

6 ENVIRONMENTAL PROTECTION

We at Midas Gold believe strongly in environmental protection and have established a “net benefit” goal for the Stibnite Gold Project to ensure it meets the spirit and intent of the Presidential Memorandum. In establishing the goal of net benefit to the environment, and as central principles to the Project development and operation, early in the design process Midas Gold focused on these key restoration and mitigation principles:

- Remove existing barriers to fish migration and re-establish salmon and steelhead passage as a beneficial environmental outcome;
- Remove and re-process uncontained legacy tailings as an advance compensation measure created by the Project;
- Remove and re-use legacy development rock and spent ore material for construction activities;
- Restore and enhance stream channels and riparian habitats that were altered or impacted by historic mining, thereby providing shade for cooling of water, and enhancing fish habitat;
- Enhance fish habitat, with a particular focus on access to spawning habitat and creation or improvement of spawning habitat quality for salmon for the long-term as a durable beneficial environmental outcome;
- Replant the Project area where it was impacted by mining and/or forest fires in order to enhance vegetative cover and wildlife habitat; and,
- Implement sediment control actions, such as repairing Blowout Creek, removing or mitigating uncontained legacy development rock dumps, and reforestation to reduce erosion, thereby enhancing fish habitat and protecting salmon spawning beds.
- Reduce fossil fuel energy consumption at the site by the targeted application of solar power and through the use of line power over diesel generation for processing and mining, thereby reducing human emissions of greenhouse gases.

By achieving this net benefit goal, Midas Gold will have designed Project restoration and mitigation projects that are both durable and additional. This is to say the mitigation outcomes will be above and beyond that which would have occurred in the absence of the Project. Early restoration and mitigation are key aspects of the Stibnite Gold Project.

In addition to the cleanup and restoration of legacy mining-related disturbance, Midas Gold plans to minimize, to the extent practicable, the Project’s footprint and related impacts by using existing roads, locating facilities on previously disturbed ground and avoiding riparian areas.

For example, Midas Gold will upgrade and extend the existing Burntlog Road for access to the Project site to avoid using existing roads that are adjacent to the region’s rivers and large streams. The use of the Burntlog Road will result in improved sediment control, minimal construction in riparian zones, and protection of water quality through avoidance of the transportation of supplies and materials (including fuel and reagents) adjacent to Johnson Creek and the EFSFSR during operations. These measures are consistent with the Presidential Memorandum. The Burntlog Route is shorter than the historically used routes and will reduce carbon emissions by transport vehicles and protect the fisheries resources along the historically used routes to the Project.

In addition, to lessen traffic to the mine site, Midas Gold will house most of its workforce on site and transport contractors and employees to the site by bus and van. Midas Gold will also operate off site



logistics facilities and assign many of the Project's administrative, financial, laboratory and warehousing personnel to work in those facilities; this will reduce the need to transport these town-based workers to the Project site and house them on site.

Midas Gold will re-establish the historic electric power transmission line along much of the existing right-of-way to the Project site. This will minimize new disturbance, provide low carbon electric power to site and minimize fuel haulage to the site that would otherwise be required to power diesel, coal or propane on-site generators. Expanded solar capacity at the Project site will reduce the Project demand for electricity and be available during power outages. Diesel or propane generators used during construction will be maintained at the site for backup or emergency use once the new powerline is energized. These energy-related efforts will reduce greenhouse gas emissions and contributions to climate change.

Midas Gold will use best management practices (**BMPs**), monitor the effectiveness of those practices, and implement numerous environmental protection and management measures based on current technology, Midas Gold's environmental management standards, and various accepted standards such as the International Cyanide Management Code, the International Organization for Standardization 14001 Environmental Management System, and applicable federal, state and local laws and regulations. The purpose of these practices will be to maintain responsible mining and processing operations, avoid or minimize adverse impacts detrimental to human health and the environment, and reclaim disturbed areas and the natural environment (fish and wildlife habitat).

As noted in Section 2 and above in this section, one of Midas Gold's core values is the protection of the natural environment and, as a result, Midas Gold has developed principles that drive our policies and SOPs to protect the natural environment against adverse impacts or, where unavoidable, to minimize and/or mitigate such impacts. The following section sets out Midas Gold's environmental practices and establishes specific goals and actions to ensure these objectives are met. Protection of the natural environment is just the first step towards restoring the site.

6.1 ENVIRONMENTAL MANAGEMENT PRACTICES

Midas Gold will implement numerous environmental protection and management practices based on current technology, BMPs, Midas Gold's environmental management standards and policies, and federal, state and local laws and regulations that are also consistent with the Presidential Memorandum. The purpose of these practices will be to maintain responsible mining operations, to reduce adverse impacts, to avoid undue and unnecessary effects to human health and the environment, and to reclaim disturbed areas, all with the objective of leaving an ecologically diverse and naturally sustainable ecosystem supportive of salmon, steelhead, bull trout and other wildlife.

As an overall guiding principle for the Stibnite Gold Project, Midas Gold will conform to the BMPs outlined in the IDL manual of Best Practices for Mining in Idaho (IDL, 1992).

Midas Gold has adopted the following mitigation and conservation standards (with additional details below):

- Conduct construction, mining, processing and closure/reclamation activities in an environmentally responsible manner;
- Locate project infrastructure on previously disturbed areas and sites wherever practicable to reduce incremental disturbance;
- Design and construct facilities to minimize impacts to aquatic and terrestrial wildlife;

- Improve aquatic and wildlife habitat through various habitat mitigation and enhancement projects across the Project site;
- Protect and enhance habitat to support the natural anadromous and local aquatic populations;
- Protect and improve local surface water and groundwater quality;
- Re-establish forested conditions where forest fires or historical mining activities have previously destroyed local vegetation; and,
- Repair, relocate or construct new ecologically diverse stream channels and wetlands to replace those disturbed by legacy and new mine development.

Midas Gold endeavors to work cooperatively with Tribal representatives, local communities and NGOs to develop approaches, implementation, monitoring and reporting so that these practices and measures achieve our mutual objectives.

6.2 SPECIFIC ENVIRONMENTAL GOALS & ACTIONS

The following subsections outline specific environmental goals for the Project and actions Midas Gold will undertake in order to realize these goals. Midas Gold will meet and comply with applicable federal, state and local air quality, water quality, solid waste, hazardous materials, and other regulatory requirements (see Section 6.3 for specific permits) in its Project operations.

