DEIS Table 4.4-4.

Collaboration Meetings Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Collaboration, Meetings	801.0502	Primary	There are statements that Midas Gold engaged with community members and sought feedback as exemplified by the Stibnite Advisory Council established by the Community Agreement and the submittal of a modified PRO that included Project modifications recommended by the public.	The modified PRO which incorporated Project feedback was analyzed as Alternative 2 in the DEIS. Additional modifications inclusive of Project feedback are analyzed in the SDEIS.
Collaboration, Meetings	801.0502	C.1	There are opinions that the modified PRO is responsive to feedback and suggestions from the public.	The modified PRO which incorporated Project feedback was analyzed as Alternative 2 in the DEIS. Additional modifications inclusive of Project feedback are analyzed in the SDEIS.
Collaboration, Meetings	801.0502	C.2	There are opinions that the Community Agreement creates the framework for exchange of information regarding the Project.	No further response required. General in nature or position statement.
Collaboration, Meetings	801.0502	C.3	There are general statements that Midas Gold engaged community members and sought feedback.	The modified PRO which incorporated Project feedback was analyzed as Alternative 2 in the DEIS. Additional modifications inclusive of Project feedback are analyzed in the SDEIS. No further response required for comment general in nature.

Comment Period Extension Request Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Comment Period Extension Requests	801.0505	Primary	There are differing opinions regarding the adequacy of the public comment period and the need for an extension along with differing opinions on the trustworthiness of Midas Gold and its participation in the NEPA process.	The U.S. Forest Service established the 60-day DEIS comment period and the 15-day extension in accordance with its procedures for review of NEPA documents. No further response required. Conjectural in nature.
Comment Period Extension Requests	801.0505	C.1	There are requests for an extension to the comment period due to a number of reasons, including the length of the DEIS, complexity of the impacts and analysis, precedent set by other similar projects, and difficulties related to the COVID-19 pandemic.	In response to requests for extension, a 15-day extension was granted for public comments on the DEIS.
Comment Period Extension Requests	801.0505	C.2	There are general comments regarding support for the public involvement tools such as the virtual meeting room.	No further response required. General in nature or position statement.
Comment Period Extension Requests	801.0505	C.3	There are comments voicing general support for the Project and Midas Gold.	No further response required. General in nature or position statement.
Comment Period Extension Requests	801.0505	C.4	There are general opinions provided that the length of the comment period is adequate and should not be extended.	No further response required. General in nature or position statement.
Comment Period Extension Requests	801.0505	C.5	There are general comments voicing the opinion that the Forest Service failed to provide adequate public participation and is not encouraging and facilitating public involvement to the fullest extent possible.	The U.S. Forest Service disagrees with the comments. In addition to soliciting input via Forest Service procedures, public participation was encouraged via delivery of Project information by way of written and interactive on-line media. Public comments were accepted in a variety of written and on-line formats, and the period for receipt of those comments was extended for 15 days in response to extension requests.

Resource	Comment Code	Comment Number	Concern Statement	Response
Comment Period Extension Requests	801.0505	C.6	There is an allegation that the proponent has been pressuring elected officials and regulatory agencies to approve the Project. Therefore, the comment period for the DEIS should be extended.	The 15 day extension of the public comment period by the U.S. Forest Service was in response to public requests for an extension. No further response required. Conjectural in nature.
Comment Period Extension Requests	801.0505	C.7	There are comments that the DEIS comment period should not be delayed due to ongoing Idaho State rulemaking processes for ore processing by cyanidation.	The 15 day extension of the public comment period by the U.S. Forest Service was in response to public requests for an extension and was not associated with the Idaho State rulemaking process.

Outreach Education Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Outreach, Education	801.0501	Primary	There is recognition that Midas Gold conducted more than 900 public events and 190 site tours to provide information regarding the Project.	No further response required.
Outreach, Education	801.0501	C.1	There are statements that a Community Agreement was formed amongst Midas Gold and seven municipalities to facilitate Project dialogue via a binding, resourced framework. Further, more than 900 public events and 190 site tours have been held to discuss the Project.	No further response required.
Outreach, Education	801.0501	C.2	There is a statement that the USFS did not provide any informational presentations to the public.	Public participation has been solicited and facilitated throughout the NEPA process via standard procedures such as public scoping and comment on the DEIS. The Forest Service utilized a virtual, on-line Project information room to provide summary Project information during the public comment period on the DEIS. Due to the COVID-19 pandemic, in-person public meetings were not held.

