8 OPERATIONS: SITE PREPARATION & ONSITE INFRASTRUCTURE

Certain site preparation work and onsite infrastructure are needed to support the proposed cleanup of legacy impacts and site restoration, exploration, mining and ore processing, and for closure. This infrastructure includes utilities for the day-to-day activities such as electric power supply distribution, water supply and sewage disposal systems, and facilities such as offices, employee housing, workshops and warehouses required to support the construction activities, site workforce and equipment, and the mining, ore processing and reclamation and restoration activities that will occur at the site.

Given the remoteness of the site, the relative short construction season in this part of Idaho, and the complexity of the Project, Midas Gold plans for up to three years of initial onsite construction work to upgrade, install and construct the supporting onsite infrastructure needed for the Project.

This onsite infrastructure includes:

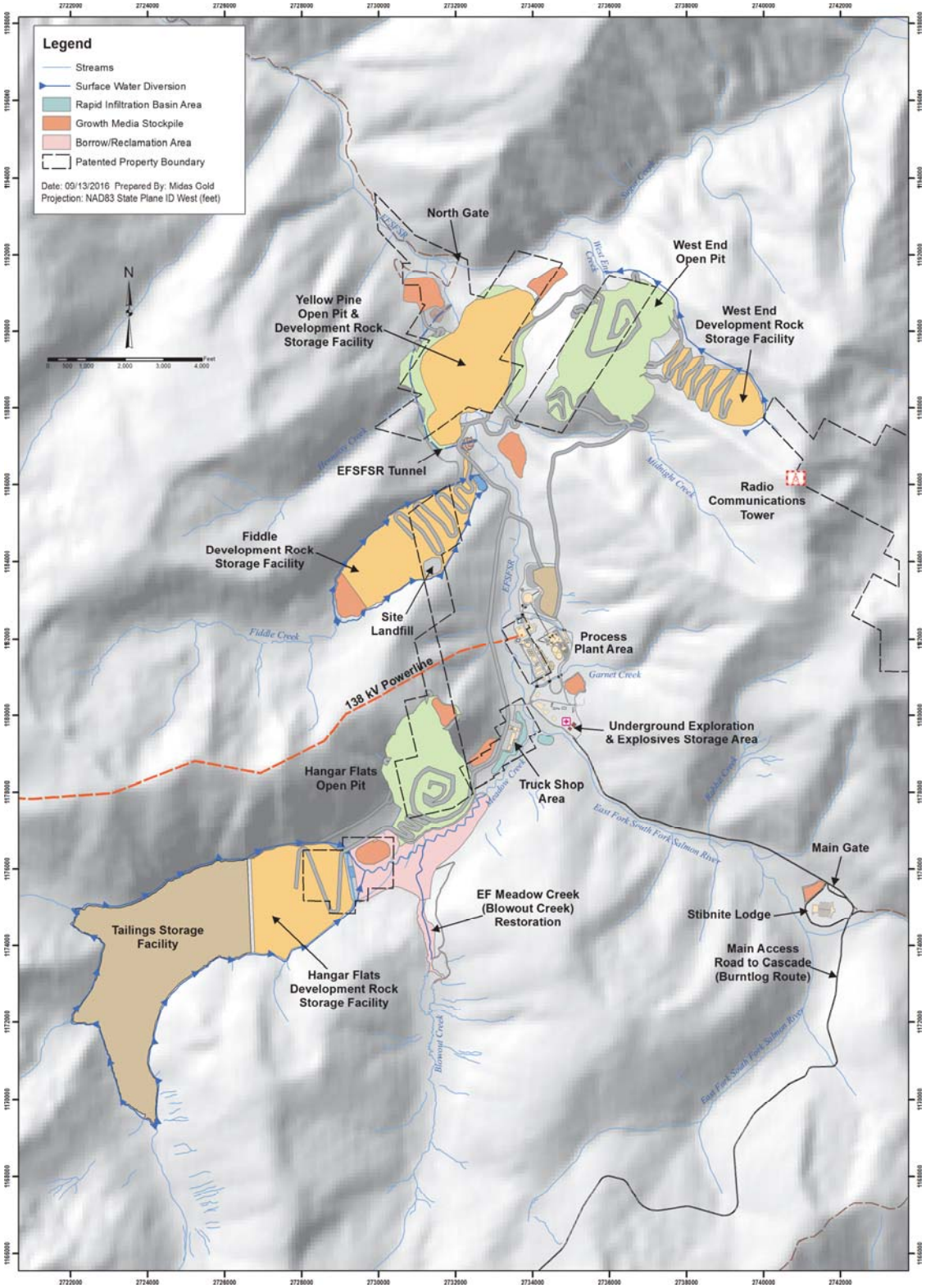
- Site preparation prior to commencement of legacy restoration and construction;
- Upgrade to the existing onsite exploration housing and construction of new onsite housing to support construction, operations and closure, thereby promoting worker safety and quality of life, and to minimize traffic on area roads;
- Sanitary and solid waste facilities;
- Upgrades to the existing onsite power supply system (including solar power) to support construction activities and provide power during operations and closure, as well as during possible service interruptions to the IPCo electric system;
- Construction of onsite water management facilities to handle storm and snowmelt runoff;
- Construction of potable water, fire water and sewage disposal systems on site to support employee housing and office facilities;
- Firefighting and support facilities;
- Security and fencing;
- Expanded communications facilities; and
- Development of borrow sources.