6.2.1 Air Quality

The Project is located in an isolated area in non-designated air shed, however is subject to windblown dust generated from exposed and only partially reclaimed legacy mining, development rock, spent heap leach ore and wildfire impacted forest.

Goal: *Manage point and non-point source air emissions to protect human health and the environment during construction, operation, closure and reclamation.*

Actions:

- Midas Gold will design, construct and operate Project facilities in compliance with appropriate air pollution controls to comply with applicable regulations and any air quality permits issued by IDEQ.
- Midas Gold will use BMPs to control fugitive dust generation. These practices will include dust control for site access and haul roads that will involve periodic watering and/or approved chemical treatment. A water truck will run periodically in the drier months, wetting the roads to minimize dust. The mine haul roads will be maintained regularly by a motor grader to remove any rock, silt or other debris. Smooth and clean road surfaces not only to minimize dust but also to allow efficient, safe and economical use of the roads.
- The main ore processing facility building and coarse ore stockpile will be enclosed, and Midas Gold will use water and dust collection systems for ore processing facility material handling activities in order to reduce potential dust emissions. Specific examples include the installation of water sprays and/or bag house dust collectors at the ore crushing system and at ore reclaim feeders that deliver ore to the grinding circuit.
- Midas Gold will (a) utilize electric line power to the extent possible to reduce greenhouse gas emissions and reduce its carbon footprint; (b) maintain internal combustion engines (diesel or gasoline powered) for efficient operation and to minimize emissions; (c) operate any onsite stationary generators under air quality limitations required by IDEQ air quality rules and

regulations; and (d) look to expand its use of solar power where practicable to reduce offsite electrical demand.

- Busing and/or vanpooling will be provided for Midas Gold and contractor employees to minimize traffic, dust emissions, sediment runoff and greenhouse emissions from vehicles.

All these air quality provisions are designed to limit climate change as a result of the Project. They will reduce carbon and fugitive dust emissions and limit greenhouse gas concentrations.

6.2.2 Chemicals & Hazardous Materials

The operation of the Project will entail the use of various chemicals and hazardous materials in order to mine, process and extract the valuable metals from the ore, as well as in related activities.

Goal: *Protect worker health and safety and protect the environment. Manage the use of chemicals and hazardous materials to prevent spills, fires or explosions and to protect the existing biological and hydrologic resources of the area during construction, operation, reclamation and closure.*

Actions:

- Hazardous chemicals will be transported to the mine site in U.S. Department of Transportation (USDOT)-certified containers and by USDOT-registered transporters, who will comply with applicable USDOT, OSHA, and MSHA regulations.
- The Burntlog Route will be used for site access, minimizing transportation adjacent to major waterways, considerably reducing the risk of incidents related to such waterways.¹ See Section 7.1 for additional details.
- Personnel transporting, handling or using any hazardous chemicals (including sodium cyanide) will be trained to ensure the safe use of such materials. Midas Gold will design, construct, and manage facilities to conform to International Cyanide Management Institute code.
- Hazardous chemicals will be stored in designated areas for safety and to prevent environmental releases, including the use of secondary containment measures.
- Fuel and other petroleum products at the site will be stored in above ground containment structures, with appropriate secondary containment measures.
- Midas Gold will maintain a Spill Prevention Control and Countermeasure (SPCC) Plan for the operation as required by 40 CFR 112 regulations. The SPCC plan will address site-specific spill prevention measures, fuel haul guidelines, fuel unloading procedures, inspections, secondary containment of all onsite fuel storage tanks, and staff training.

6.2.3 Cultural & Historic Resources

Surveys of the Project area have identified limited cultural and historic resources within areas to be affected by the proposed Project. However, Midas Gold recognizes that such important resources may exist and is committed to protection or mitigation for such cultural and historic resources as may be encountered during Project development and operations.

Goal: *Prevent impacts to cultural resources, especially to properties or sites listed or eligible for listing on the National Register of Historic Places.*

¹ During the initial construction period when the upgrade and extension to the Burntlog Road is being completed, access to the Project site will be via the Johnson Creek Road (County Road 10-413). See Figure 1-1.

Actions:

- Cultural surveys have been (and will continue to be) conducted prior to disturbance by Midas contract archaeologists under guidance from the Forest Service and the Idaho State Historic Preservation Office (**SHPO**). Midas Gold will avoid identified cultural resource sites (historic or pre-historic) or, if disturbance is unavoidable, mitigate to meet Forest Service and Idaho SHPO requirements.
- Midas Gold employees and contractors will be informed about relevant governmental regulations intended to protect cultural and historic resources.
- If any previously-unidentified cultural resources are unearthed or otherwise encountered during Project construction and mining operations, such activities will cease in the area of discovery, and the Forest Service and/or the Idaho SHPO will be notified so that such cultural resources can be identified and appropriate resource protection measures can be developed and implemented.
- While they are not listed or identified as eligible for listing as historic resources, Midas Gold will evaluate the feasibility of relocating the remnants of the two remaining wooden buildings currently located in the Yellow Pine pit to a suitable site, providing the basis for a historical information center relating the history of the Stibnite Mining District.

6.2.4 Fisheries & Aquatics

Midas Gold recognizes that fisheries resources are one of the highest value opportunities for a restored and reclaimed Project area and, as a result, water quality, water temperature and fish habitat are a priority focus.

***Goal:** Design, construct and operate mine and support facilities to minimize negative impacts on aquatic habitat and aquatic species, in particular, anadromous and local fish populations while, in parallel, developing and implementing opportunities to maintain water temperature, improve water quality and enhance anadromous fish populations in the headwaters of the EFMSR.*

Actions:

- Midas Gold will use existing on and off site roads where practicable to avoid new disturbance and avoid using roads located immediately adjacent to major streams and rivers in order to minimize sedimentation in drainages and to minimize the risk of spills into such waterways (see Section 6.2.9).
- A SWPPP will be implemented as part of the Clean Water Act Multi Sector General Permit as applicable to inhibit sediment or pollution from entering on-site streams and rivers (see Section 6.2.12).
- As part of the overall mitigation plan for the Project, Midas Gold will rehabilitate EFMC, known locally as “Blowout Creek” (see Section 8.10.2), to control sediment from the area, which is the largest single source of sedimentation within the Project area. As part of its construction and operation activities, Midas Gold will implement a phased approach to address the multiple environmental impacts associated with the 1966 failure of the EFMC water reservoir. Specifically, Midas Gold will:
 - Construct a French drain in the main erosional cut feature, which is a major sediment contribution source for the basin. This constructed drain will route the flow of that portion