Public Involvement Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
Public Involvement	801.0500	Primary	There are differences of opinion regarding the suitability of the public review of the DEIS, including the length of the review period, the availability of documents for review, the form in which the documents were provide for public review, the receipt of batch comments, how public meetings were conducted, and the trustworthiness of Midas Gold’s input into the project documentation.	<p>The Forest Service utilized its standard 60-day review period and granted one 15-day extension. The DEIS and supporting documents were made available through the Forest Service-hosted website (https://cara.ecosystem-management.org/Public/CommentInput?Project=50516).</p> <p>The Forest Service received four non-routine submissions containing multiple unique and form letters from different commenters. While these non-routine submissions were received as an individual submission, the number of individual commenters contained in each was recorded along with the content of their comments.</p> <p>COVID-19 restrictions limited public meetings to virtual meetings that provided the opportunity for information review and comment.</p> <p>Documentation submitted by the Project proponent is reviewed by the Forest Service, and the Forest Service determines whether that content is informative to the analyses.</p>
Public Involvement	801.0500	C.1	There are general opinions provided that the length of the comment period is adequate and should not be extended	The U.S. Forest Service established the 60-day DEIS comment period and the 15-day extension in accordance with its procedures for review of NEPA documents.
Public Involvement	801.0500	C.2	There are concerns that the Forest Service has failed to make printed copies of the DEIS available to the public and has thus excluded a large portion of the public and disproportionately affected minority populations.	In addition to online availability, hardcopies of the DEIS were provided to those who requested them, including requests for multiple copies to individual requestors. Copies were also available at the McCall and Cascade Libraries.
Public Involvement	801.0500	C.3	There are general comments regarding public involvement.	No further response required. General in nature or position statement.

Resource	Comment Code	Comment Number	Concern Statement	Response
Public Involvement	801.0500	C.4	There are concerns that the Forest Service has violated NEPA by failing to issue a timely response to Save the South Fork Salmon's FOIA requests. CEQ regulations require federal agencies to make available not only the NEPA analysis itself, but also all incorporated documents and documents underlying the NEPA analysis available pursuant to FOIA requests. To participate effectively in the NEPA process, the public must have such documents before commenting on the NEPA analysis. Commenters state that some documents were provided by the Forest Service too late in the comment period to allow for sufficient time to analyze them. Additionally, commenters were unable to locate the following document: STRATA Inc., Geologic Hazard Assessment. Proposed Burntlog Access Road Alignment Valley County, Idaho (2016).	DEIS reference documents were available via a linked document on the Project webpage (http://www.fs.usda.gov/nfs/11558/www/nepa/105403_FSPLT3_5429580.pdf) except for information held as confidential per Forest Service procedures such as some heritage resources and proponent proprietary data. (The STRATA Inc (2016) document was confidential.)
Public Involvement	801.0500	C.5	There are concerns that the Forest Service has not issued timely or complete responses to multiple Freedom of Information Act (FOIA) requests. Specifically, the commenters cite a FOIA request from Save the South Fork Salmon to the Payette National Forest (dated March 6, 2020), a second FOIA request from Save the South Fork Salmon to the Payette and Boise National Forests and the Forest Service Washington Office (dated March 28, 2020), and a FOIA request from the Idaho Conservation League to the Boise National Forest (dated July 1, 2020). The commenters also state that requested model input files that were provided by the Forest Service were incomplete.	DEIS reference documents were available via a linked document on the Project webpage (http://www.fs.usda.gov/nfs/11558/www/nepa/105403_FSPLT3_5429580.pdf) except for information held as confidential per Forest Service procedures such as some heritage resources and proponent proprietary data. Modeling documents were also available via that link.
Public Involvement	801.0500	C.6	There are opinions that the length and density of the DEIS, combined with errors and inconsistencies, are deterrents to public engagement in the comment process. For example, there are concerns that the structure and terminology used in the DEIS are misleading to the reader. Commenters note that typical EISs include the No Action Alternative as Alternative 1, but the Stibnite Gold	The SDEIS contains revisions that address errors and inconsistencies identified from reviews of and comments on the DEIS text. Every EIS document includes evaluation of a No Action Alternative. The order that alternatives are presented is not standardized but the descriptions of each alternative were provided in the DEIS text