- of EFMC, reducing the introduction of sediment into the creek and controlling the ongoing erosional damage still occurring after 50 years;
- Construct features near the old hydro dam location to raise the level of the valley water table to enhance the existing wetlands in the valley and restore the pre-reservoir conditions to support wetlands and riparian features; and,
 - Establish a new surface channel as part of mine closure to provide stable and functional stream channel conditions with aquatic and riparian habitat, hydraulic and stability characteristics similar to conditions which existed in the early 1900s.
- At closure, Midas Gold will re-establish the surface channel of Meadow Creek over the Hangar Flats Development Rock Storage Facility and TSF to restore fisheries, wetlands and riparian habitat disturbed during operations. Surface water diversions around the active TSF will route Meadow Creek around the TSF and Hangar Flats DRSF during construction, operations and active closure activities (see Sections 11.7 and 8.10.3).
 - Midas Gold will implement and maintain erosion and sediment control “best-management practices” during construction and operation (see Section 6.2.12).
 - The EFSFSR will be routed around the Yellow Pine Pit during operations through a tunnel, which will be designed and constructed to allow fish passage while operations are ongoing. As part of ongoing operations, following completion of ore extraction from the Yellow Pine pit, the Yellow Pine pit will be backfilled with development rock from the West End pit, and the EFSFSR channel will be re-established across the backfilled pit to allow for sustainable long-term fish passage to upstream segments of the EFSFSR and its tributaries (see Sections 8.10.1 and 14).
 - To improve existing site conditions, reduce the impacts to the drainages within and downstream of the Project site, and provide mitigation for Project impacts (see Mitigation Plan in Appendix F), Midas Gold will undertake a number of clean-up and habitat enhancement efforts that will benefit the streams and rivers in this District. Midas Gold’s actions will include:
 - Removal of unconstrained legacy tailings for reprocessing, metal extraction and placement in a new, lined, TSF with the intent of improving water quality conditions in the Meadow Creek drainage basin through removal of the legacy tailings from surface and groundwater interaction;
 - Removal and reuse of SODA materials to remove these materials from active erosion and potential leaching due to direct meteoric water interactions, with the intent of improving surface and ground water quality;
 - Removal and reuse of spent leach ore from the Hecla heap with the intent of encapsulating the material in the embankment of the TSF to limit the potential for the material to be mobilized during direct meteoric water contact;
 - Removal of contaminated materials encountered during construction near the former Bradley ore processing facility and smelter site, as well as in areas surrounding the existing Yellow Pine pit and within the footprint of SODA. These materials will be hauled off-site or placed in the lined TSF or a designed DRSF;
 - Restoration and enhancement of the EFSFSR channel within the Project area in order to improve fish passage, enhance fish habitat, and optimize potential for fish spawning. Typical enhancement activities include removal of local barriers to fish migration, restoration of riparian vegetation, installation of habitat improvement features (woody debris, etc.), and reestablishment and reconnection of active floodplains;

- Re-establishment of short-term fish passage through the tunnel and long-term fish passage and usage in the restored EFSFSR across the reclaimed Yellow Pine pit area, allowing local and anadromous fish access to the upper EFSFSR and Meadow Creek;
- Rehabilitation and stabilization of EFMC (discussed above) to restore EFMC valley wetlands and enhance stream channel stability, aquatic habitat quality, and floodplain function;
- Planting of suitable vegetation along the margins of restored and enhanced waterways in order to provide vegetative cover and manage water temperatures;
- Restoration of wetlands in the Project area in areas of legacy disturbance as well as restoration and mitigation of areas disturbed to support the Project; and,
- Restoration of high-quality aquatic habitat and riparian areas in Meadow Creek valley, repairing reaches of Meadow Creek heavily affected by past mining by removal of legacy materials (tailings and spent ore) that affect water quality, removal of riprap channels, and restoration of natural, self-sustaining channels with associated floodplain and riparian habitat and spawning and/or rearing habitat as appropriate to the stream gradient.

6.2.5 Climate Change

Midas Gold recognizes the importance of cumulative actions affecting climate change and the need to review this PRO in light of the current understanding of causes of climate change. Midas Gold’s ultimate objective is to limit production of greenhouse gases by reducing emissions at the Project and watershed level and provide offsets through reforestation.

Goal: *Midas Gold will endeavor to avoid and mitigate impact that could contribute towards climate change as a result of the Project, and will undertake projects that will ameliorate some of the impacts of the Project.*

Actions:

- Midas Gold will connect to grid power in an effort to reduce potential greenhouse gas emissions as compared to using diesel or other fuels for power generation.
- Midas Gold will complement its existing solar power generation capacity with expanded solar generation for the Stibnite Lodge and other facilities, reducing energy demand and potential greenhouse gas emissions related to power generation.
- Midas Gold will utilize “smart grid” technology to reduce energy consumption, such as auto-dimming lights in offices, to reduce overall energy demand.
- Connecting to grid power will reduce vehicles required to haul fuel, as will consolidating loads at the SGLF before trucking to site and bussing employees to and from site. These combined actions will reduce the number of vehicles driving to and from site, reducing greenhouse gas emissions as compared to many individual vehicles making the journey.
- Midas Gold plans to continue its multiyear effort to reforest areas where legacy mining activity and forest fires have burned or removed forest cover from approximately 76% of the area of its mining claims; this reforestation will sequester greenhouse gasses and earn climate credits.
- Midas Gold will plant trees and other vegetation along the restored waterways, helping to mitigate increases in water temperatures due to climate change and, in addition, improving water temperature characteristics for migratory fish.

6.2.6 Land Use

The Stibnite Mining District has been the site of widespread mining and mining-related activities for over a century, the effects of which dominate the Project area. The existence of previously-affected lands reduces the need to disturb new areas for Project facilities, and redevelopment provides opportunities for the restoration of many of these sites.

Goal: *Locate facilities and infrastructure on previously disturbed and impacted areas to the extent practicable. Minimize new disturbance to reduce effects to future land use.*

Actions:

- Midas Gold will locate as many of the Project facilities and activities as practicable on previously impacted areas; as proposed, approximately 42% of the Project impacts will be located on previously impacted lands.
- Midas Gold will locate the proposed Hangar Flats DRSF at the SODA site, which is also the legacy tailings storage area, in order to maximize overlap with existing disturbance and to provide for secure storage and containment of tailings.
- Locating the Hangar Flats DRSF abutting the TSF will also provide a substantial buttress for the proposed TSF, improving geotechnical stability well beyond design requirements.
- Midas Gold will locate the ore processing facility where the former Stibnite town site was situated, and where Midas Gold operates the current exploration housing facility area, after completing any required remediation of prior impacts, since the area is already extensively impacted, thereby reducing incremental impacts.
- Midas Gold will locate its truck shop and fuel storage facility on the impacted area that was previously used as the processing area for the previous heap leach operations, after the prior impacts have been adequately remediated, thereby reducing incremental impacts.
- The planned Hangar Flats, West End and Yellow Pine open pit areas largely lie within areas that have already been extensively disturbed by previous mining operations, keeping incremental disturbance to a minimum.
- Midas Gold plans to backfill the Yellow Pine Pit with development rock as part of the operation of the West End Pit. This will lessen the amount of disturbed area by reducing the potential footprint of Development Rock Storage Facilities (**DRSFs**), as well as facilitating the restoration of the EFSFSR.
- Midas Gold will contract for the upgrade and construction of the electric transmission power line to the Project site along the existing power line corridor into the Project site, thereby largely eliminating additional disturbance for line construction, and reducing greenhouse gas emissions, carbon footprint and impacts/risks related to the fuel transport that would have been required should Midas Gold have had to generate power on-site.
- Midas Gold will revegetate and reforest the Project area, thereby generating carbon benefits from the new trees and other vegetation, enhancing wildlife habitat and reducing soil erosion and sediment runoff that impact water quality and fish habitat.
- Midas Gold will incorporate restoration and reclamation measures to return previously disturbed sites and areas disturbed by Midas Gold's operations to a productive future sustainable land use for wildlife and fisheries habitat.

6.2.7 Noise & Quiet

The Project is located in a relatively unpopulated, remote area. The closest (non-Midas Gold) occupied residence is located in the community of Yellow Pine nearly ten miles west of the Project area. The recommencement of mining operations will introduce a number of new sources of noise.

Goal: *Minimize noise impacts for worker safety and to limit effects on area wildlife.*

Actions:

- MSHA governs miner health and safety, which includes requiring hearing protection for workers in high noise areas.
- The ore processing facility building will be enclosed, thereby containing one of the largest sources of noise – the ore grinding equipment.
- Internal combustion engines associated with the Project will be maintained and contained so as to minimize noise.
- Construction equipment engines will be equipped with adequate mufflers, intake silencers, and engine enclosures so as to minimize noise generation.
- Appropriate sound dampening and muffling equipment will be utilized to minimize noise excursion from equipment and facilities.
- When practicable, pumps, generators, and engines would be turned off when not in use so as to avoid unnecessary noise generation and reduce energy consumption.
- Electric line power will be utilized during operations to eliminate diesel generator noise, except in emergency situations when grid power is down or temporary use in remote areas where it is not practical to run power lines.
- Midas Gold will work with Valley County to reduce speed limits and to set standards on the use of truck compression brakes, especially on steep sections of the Project access routes and along areas where residences and housing are located.

6.2.8 Public Access & Recreation

Members of the public travel through the Project area on the way to Thunder Mountain and other areas of local interest; such access and use needs to be maintained.

Goal: *Minimize impacts to developed and dispersed recreation activities.*

Actions:

- Public access around the Project site during operations will be accomplished via the upgraded and extended Burntlog Road to connect to the existing Thunder Mountain Road at the bottom of Meadow Creek Ridge.
- Recreation access for ATVs around the Project site will involve an existing trail from Johnson Creek to the Horse Heaven summit along the Forest Service 097 Trail. Midas Gold will also upgrade the existing Horse Heaven/Power-line road (097 Trail) to support access for construction and maintenance on the powerline and connect it with the Meadow Creek Lookout Road to provide alternate access and potential for a trail loop route for non-motorized and ATV/UTV motorized opportunities. The trail connection will be similar to the Meadow Creek Lookout Road and 097 Trail which is currently designated by the Forest Service as a trail open to all.

- Midas Gold will work with Valley County, the Boise National Forest, and IPCo to replace the Warm Lake groomed snowmobile route with a new Cabin-Trout route between Warm Lake and Johnson Creek. It is anticipated the Cabin-Trout route can be used, with minor upgrades and maintenance to facilitate the grooming of the trail. Upgrades would include the installation of culverts at stream crossings, road stabilization, and road base addition for access for construction and maintenance activities. Additionally, during construction when the Johnson Creek road is plowed during the winter, an alternate trail from the Cabin-Trout groomed trail will be needed to provide access from that route to the Landmark area. Midas Gold will work with Valley County, the Boise National Forest, and user groups to identify a route for this purpose.
- Midas Gold will work with the various agencies and local user groups to identify needs associated with trail grooming and parking in the trailhead areas to ensure that suitable parking is available and equipment storage/maintenance needs are met, if warranted. The public scoping process during National Environmental Policy Act (**NEPA**) analysis will likely provide more detail to those needs and best uses.
- For safety and security reasons, no alcohol, firearms, or illegal drugs will be permitted on site.
- For safety and security reasons, public access into the mine area will be prevented by using fencing, gate locking, security personnel, and/or notice postings that prohibit unauthorized entry; no unauthorized vehicles or personnel will be permitted on site.
- For safety and security reasons, there will be no hunting allowed within areas posted or fenced during the mine operation in order to ensure worker safety, however hunting may continue on public lands outside of fenced or posted Project area in accordance with applicable regulations.

6.2.9 Roads & Transportation

The Project area is currently accessible via an existing road network; however, redevelopment provides the opportunity to improve access in a manner that is protective of the environment for the life of the Project.

Goal: *Use existing roads to the extent practicable to minimize new disturbance and locate roads away from sensitive environmental features such as streams, rivers and Waters of the U.S. Minimize traffic to the site to the extent practicable. Provide public access around the Project site.*

Actions:

- During the initial construction period, Midas Gold will use the existing Johnson Creek and Stibnite roads year-round for access to the site for transportation of personnel, equipment, and materials until the new access road is available for use. BMPs will be utilized on maintenance of these routes during construction and haulage activities. Crushed gravel will be placed on these roads as needed to provide a durable driving surface, limit migration of fine sediment into nearby streams, and protect road surfaces from damage due to traffic.
- Midas Gold will use an existing forestry road corridor, known as the Burntlog Route, for its primary access to the Project area, once road construction for this route is completed. This route will extend the existing Burntlog Road to connect to portions of the existing Thunder Mountain Road, all of which will be upgraded to meet Project transportation needs. The establishment and use of the new access route will provide a transportation route that minimizes proximity to major waterways (including Johnson Creek and the EFSFSR) and reduces the amount of traffic traveling adjacent to important and sensitive waterways.