Resource	Comment Code	Comment Number	Concern Statement	Response
			Project DEIS has developed the No Action Alternative as Alternative 5. This has led to the DEIS comparing the impacts of all the alternatives to Alternative 1 (an action alternative), rather than the No Action Alternative, which is misleading to the reader. For example, page 16 of the Technical Memorandum for the Stibnite Gold Project Chinook Salmon Flow-productivity Analysis only compares Alternatives 1, 2, and 3, and does not even include the No Action Alternative in the comparison, in violation of NEPA. In another example, commenters cite the term "development rock storage facilities" as an example of misleading terminology that should be replaced by the more transparent and accurate term "waste rock dumps".	(Sections 2.3 through 2.7). Individual technical memoranda utilized in developing the EIS – especially those describing specific action alternatives - may not include all alternatives. The DEIS document compared all alternatives to baseline conditions as summarized in the Executive Summary, Table ES4-1. Terminology used in the DEIS document was defined and described in the text and in DEIS Section 7.2 (Acronyms and Glossary). This offers readers opportunity to look-up the meaning of terms used.
Public Involvement	801.0500	C-7	There are concerns regarding how the Forest Service accepted comment letters and opinions that comment letters submitted in a batch should be considered and counted as individual comment letters. Additionally, there are concerns regarding how form/unique letters were designated in CARA.	The Forest Service received four non-routine submissions containing multiple unique and form letters from different commenters. While these non-routine submissions were received as an individual submission, the number of individual commenters contained in each was recorded along with the content of their comments.
Public Involvement	801.0500	C-8	There are concerns that throughout the comment period, project information (including portions of the DEIS) on the Forest Service website has been unavailable, inaccurate, and/or inaccessible.	Periods where Project information was not available or accessible via the website were of short duration compared to the duration of the public comment period. Over the course of the comment period, the system was operational more than 98 percent of the time. Potential errors or inaccuracies in Project information are identified and addressed via the public comment process and revision of the EIS document.
Public Involvement	801.0500	C-9	There are concerns that several key references for the DEIS have been designated as "confidential" and not provided to the public. There are concerns that this hinders the public's ability to comment on the DEIS. Commenters cite geotechnical reports prepared by URS (2013) and Tierra Group (2018) as examples and request	DEIS reference documents were available via a linked document on the Project webpage (http://www.fs.usda.gov/nfs/11558/www/nepa/105403_FSPLT3_5429580.pdf) except for information held as confidential per Forest Service procedures

Resource	Comment Code	Comment Number	Concern Statement	Response
			that the Forest Service make these documents publicly available.	such as some heritage resources and proponent proprietary data.
Public Involvement	801.0500	C-10	There are general comments voicing the opinion that the Forest Service failed to provide adequate public participation and is not encouraging and facilitating public involvement to the fullest extent possible.	Public participation has been solicited and facilitated throughout the NEPA process via standard procedures such as public scoping and comment on the DEIS. Additional measures such as a virtual, on-line Project information room have also been utilized to promote public involvement.
Public Involvement	801.0500	C-11	There is a request for an open house to review the proposed water treatment processes. Further, the Water Quality Management Plan should be provided to the public for review.	Environmental management plans including water quality will be incorporated into the SDEIS where they will be available for public review.
Public Involvement	801.0500	C-12	There is a recommendation that mitigation measures identified in public comments on the DEIS be incorporated as mitigation measures for the Project if they are technically and economically feasible.	The Forest Service will select mitigation measures for the Project based on its analysis of impacts including input received on the DEIS. These mitigations measures will be described in the Final EIS and incorporated into the Project ROD.
Public Involvement	801.0500	C-13	There is a statement that past occurrences at other locations are not relevant to the examination of the Project.	The Forest Service considers information provided from a number of sources in its analysis of the Project effects. In the process, the Forest Service determines the relevance of information provided and utilizes the information it deems relevant.
Public Involvement	801.0500	C-14	Commentors expressed that the virtual meeting room was helpful and they appreciated having electronic access to documents.	No further response required. Comment general in nature.
Public Involvement	801.0500	C-15	Commentor stated that the comment drop box at the Payette NF SO was not available at the end of the comment period and the office was locked.	Because the office was closed due to COVID 19, there was a mail bin set outside during regular business hours. This bin was used to collect deliveries, including hand delivered comments to the project DEIS but was not set-up as a comment drop-box specifically for the project.

General Concerns

Resource	Comment Code	Comment Number	Concern Statement	Response
General	801.0000	Primary	There are differing opinions as to whether the DEIS adequately analyzed and disclosed the direct, indirect, and cumulative impacts of the Project.	Chapter 4 of the DEIS presented the analysis of Project impacts to 23 environmental resources. Revisions based on comments received on the DEIS have been incorporated into the SDEIS.
General	801.0000	A.1	There is a recommendation to define the terms “technically infeasible” and “economically feasible” in the alternatives analysis.	The definitions have been incorporated into the SDEIS under the definition of “Practicable (or feasible)”.
General	801.0000	A.2	There is a concern that a plan for temporary closure will not be developed, analyzed and approved prior to the experience of a temporary closure. Further, there is not a definition regarding the transition from temporary to permanent closure.	Temporary closure does not reduce or modify an operator’s obligations related to environmental protection measures (such as water treatment) and site monitoring. Non-performance of these obligations would lead to regulatory enforcement action. Closure scenarios that do not follow the planned Project timeframe are addressed via the financial assurance for closure. Financial assurance amounts are determined to allow for reclamation of Project disturbance and activity at the time that a Project goes into permanent or temporary closure.
General	801.0000	A.3	There are concerns that the DEIS and its supporting documents rely upon missing and incomplete information. Additionally, there are concerns that some of the information listed in the DEIS as “incomplete and unavailable” is not truly unavailable but has simply not been provided to the public. Commenters express concerns that the lack of disclosure of this information hinders the public's understanding of adverse impacts, impedes public participation, and violates NEPA.	In the interest of full disclosure, the DEIS described information that was incomplete or unavailable for its analysis. In those instances, the Forest Service was not in possession of information beyond that described in the DEIS and supporting documents. The SDEIS provides information that has become complete or available since distribution of the DEIS.
General	801.0000	A.4	There are concerns that the Forest Service has failed to make printed copies of the DEIS available to the public and has thus excluded a large portion of the public and disproportionately affected minority populations.	The Forest Service received requests for 25 hardcopies of the DEIS document from 14 requestors. Eighteen hardcopies were distributed in an initial mailing that provided at least one hardcopy to each requestor. Requestors asking for multiple copies of the document

Resource	Comment Code	Comment Number	Concern Statement	Response
				received the additional seven copies via a subsequent mailing.
General	801.0000	A.5	There are concerns that the public will not be informed regarding mitigation requirements until release of the ROD.	Mitigation measures and their effectiveness are discussed in Chapter 4 of the DEIS. SDEIS updates include more information regarding Forest Service requirements, best management practices, and environmental design features. Mitigation requirements will be further clarified in the Final EIS and will be included in the draft ROD which is available for public review prior to issuance of the signed ROD.
General	801.0000	A.6	There are concerns that the Forest Service has not addressed mitigation and monitoring measures sufficiently in the EIS to inform meaningful public comment.	The DEIS presented mitigation and monitoring measures in Chapter 4 and Appendix D. The SDEIS clarifies Forest Service requirements, best management practices, and environmental design features. The mitigation and monitoring discussion in the SDEIS has been revised to incorporate comments received on the DEIS.
General	801.0000	A.7	There is a recommendation to include seismic evaluation, dam failure analysis, and analysis of the water management plan for the TSF in the EIS and provide the primary references for these analysis to the public.	The SDEIS analysis includes consideration of a seismic evaluation and water management plan for the TSF. Based on the design Factor of Safety for the TSF embankment and buttress, dam failure is not a reasonably foreseeable event.
General	801.0000	A.8	There is a recommendation to include additional minimum stream flow (MSF) data in the EIS impact analysis and also include analyses of impacts to MSF water rights and Nez Perce Tribal Treaty fishing rights.	Minimum stream flow (MSF) for streams in the area of analysis was included in the Section 4.8 of the DEIS along with an analysis of impacts to MSF water rights. Impacts to Nez Perce Tribal Treaty fishing rights were described in Section 4.24 of the DEIS.
General	801.0000	A.9	There is a recommendation that the EIS include disclosure regarding future discovery of additional economic gold resources would affect the current Plan of Operations approval and accompanying mitigation measures.	The DEIS described currently proposed future actions including those associated with additional economic gold resources in the impacts analysis in Chapter 4. Any proposed future changes in the operations that would be authorized by a ROD would need to be proposed to the Forest Service and evaluated as needed under NEPA.