- Midas Gold will re-use several existing haul road corridors for upgraded roads in order to minimize new disturbance at the Project site.
- Midas Gold will locate main access and haul road corridors to minimize direct disturbance to Waters of the U.S.
- During Burntlog Route and onsite haul road construction and use, Midas Gold will install and maintain sediment control measures and devices, such as culverts, culvert inlet protection devices, ditching, silt fencing, straw wattles, straw bales, and sediment catch basins. Culverts in the area have historically been placed in such a manner as to restrict movement of fish populations upstream and new culverts and other features will be installed to minimize such barriers.
- Cut and fill slopes along roads will be mulched, hydro-seeded or have durable rock inlay material to minimize the potential for sediment generation.
- Midas Gold will maintain the Burntlog Route and haul roads with a motor grader that will remove any rock, silt or other debris. Smooth and clean road surfaces are essential for not only minimizing sediment and mud but also for allowing efficient, safe and economical use of the road.
- During winter road maintenance, Midas Gold will remove snow from the Burntlog Route and haul roads at the site and the temporary construction access Yellow Pine Route. Midas Gold will avoid disposal of snow in riparian areas, wetlands, or areas where snowmelt might cause road damage or erosion during spring melt. Care will also be taken to dispose of collected snow, which may contain sand or gravel, in a manner that avoids impacts to nearby streams and rivers.
- Midas Gold will use coarse sand (with less than 20% fines²) for winter sanding of the main access road and haul roads in combination with a fine to medium gravel as needed, (approximately $\frac{1}{4}$ - $\frac{5}{8}$ inch sizing) which will provide traction in its own right, resulting in less sand being used through the winter. The coarser particles and sand will allow water to drain through instead of pooling and generating fine sediment during spring thaw.
- Midas Gold will install onsite employee housing (the Stibnite Lodge) at the Project site for employees and contractors, in part to lessen daily traffic on the main access road and to reduce potential environmental impacts safety concerns associated with traffic (see Section 8.1).
- Midas Gold will provide busing and/or van pooling to the site that will further reduce daily traffic to the site (see Section 12.2). Minimizing traffic will promote less sediment generation on the roads and reduce the risk of vehicle accidents and incidents.
- Access and Project roads will be engineered and maintained to minimize dust and sediment contribution to local streams from road maintenance and spring runoff, particularly at stream crossing areas. Crushed gravel will be placed on these roads as needed to provide a durable driving surface, limit migration of fine sediment into nearby streams, and protect road surfaces from damage due to traffic.
- Access and haul road crossings of fish bearing streams will be designed such that structures installed or constructed allow fish passage.

² "Fines" are defined as particles passing a standard No. 200 sieve, and consist of silt and clay.

- Roads newly constructed for the Project on National Forest lands, once they are no longer needed for Project restoration, operations, closure or reclamation, will be closed and reclaimed in consultation with, and as required by, the Forest Service.

6.2.10 Sewage, Trash & Other Solid Waste

During restoration, construction, operations and closure, Midas Gold will need to manage sewage, trash & other solid waste.

Goal: *Manage and properly dispose any Project-generated sewage, trash and hazardous chemicals.*

Actions:

- Midas Gold will maintain and expand its already robust recycling program at the Project site to minimize waste and trash delivery to area landfills.
- Midas Gold will expand and/or install packaged sewage treatment facilities and leach fields adjacent to the ore processing facility and the Stibnite Lodge. These facilities will be similar to those currently at the site for exploration activities, and will be designed to Valley County and State of Idaho standards to handle the construction, site restoration, operational and closure workforce.
- Midas Gold will place portable toilets at the open pits and other remote locations. These portable toilets may be serviced by a local vendor.
- Midas Gold intends to compost kitchen waste / food scraps from the on-site employee housing facility, and use the resulting compost in reclamation activities.
- Waste bins, dumpsters or trash cages will be provided on site for trash and refuse. This trash material will be regularly picked up and hauled to the Valley County waste transfer station for disposal. An onsite landfill for inert material and construction and demolition debris will be located on private property. There will be no open burning of garbage and refuse at the site; however, Midas Gold may utilize a solid waste incinerator for employee housing facility food scraps and other kitchen wastes if composting proves ineffective or causes wildlife management issues.
- Petroleum waste products, spent solvents, and aerosol can residues will be stored in approved containers separate from other trash products and transported off site for recycling or disposal in an approved waste facility.
- A 90-day capacity hazardous waste storage facility and appropriate satellite storage facilities will be constructed to store any generated hazardous wastes as required by EPA and State of Idaho regulations. All hazardous waste stored in this facility will be transported to an EPA-approved off-site disposal facility within 90 days.

6.2.11 Soils

Soils in the Project area are generally poorly developed and will need to be improved and supplemented during the life of the Project in order to support site restoration and reclamation.

Goal: *Minimize Project-related impact to soils, while salvaging, enhancing and supplementing available soils for reclamation and restoration purposes.*

Actions:

- Growth medium material (topsoil) will be removed, as practicable and where available, from areas that will be affected by the Project operations and surface facilities, and stored (stockpiled) for future reclamation use. Given the previous mining activities and past disturbances at the Project area, little soil remains that can be used for reclamation. Additionally, limited organic soils exist in the area due to slope, limited vegetation, and a short growing season thus limiting the amount of topsoil in the Project area available for reclamation activities.
- Reclamation soils will likely have to be “constructed” from existing mineral soils in the area utilizing composting products, mulch products, and other organics sources from on and off site (see Section 8.7.1).

6.2.12 Erosion & Sediment Control Measures

Widespread mining-related activity and forest fires have resulted in elevated levels of erosion and sedimentation. The impacts of additional disturbance related to the Project need to be managed to mitigate incremental impacts and reduce erosion and sedimentation related to legacy impacts.