Resource	Comment Code	Comment Number	Concern Statement	Response
General	801.0000	A.10	There are opinions that the organization of supporting documentation – particularly in the area of water quality – makes review of the documentation more difficult compared to other mining EIS’s.	The SDEIS revises the organization of documentation per comments received on the DEIS.
General	801.0000	A.11	There are concerns that the 2020 Buck Fire has burned through areas that are part of the Stibnite Gold Project area, leading to significant changed circumstances requiring a supplemental DEIS for public comment.	The 2020 Buck Fire occurred concurrently with the publication and public comment period of the DEIS. The DEIS described general implications of wildfire in Section 4.1. Environmental implications of the 2020 Buck Fire on the analysis of this Project are incorporated into the SDEIS.
General	801.0000	A.12	There is an opinion that the rulemaking process for the Reclamation Rule by the Idaho State Land Board does not affect public review of the DEIS.	Comment noted. The 15-day extension of the public comment period by the U.S. Forest Service was in response to public requests for an extension and was not associated with the Idaho State rulemaking process.
General	801.0000	A.13	There is a request for additional time to review and comment on the DEIS.	The U.S. Forest Service established the 60-day DEIS comment period and the 15-day extension in accordance with its procedures for review of NEPA documents.
General	801.0000	A.14	There are general comments regarding public involvement.	The Forest Service appreciates the involvement of the public throughout this NEPA process. The EIS and supporting documents are available through the Forest Service-hosted website (https://cara.ecosystem-management.org/Public/CommentInput?Project=50516).
General	801.0000	A.15	There are concerns that the DEIS lacks the technical details related to the operationalization of the mining activity to determine the level of risk to the surrounding region.	The proposed mining activities were described in DEIS Chapter 2. The SDEIS has been revised per comments received on the DEIS to include details informative to its impact analyses.
General	801.0000	A.16	There are concerns regarding the management and storage of tailings proposed by the Project, including the evaluation of alternatives to conventional tailings management.	Alternatives to conventional tailings management were examined in Section 2.8.3 of the DEIS.

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General	801.0000	A.17	There are recommendations that the potential synergies between restoration and mining be clarified in the Final EIS.	The incorporation of restoration actions as part of the proposed mine plans is described in Chapter 2 of the DEIS and has been updated in the SDEIS.
General	801.0000	A.18	There are recommendations that mitigation measures, monitoring plans, and contingency plans be disclosed to the public via a supplemental DEIS.	The SDEIS clarifies Forest Service requirements, best management practices, and environmental design features identified for the proposed Project. Monitoring and other plans submitted since the DEIS are made available to the public with the SDEIS. In instances where they are not already components of mitigation measures, monitoring and management plans associated with approval of the Plan of Operations would be required by the draft ROD.
General	801.0000	A.19	There is a request to include all Nez Perce tribal comments, the 2012 administrative appeal of the Golden Meadows Exploration Project, the 2013 comments and objection to the exploration Project, and the legal filings related to the lawsuit challenging the exploration Project in the Stibnite Gold Project EIS Administrative Record.	Nez Perce Tribal comments submitted previously were attached to the Tribe's comments on the DEIS, and therefore, are included in the Administrative Record.
General	801.0000	A.20	There is an opinion that the baseline data collected for the NEPA analysis is sufficient and that information from other projects elsewhere should not influence the decision-making process.	The Forest Service considers information provided from a number of sources in its analysis of the Project effects. In the process, the Forest Service determines the relevance of information provided and utilizes the information it deems relevant.
General	801.0000	A.21	There are opinions that the description of the baseline conditions does not include up-to-date and accurate data.	The SDEIS includes revisions to the description of baseline conditions per information received since publication of the DEIS.
General	801.0000	B.1	There are concerns that the area of effect analysis is too constrained and needs to be expanded into downstream areas along the SFSR.	The area of effect analysis was determined based on the area where measurable effects of the Project are predicted.
General	801.0000	B.2	There are concerns that the Forest Service has arbitrarily constrained the temporal and/or geographic scope of its effects analysis, thus omitting disclosure and evaluation of significant effects caused by the	The geographic scope of the effects analysis was determined from the area where measurable effects of the Project are predicted. The temporal scope of the analysis incorporates the construction, operations, and

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			Stibnite Gold Project. Commenters state that the Forest Service must expand the geographic and temporal scopes of analysis and disclose the potential impacts in a supplemental DEIS.	closure period for the proposed Project along with a duration of time post-closure for conditions to respond to reclamation and restoration activities and reach near-steady condition.
General	801.0000	B.3	There are concerns that the impacts would include the Salmon Challis National Forest and those impacts have not been presented in the EIS.	The impact analysis is described in Chapter 4 of the SDEIS. The impacts identified through the NEPA analysis do not extend to the Salmon Challis National Forest.
General	801.0000	B.4	There are concerns that the range of alternatives, effects, and analysis of the DEIS must undergo foundational revisions to comply with NEPA and the NFMA standards that protect treaty reserved fish and habitat and other values important to the exercise of the Nez Perce Tribe's treaty rights and protection of cultural resources.	The effects of the Project and its alternatives on fish habitat, Nez Perce Tribal Treaty rights, and cultural resources were described in Sections 4.12, 4.24, and 4.17 of the DEIS, respectively. The SDEIS incorporates revisions to these analyses based on comments received on the DEIS.
General	801.0000	B.5	There is a recommendation that the No Action alternative effects analysis include remediation of the site (e.g., via a CERCLA action).	Remediation of the site under CERCLA as defined under an ASAOC is incorporated into the SDEIS as a Reasonably Foreseeable Future Action because planned aspects of that remediation are anticipated to occur between 2021 and 2025. Future aspects of that remediation are contingent on approval of the permits required to construct and operated the proposed Project.
General	801.0000	B.6	There is a recommendation that proposed exploration activity not be analyzed as part of the mining EIS but instead, by a separate NEPA analysis.	Ongoing exploration activity at a mine property may be proposed as part of a mining plan of operations. As such, that activity can be incorporated into a mining EIS as part of the proposal, and the effects of that exploration analyzed within the analysis of the overall Project.
General	801.0000	B.7	Commenters suggest that the current degraded conditions of the site be acknowledged.	The site history including its mine-impacted condition and associated remediation efforts is described in Chapter 1 of the SDEIS. The effects analysis compares the potential impacts of the action alternatives and No