Goal: *Manage stormwater runoff and control erosion during site restoration, construction, operation, closure and reclamation from both Project-related and legacy-impacted areas.*

Actions:

- Midas Gold will maintain a stormwater pollution protection plan (**SWPPP**) for the Project site.
- Midas Gold will continue to utilize and implement additional “best-management” practices for erosion and sediment control, including:
 - Vegetation will be removed only from those areas to be directly affected by Project operations and only from areas directly ahead of operations;
 - Cut and fill slopes for access and haul roads will be designed to prevent soil erosion;
 - Stormwater features and facilities will include surface water channels, culverts, culvert inlet protection devices, silt fencing, straw wattles, straw bales, and sediment catch basins.
 - Runoff from roads, building sites and parking lots will be handled through sediment traps, settling ponds, berms, wattles, sediment filter fabric, etc. Design of these features will be based on Forest Service, IDEQ and IDL requirements and analysis of local hydrologic conditions;
 - Off-road vehicle traffic will be avoided except in association with environmental management and monitoring activities; and,
 - Restoration, reclamation and revegetation will be implemented as soon as practical for long term stability and erosion control. Additionally, temporary stabilization of inactive features or temporary disturbances will be utilized where practicable such as temporary road cut and fill areas, facility construction areas, and other inactive areas.
 - Tree planting in forest fire burned areas of the Project will be implemented to reduce erosion and sediment generation.
- Midas Gold will install and maintain up-gradient surface water channels to route runoff around the TSF, DRSFs, mine pits, ore stockpiles, ore processing facility area, truck shop area, and other infrastructure to prevent runoff from contacting the areas used by these facilities. When appropriate, settling basins will be provided at channel outlets to remove sediment before

releasing water downstream. Sediment will be periodically removed from the settling basins and deposited in one of the Project's DRSFs or used for reclamation soil generation.

- Runoff generated from precipitation on general infrastructure areas, haul roads, laydown yards, reclamation areas, will be routed in channels or through culverts towards stormwater basins or other appropriate sediment control measures or devices, where sediment can collect and water can evaporate, percolate into the ground, or be discharged back into the environment as appropriate.
- Runoff generated from direct precipitation on the DRSFs, mine pits, ore stockpiles, ore processing facility area, and truck shop area will be collected in stormwater basins or other appropriate control measures or devices, where water can collect and be evaluated for treatment and discharge or utilized as process makeup water.
- Runoff generated from direct precipitation on the TSF will be retained in the TSF water pool for reclaim to the ore processing circuit.

6.2.13 Water Quality

Extensive mining and mining-related activities over the past 100 years, compounded by extensive deforestation related to wildfires, has resulted in widespread erosion and sedimentation, impacting water quality and fish habitat.

Goal: *Minimize impacts to surface and groundwater quality and the hydrology of the area, and work to mitigate and reduce impacts related to legacy mining and mining-related activities.*

Actions:

- In addition to stormwater, erosion and sediment control measures listed in Section 6.2.12 Midas Gold will perform groundwater and surface water monitoring at locations shown on Figure 15-1.
- Process tankage will be equipped with appropriate secondary containment.
- Discharge water quality standards will be required for discharge into the EFSFSR. Also, the need for a water treatment facility will be based on the discharge standards set by a National Pollutant Discharge Elimination System (**NPDES**) permit.
- Transport of hazardous substances or chemicals will be done via convoys with emergency response personnel and equipment.
- Utilize rapid infiltration basins to reintroduce excess mine pit dewatering water to the alluvial aquifer.
- Comply with International Cyanide Management Institute code.

6.2.14 Removal & Reprocessing of Legacy Tailings

Prior mining operations generated tailings that were deposited in the Meadow Creek valley without consideration to long-term impacts on water quality and likely represent a source of metals leaching into groundwater and surface water.

Goal: *Recover, reprocess, remove metals and redeposit the legacy tailings into a designed, engineered and lined tailings storage facility to eliminate potential for metal leaching.*

Actions:

- After removing the SODA materials, recover the legacy tailings, re-pulp, and pump to the processing facilities.
- In the processing facilities, recover metals from the tailings, thereby reducing the metals available for potential leaching, while neutralizing the new tailings generated by such reprocessing.
- Deposit the neutralized tailings in the fully designed, engineered and lined TSF (see Section 11.2) along with tailings generated from processing newly-mined ore.

6.2.15 Vegetation

Vegetative cover in the Project area has been impaired by legacy mining and mining-related activities and extensive wildfires.

***Goal:** Minimize Project-related impacts to vegetation and riparian zones and use the Project redevelopment as an opportunity to enhance vegetative cover and, thereby, wildlife and fish populations.*

Actions:

- Removal or disturbance of vegetation will be kept to a minimum by limiting the area of disturbance, to the extent practicable, to maintain safe and efficient operations.
- Vegetation and soil removal will occur in a manner that minimizes erosion and sedimentation. Disturbance of riparian and wetland vegetation will be avoided where practicable.
- Both historically and newly disturbed areas will be stabilized and seeded and/or replanted in accordance with Forest Service and IDL approved guidelines and standards as final land forms are available for reseeding.
- Select areas within and immediately adjacent to the Project site that have been severely impacted by forest fires will be replanted to reduce soil erosion, landslides, debris flows and sediment run-off, which contribute to sediment levels in local drainages and degrade water quality and fish habitat. Midas Gold will coordinate with the Forest Service to identify reforestation opportunities.
- Only certified noxious weed-free seed mixtures will be used as part of interim, concurrent and final reclamation.
- Midas Gold will be responsible for noxious weed control within areas disturbed by Project activities (see Section 14.3).
- The list of noxious weeds requiring control will be obtained from the Forest Service and Valley County Extension Office. Weed control will be accomplished using a number of appropriate tactics, including cultural, mechanical, biological, and chemical controls. Only Forest Service approved herbicides will be used on lands administered by the Forest Service.

6.2.16 Wetlands & Jurisdictional Waters of the U.S.

The Project is located within the upper reaches of the EFSFSR and many Project-area wetlands and streams have been impaired by legacy mining-related impacts

Goal: *Minimize impacts to Waters of the U.S. and wetlands and enhance areas affected by legacy mining-related activities.*

Actions:

- Midas Gold will locate major facilities such as the TSF, DRSFs, growth media stockpiles (**GMS**), the ore processing facility, the truck shop, the employee housing facility and haul road corridors to minimize direct disturbance to Waters of the U.S.
- Midas Gold will work with the U.S. Army Corps of Engineers (**USACE**) under the Clean Water Act Section 404 permitting process to provide mitigation as required for any dredge or fill of jurisdictional wetlands or other Waters of the U.S. A conceptual Mitigation Plan is included as Appendix F of this PRO.
- Midas Gold will design and locate closure related facilities to maximize restoration of area streams, wetlands and riparian features in the Project area and for off-site infrastructure such as the power line and access road corridors.

6.2.17 Visual Resources/Scenic Values/Aesthetics

The Project area has been subject to mining and mining-related activities for the past 100+ years and, as a result, visual resources, scenic values and esthetics are currently impaired.

Goal: *Minimize Project-related impacts on view-sheds and conform to Forest Service visual resource management requirements, while restoring legacy impacts and Project-related impacts to improve the visual resources, scenic values and aesthetics.*

Actions:

- Project facilities on Forest Service administered lands will conform to applicable Forest Service visual management requirements for this area. Midas Gold will use early planning and design features to minimize contrast with the surrounding landscape to meet the visual resource management objectives of the area.
- To the extent practicable, interim and concurrent reclamation practices will be implemented.
- External lighting will be kept to the minimum required for safety and security purposes. Lights will be directed down toward the interior of the Project site and shielded, where appropriate.
- Suitable surface coatings or exterior design features will be used on mine site buildings and other structures to reduce visual impacts.
- Restoration actions and final reclamation practices will restore disturbed areas and reclaimed topography to blend with the surrounding landscape (see Section 14).

6.2.18 Wildlife

Wildlife habitat in the Project area has been impacted and impaired by legacy mining-related activities and extensive wildfires.

Goal: *Minimize disruption to wildlife species and wildlife habitats during Project activities and enhance available habitat in the Project area through revegetation and habitat improvement.*

Actions:

- Midas Gold will minimize disturbance to wildlife habitat by maintaining a compact operation, minimizing noise and light, and concurrently working to improve wildlife habitat.
- Vegetation will be cleared only in those areas necessary for Project activities in order to preserve natural habitat to the greatest extent practicable.
- In order to reduce attractants, during construction and operations, trash and other miscellaneous inert (non-hazardous) garbage will be placed in the onsite landfill, or contained in onsite wildlife-resistant containers and hauled to the Valley County waste transfer station for disposal. Used oils, solvents, grease and antifreeze will be handled separately from normal trash and garbage (see Section 8.7).
- Midas Gold will establish appropriate speed limits for the Burntlog Route, site haul roads, and light vehicle access roads on the Project site. This should reduce the potential for vehicle/wildlife collisions.
- There will be no hunting or discharge of firearms during construction and operations within the Project area (see Section 6.2.8). The Project site will be posted to prohibit hunting, and employees will be prohibited from carrying firearms on the Project site.
- Electric power structures to serve the Project facilities will be designed and constructed to avoid raptor perching on structures for predation purposes and minimize the risk of their being electrocuted.
- Midas Gold will install a wildlife exclusion fence around the TSF, process facility areas, and related process ponds in order to reduce the potential for drownings.
- Tailings will be neutralized before discharge from the process building so that any supernatant collecting in the TSF will be protective of wildlife.
- Midas Gold will develop a wildlife mortality-reporting format to be used for reporting accidental Project-related mortality of birds and other wildlife species.
- Midas Gold will undertake reforestation and fish habitat enhancement in order to improve the overall quantity and quality of wildlife habitat.

6.3 PERMITS AND REGULATORY APPROVALS

The Project area includes both private land (patented mining claims) and unpatented mining claims located on National Forest public land administered by the US Forest Service, Payette National Forest, Krassel Ranger District (see Appendix C). Midas Gold affiliates own or control patented and unpatented millsite and lode claims throughout the Project area. The Forest Service oversees mineral activities (exploration and mining) on the surface of unpatented mining claims within the Project area, and IDL oversees mineral activities on private land.

The federal General Mining Act of 1872 (the **1872 Mining Law**) and later legislation establish the statutory right to search for, develop and extract mineral deposits on public domain lands open to mineral entry. These rights include the right to initially locate a mining claim. A mining claimant is entitled to reasonable access to the claim for further exploration, mining or necessary related activities, consistent with the Mining and Mineral Policy Act and other applicable laws. The Forest Service regulates locatable mineral surface activities on National Forest lands under regulations codified at 36 CFR 228 Subpart A, providing for the agency to review and approve the Proponent's plan of operations that includes, among other requirements:

- Provisions for operations to be conducted so as, where feasible, to minimize adverse environmental impacts on National Forest surface resources;
- Measures to provide for surface reclamation, where practicable; and,
- Measures for operations to meet and comply with applicable federal and state air and water quality and solid waste standards and other requirements.

A number of federal, state and local permits and other approvals may be required for the Project (see Table 6-1)

Table 6-1, Potential Permits, Approvals, and Other Responsibilities for Stibnite Gold Project

Federal Government	Permits and Approvals	Other Involvement and Responsibilities (Coordination and Consultation)
Forest Service	<ul style="list-style-type: none"> • Plan of Operations (36 CFR 228) • Road Use Permit • Mineral Material Permit • Timber Sale Permit and Contract 	<ul style="list-style-type: none"> • NEPA Compliance • Inspections • Idaho Joint Review Process
Army Corps of Engineers	<ul style="list-style-type: none"> • Clean Water Act Section 404 Permit (Dredge & Fill) 	<ul style="list-style-type: none"> • NEPA and 404(b)(1) Compliance
Environmental Protection Agency	<ul style="list-style-type: none"> • Clean Water Act NPDES Permit (responsibility to be transferred to Idaho DEQ in the near future) • Stormwater Pollution Prevention Plan • Spill Prevention Control and Countermeasure Plan • Clean Water Act Section 401 Certification • SARA Title III – EPCRA • TSCA – TRI 	<ul style="list-style-type: none"> • NEPA Compliance • Compliance with prior Administrative Orders of Consent (AOC's) and Voluntary Consent Orders (VCO's) ⁽¹⁾ • Inspections
NOAA National Marine Fisheries Service	<ul style="list-style-type: none"> • None anticipated (depends on results of Section 7 Consultation) 	<ul style="list-style-type: none"> • Threatened and Endangered Species Consultation (Section 7 Consultation) • Informal consultation on NEPA work
U.S. Fish & Wildlife Service	<ul style="list-style-type: none"> • None anticipated (depends on results of Section 7 Consultation) 	<ul style="list-style-type: none"> • Threatened and Endangered Species Consultation (Section 7 Consultation) • Informal consultation on NEPA work
Federal Communications Commission	<ul style="list-style-type: none"> • Radio Authorizations 	
Treasury Department (Bureau of Alcohol, Tobacco, Firearms and Explosives)	<ul style="list-style-type: none"> • Permit for Transporting, Storage and Use of Explosives. 	Incorporated at part of final PRO
Mine Safety and Health Administration	<ul style="list-style-type: none"> • Mine Identification Number • Legal Identity Report • Ground Control Plan 	<ul style="list-style-type: none"> • Miner Safety and Training Plans • Inspections