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				Action Alternative to a baseline condition that represents the current site conditions.
General	801.0000	B.8	There are concerns that two design alternatives that would affect predicted elevated water temperatures (i.e., 1) an engineered structure including a head gate and pipe from the bottom of the West End Pit into West End Creek and 2) an engineered structure including a head gate and pipe from the bottom of the Hangar Flats pit into Meadow Creek) were not evaluated.	Analyzed design features focused on fish access to habitat as well as habitat quality. Alternatives that did not address fish access to habitat were not carried forward for detailed analysis (DEIS Section 2.8).
General	801.0000	B.9	There are concerns that the DEIS and its supporting documents make numerous unsupported assumptions on issues that are unknown, subject to change, and/or still being decided; these issues could have major implications on the likely environmental effects, feasibility, and other factors related to each alternative, including the Proposed Action, and for the associated mitigation and monitoring. Commenters provide several examples of issues that have not been adequately disclosed or considered in the DEIS, including 1) a potential Administrative Order on Consent under the Comprehensive Environmental Response, Compensation, and Liability Act, 2) ongoing Idaho Department of Environmental Quality rulemaking, 3) a pending Burntlog Route Geophysical Investigation proposal that is mentioned in the DEIS as a connected action to the Project, and 4) explorations conducted by Midas Gold for additional mining opportunities at the Project site.	Revisions in the SDEIS disclose current information regarding issues and other regulatory processes identified by comments on the DEIS. In some instances, such as the finalization of the ASAOC, current information clarifies the analyses as presented in the DEIS. In other instances, such as continued mineral exploration, current information differs little from the DEIS analyses.
General	801.0000	B.11	There are concerns that the DEIS did not sufficiently examine on-site infrastructure and their potential environmental impacts.	The SDEIS clarifies the environmental design features for on-site infrastructure and their associated impacts.
General	801.0000	B.12	There is a concern that the impacts of extreme weather events that could transport metals and sediment downstream have not been analyzed relative to ESA	The weather events included in the design and analysis of the project are described in DEIS Section 2.3.5. The most common weather event utilized is the 100-year,

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			listed populations in lower reaches of the EFSFSR, SFSR, and Salmon River.	<p>24-hour storm event which is utilized primarily for the design of the water management system components.</p> <p>In addition, the site-wide water balance model utilizes monthly precipitation observations for the area from 1896 to 2017 to incorporate longer-scale events into the site water balance.</p> <p>Predicted impacts associated with these weather events did not extend downstream to lower reaches of the EFSFSR, SFSR or Salmon River. This is largely due to the design and sizing of water management infrastructure to contain process solution, seepage and sediment under these weather conditions.</p>
General	801.0000	B.13	There are concerns that the DEIS analysis does not account for economic harm to downstream river users caused by environmental degradation.	Economic impacts to river users were described in Section 4.21 of the DEIS. Project design features and environmental mitigation measures are expected to sustain or improve Project area conditions that would contribute to environmental conditions downstream.
General	801.0000	B.14	There are concerns that water treatment options are not applied consistently across all alternatives (notably to Alternative 1). Further, commenters state that the effects of water treatment should be applied to all alternatives, not just Alternative 2.	The SDEIS clarifies the application of water treatment to the alternatives.
General	801.0000	C.1	There are concerns that the DEIS failed to adequately analyze and disclose the direct, indirect, and cumulative impacts of the Project.	Impacts were discussed in Chapter 4 of the DEIS, along with the limitations of that impact analysis (Section 4.1). The SDEIS clarifies, updates, and revises that analysis per comments received on the DEIS.
General	801.0000	C.2	There are concerns that care and maintenance measures that account for long-term settlement of mined materials in closed facilities are inadequate to address stability concerns, performance of constructed channels, and climate change.	The SDEIS clarifies the analysis of the stability of post-closure mined materials and incorporates care and maintenance aspects of the site reclamation closure plan.