Table 6-1, Potential Permits, Approvals, and Other Responsibilities for Stibnite Gold Project

State of Idaho	Permits and Approvals	Other Involvement and Responsibilities (Coordination and Consultation)
Department of Environmental Quality	<ul style="list-style-type: none"> • Air Quality Permit to Construct • Air Quality Operating Permit • Cyanidation Permit (coordinate with IDL) • NPDES primacy (IPDES forthcoming from EPA) • 401 Certification – Dredge and Fill • Stormwater Pollution Prevention (IPDES forthcoming from EPA) • Wastewater Treatment Permit • Groundwater Rule Permit • Drinking Water Permit • Water Treatment permits • Solid Waste permits (landfill, slash stockpiles, composting facilities, weed spraying) 	<ul style="list-style-type: none"> • Coordination with Forest Service • Informal consultation on NEPA work • Idaho Joint Review Process
Department of Health and Welfare	<ul style="list-style-type: none"> • Septic System Approval • Food Establishment License and Inspections 	<ul style="list-style-type: none"> • Idaho Joint Review Process
Department of Water Resources	<ul style="list-style-type: none"> • Water Rights • Stream Channel Alteration Permit • Mine Tailings Impoundment Structure Permit 	<ul style="list-style-type: none"> • Coordination with Forest Service • Informal consultation on NEPA work • Idaho Joint Review Process
Department of Fish and Game		<ul style="list-style-type: none"> • Input related to wildlife resources • Idaho Joint Review Process
State Historic Preservation Office (SHPO)	<ul style="list-style-type: none"> • Cultural (SHPO) Clearance 	<ul style="list-style-type: none"> • National Historic Preservation Act Section 106 consultation • Idaho Joint Review Process
Department of Lands	<ul style="list-style-type: none"> • Mine Operating Plan (PRO) • Reclamation Plan Approval • Reclamation Financial Assurance 	<ul style="list-style-type: none"> • Coordination with Forest Service • Informal consultation on NEPA work • Joint Review Process co-lead • Financial Assurance • Reclamation Plan Inspections
Valley County	Permits and Approvals	Other Involvement and Responsibilities (Coordination and Consultation)
Planning and Zoning Department	<ul style="list-style-type: none"> • Conditional Use Permit 	<ul style="list-style-type: none"> • Consistency with goals/objectives of the Valley County Comprehensive Plan
Building Department	<ul style="list-style-type: none"> • Building Permits 	
Road Department	<ul style="list-style-type: none"> • Annual road use permits 	
<p>Note: (1) AOC's and VCO's apply to past (pre-Midas Gold) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cleanup actions in the Project area, and typically require the operator to advise signatory agencies and generally refrain from disturbing previously cleaned up sites.</p>		

To comply with regulations implementing the National Environmental Policy Act (40 CFR 1500-1508), Midas Gold anticipates that the Forest Service would prepare an environmental impact statement (EIS) as part of the process approving the Project PRO. Given its position as the land managing agency for much of the lands to be affected by the Project, the Forest Service would most likely serve as the lead federal agency to prepare the EIS, which would evaluate in reasonable detail the environmental consequences of the proposed Project, identified alternatives, and environmental management and mitigation measures that would avoid, minimize, and/or otherwise mitigate environmental impacts. It is expected IDL would act as lead agency with respect to matters under State jurisdiction.



In the preparation of an EIS for the Project, the Forest Service may invite other interested agencies (e.g. USACE, EPA, NOAA National Marine Fisheries Service, U.S. Fish and Wildlife Service, Idaho state agencies, and Valley County) to participate in the NEPA process as formal cooperating agencies or otherwise, and can be expected to engage in consultation with interested Tribes. The State of Idaho may initiate the Idaho Joint Review Process, which would be a further mechanism for government agencies to cooperate and coordinate on permit and plan review and approval.

The preparation of an EIS and the permitting processes are related but distinctly separate. An EIS is a procedural tool designed to explore alternatives and discuss environmental impacts. The permitting or approval processes give individual government decision makers the authority to grant, conditionally grant, or deny individual permit applications. Permits may be granted with requirements and conditions to eliminate and/or mitigate specific adverse impacts, or to conduct monitoring, pursuant to their governing statutes, regulations and guidelines.

The proposed Project is consistent with the current Payette National Forest Land and Resource Management Plan (Revised 2003). The federal lands within the Project area are available to locatable mineral exploration and development under the 1872 Mining Law and would be managed in a manner which recognizes the Nation's needs for domestic sources of strategic and critical minerals.

An important aspect of the Project will be the recovery and sale of domestically sourced antimony to U.S. markets. America's need for this strategic and critical mineral continues to increase.

Definitions for "Critical Minerals" varies, but typically the term is applied to minerals or mineral materials that are rare in the earth's crust, have limited geographic distribution, have few substitutes or cannot effectively be recycled, are subject to or potentially subject to upstream or downstream supply chain disruptions and that have important characteristics critical in manufacturing and are integral to national defense, aerospace, energy and other industries (NRC, 2008; Graedel et al, 2012; Barteková and Kemp, 2016). Antimony is routinely listed as a Critical Mineral by governments around the world (BGS, 2015; EC, 2014; EC, 2015) for all the reasons noted above. There is no primary antimony production in the U.S. and China supplies approximately 75-85% of the world's total production (USGS, 2015; USGS 2016). The U.S. currently imports over 75% of its antimony supplies from China directly or indirectly (USGS, 2016). U.S. import reliance for antimony typically exceeds 85% (USGS, 2016). China has routinely disrupted the supply chain for antimony to the U.S. and other countries (Oustr, 2016). Over 76% of the world's antimony reserves are held by China and Russia (USGS, 2015). The U.S. Department of Defense (**DOD**) includes antimony on the list of strategic materials and non-fuel defense shortfalls (DOD, 2015). It is used in lead-acid batteries, military equipment, explosives and munitions, fire suppressant flame-retardants, and in semi-conductors. It is also used in alternative wind and solar energy applications involving fire resistant transmission lines.

The Stibnite Mining District potentially contains over 180 million pounds of antimony and this resource represents the Nation's potential long-term strategic stockpile.