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General	801.0000	C.3	There is a recommendation that the EIS acknowledge the need for long-term, post-closure operations and maintenance, facilities replacement and monitoring.	The SDEIS clarifies the role of long-term post closure operations, maintenance, and monitoring aspects of the site reclamation closure plan.
General	801.0000	C.4	Commenters suggest that the proposal to utilize undisturbed areas for the proposed Project indicate that it is inaccurate to state that avoidance and minimization are bases for the Stibnite Gold Project Mitigation Plan and that the mitigation program is based on impact avoidance.	Impact avoidance is the initial component of the mitigation program. In instances where avoidance is not feasible, the minimization and mitigation components would be employed. As impacts have been identified, the proposed mining plan has been subject to change to incorporate avoidance and minimization into the Project design.
General	801.0000	C.5	There is a suggestion that the authorization of the Stibnite Gold Project will contribute to resolution of legacy environmental impacts at the Stibnite site in particular, and Abandoned Mine Land policy issues in general.	No further response required. General in nature or position statement.
General	801.0000	C.6	There are concerns that the proposed creation of new OHV trails to offset the temporary loss of motorized recreation opportunities will result in additive negative impacts to soils, wildlife, vegetation and non-motorized recreation that cannot be mitigated.	Impacts of the proposed OHV trails are presented in DEIS Sections 4.5 (soils), 4.10 (vegetation), 4.11 (wildlife), and 4.19 (recreation). However, the OHV was dropped from the SGP and therefore is no longer included in the analysis in the SDEIS.
General	801.0000	C.7	There are concerns that during site construction, snowplowing of the Warm Lake road to Landmark and down Johnson Creek road to Yellow Pine will preclude snowmobile trail use.	Impacts of the Project on snowmobile use are described in Section 4.19 of the DEIS. The SDEIS describes the effectiveness of Forest Service requirements, best management practices, and environmental design features in addressing these impacts.
General	801.0000	C.8	There is a recommendation that there be a permanent mineral withdrawal from mitigated wetlands covered by the USACE mitigation program.	The impacts of future mineral exploration and development on mitigated wetlands would be managed via the future permitting process and authorizations that would compensate for any impact to that mitigation.
General	801.0000	C.9	There are concerns that the DEIS has not analyzed the failure rate of wetlands mitigation, and that ratios needed to be applied to fully offset impacts.	The SDEIS describes the U.S. Army Corps of Engineer's process for review and acceptance of proposed wetland mitigation. The USACE decision and 404 permit would determine any ratio required to fully offset impacts.

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General	801.0000	C.10	There are concerns that the DEIS does not fully evaluate impacts on resources such as habitat for ESA listed fish, recreation opportunities, hazardous material spills, and water treatment.	The DEIS analyzed impacts to ESA fish habitat (Section 4.12), recreation (Section 4.19), hazardous material spills (Section 4.7), and water treatment (Section 4.9). The examination of these impacts has been clarified in the SDEIS per comments received on the DEIS.
General	801.0000	C.11	There are concerns regarding that analysis of the proposed restoration and mitigation plans including concerns regarding the use of proponent consultants as the principle source of restoration and mitigation measures.	The SDEIS clarifies the analyses of the restoration and mitigation plans per comments received on the DEIS. These plans will be incorporated into the Project ROD. The Forest Service considers information provided from a number of sources in its analysis of the Project effects. Incorporation of information into the EIS analysis is subject to Forest Service review and concurrence to utilize that specific information. Concurrence is based on technical review and acceptance of the information by Forest Service personnel.
General	801.0000	C.12	There are concerns that the determination of whether to approve the Plan of Operations as submitted and supplemented versus the approval of a modified plan including mitigation measures has not been sufficiently examined and explained.	The SDEIS identifies the Forest Service's preferred alternative for the Project based on its analysis and includes an analysis of mitigation measures and their effectiveness.
General	801.0000	C.13	There are concerns that the DEIS does not describe values such as public health, quality of life, sustainable rural economic development, water quality, threatened fish species, habitat critical to salmon, and bull trout recovery along with the direct and indirect effects of the proposed Project on these values.	The DEIS analyzed Project impacts to public health (Section 4.18), socioeconomics – including quality of life (Section 4.21), water quality (Section 4.9), and fisheries (Section 4.12). These analyses included both direct and indirect effects to these resources. Revisions related to specific comments raised on the DEIS are incorporated into the SDEIS.
General	801.0000	C.14	There are opinions supporting the designation of the Project as a HPIP and the approval of the Project.	Project designation as a HPIP does not change the analytical approach under NEPA.
General	801.0000	C.15	There are concerns that the Plan of Operations was accepted without sufficient completeness to proceed to NEPA permitting.	The Forest Service determined that the plan of operations (Plan) was acceptable to initiate the NEPA process. The Plan is supported by a series of companion documents including baseline study reports, predictive analyses, and subordinate operating plans (e.g., water

Resource	Comment Code	Comment Number	Concern Statement	Response
				resources monitoring plan). Additional information provided to the Forest Service since the DEIS was released is discussed in the SDEIS.
General	801.0000	C.16	There is a recommendation that the EIS present USFWS concerns that the fish passage tunnel will not be able to volitionally pass fish safely, timely or effectively.	Performance of the fish passage tunnel and implementation actions in the event of ineffective fish passage are the subject of the Fishway Operations and Management Plan. The ROD would adopt this plan as a requirement for Project approval.
General	801.0000	C.17	There are concerns that the fish diversion tunnel (and capture & haul back-up plans) will not result in a net uplift because there will be uncertainties in tunnel functionality and potential mortalities compared to the No Action Alternative. There is a question regarding in which mitigation category the diversion tunnel should be classified.	The diversion tunnel is classified as project design feature under the mitigation categories. The analyses of performance uncertainties and net uplift are clarified in Section 4.12 of the SDEIS.
General	801.0000	C.18	There is an opinion supporting use of the Standardized Reclamation Cost Estimator for determining the financial surety amount.	The Forest Service will determine the financial surety amount via an administrative process and securement of that financial surety will be required under the Project's ROD.
General	801.0000	C.19	There is an opinion that the cost of site restoration is underestimated and would be greater than the value of the mined metals.	The Forest Service will determine an estimated closure cost via an administrative process for the Project's ROD. The Forest Service NEPA analysis does not include a comparison of the required closure cost to Project revenue.
General	801.0000	C.20	There is an opinion that the analysis since the acceptance of the PRO as complete in December 2016 has understood the environmental effects of the Project, presented them in the DEIS, and that the analysis is appropriate for authorizing the Project via a ROD.	No further response required. General in nature or position statement.
General	801.0000	C.21	There is an opinion that the length of time to complete a NEPA analysis is too long, and that the USFS should rationalize the permitting process in the future.	No further response required. General in nature or position statement.

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General	801.0000	C.22	There are concerns that the DEIS does not include an analysis of the noise, ambient light, and wildlife affects associated with truck traffic on Warm Lake Road during the construction, operation and reclamation phases.	The analyses associated with traffic use of Warm Lake Road was presented in Section 4.16 of the DEIS. The SDEIS revises specific items in this analyses per comments received on the DEIS.
General	801.0000	C.23	There are concerns that the DEIS does not include an analysis of access of sufficient areal extent regarding restrictions to public access including trailheads associated with road closures and traffic delays	Analyses of traffic impacts to public access were included in Section 4.16 of the DEIS. Complete restrictions of access to trailheads would be temporary, related primarily to road closures for delivery of select, oversized construction materials.
General	801.0000	C.24	There is an opinion that the duration of impacts used in the soils analysis is too long.	The duration of soils impacts was based on anticipated timeframes for the re-establishment of baseline vegetation on reclaimed soils per the NEPA analysis.
General	801.0000	C.25	There is a recommendation to establish a technical review board for the Project to provide accountability for its environmental performance.	Accountability for environmental performance would be defined in the Project ROD via compliance with the authorized Plan of Operations and all required monitoring and mitigation measures.
General	801.0000	C.26	There is a concern that there are insufficient personnel, planning and material support to manage rapid growth in the utilization of National Forests, and that the DEIS does not address how those items would be resourced to protect resources under a rapid growth scenario.	The Forest Service manages growth in use of National Forest System lands through assignment of its personnel, planning, and support resources. Forest Service management accounts for utilization growth as part of its annual organizational plan and budget.
General	801.0000	C.27	There was a recommendation to include additional detail in the Final EIS regarding management and mitigation of water resources including the effectiveness and durability of mitigation measures.	The SDEIS provides detail on the effectiveness and durability of water resources management and mitigation measures.
General	801.0000	C.28	There are concerns regarding the environmental damage left by past mining activities.	Legacy environmental conditions have been incorporated into the Project NEPA analyses. Where applicable, the restoration effects of the action alternatives on legacy conditions are noted in the SDEIS.