Midas Gold will contract, preferably with local businesses, for the initial site cleanup and construction of the Project. Multiple areas, including those adjacent to the administration offices, ore processing facilities, truck shop and tunnel portal areas, will be made available for temporary contractor office trailers, with adjacent lay-down areas for construction equipment and supplies. The several hundred construction workers will initially be accommodated in the existing (but expanded) exploration housing and, later, at the Stibnite Lodge that will be installed as part of initial site work (see Figure 8-1).

During this site preparation phase, Midas Gold expects that 15 to 20 temporary trailers will be placed on temporary wood-cribbed foundations (or equivalent) and skirted with plywood sheeting. Electricity will be supplied on a temporary basis by the existing solar power generation system, as well as service from the current onsite and additional generators. Propane tanks may also be placed near the trailers to facilitate running the heating systems of these temporary facilities until grid power is available. In addition, portable sanitary facilities will be located throughout the Project area.

Table 14-3 provides estimates for the Project disturbance, by facility, on public and private land, and in Roadless areas.

Figure 8-1, General Site Plan Layout



8.1 SITE PREPARATION

Much of the area where the site restoration, development and mining activities will occur has been subjected to recent fires or has been previously cleared during previous mining operations and related activities. As necessary, on a year-to-year basis ahead of site cleanup, construction and mining, Midas Gold will remove burned trees, (and unburned Lodgepole pine, Douglas fir, Western larch and other tree species) to allow for site operations. Trees will be felled and stockpiled in temporary storage areas for future use in site reclamation.

Once the trees are removed, any remaining vegetation will be grubbed using a brush rake on a bulldozer to push such material into piles that can be combined with tree slash. The resulting material can be chipped for use as mulch for reclamation or mixed with growth medium material as it is removed.

After vegetation shredding and grubbing activities are completed, Midas Gold will remove, as practical, and store any available growth medium material (topsoil), suitable for future reclamation. Typically, a bulldozer will be used to windrow the growth medium material. The windrowed material will be loaded onto trucks by a frontend loader and hauled to a stockpile or directly reapplied, when practical, as part of concurrent reclamation activities. Stockpiled growth medium material will be used for reclamation activities. Additional stockpiles of growth medium materials will be located within open pit boundaries to provide additional storage as needed in anticipation of development rock stockpile and open pit reclamation. Midas Gold will also identify available alternative organic material to aid in and supplement reclamation work (see Section 14).

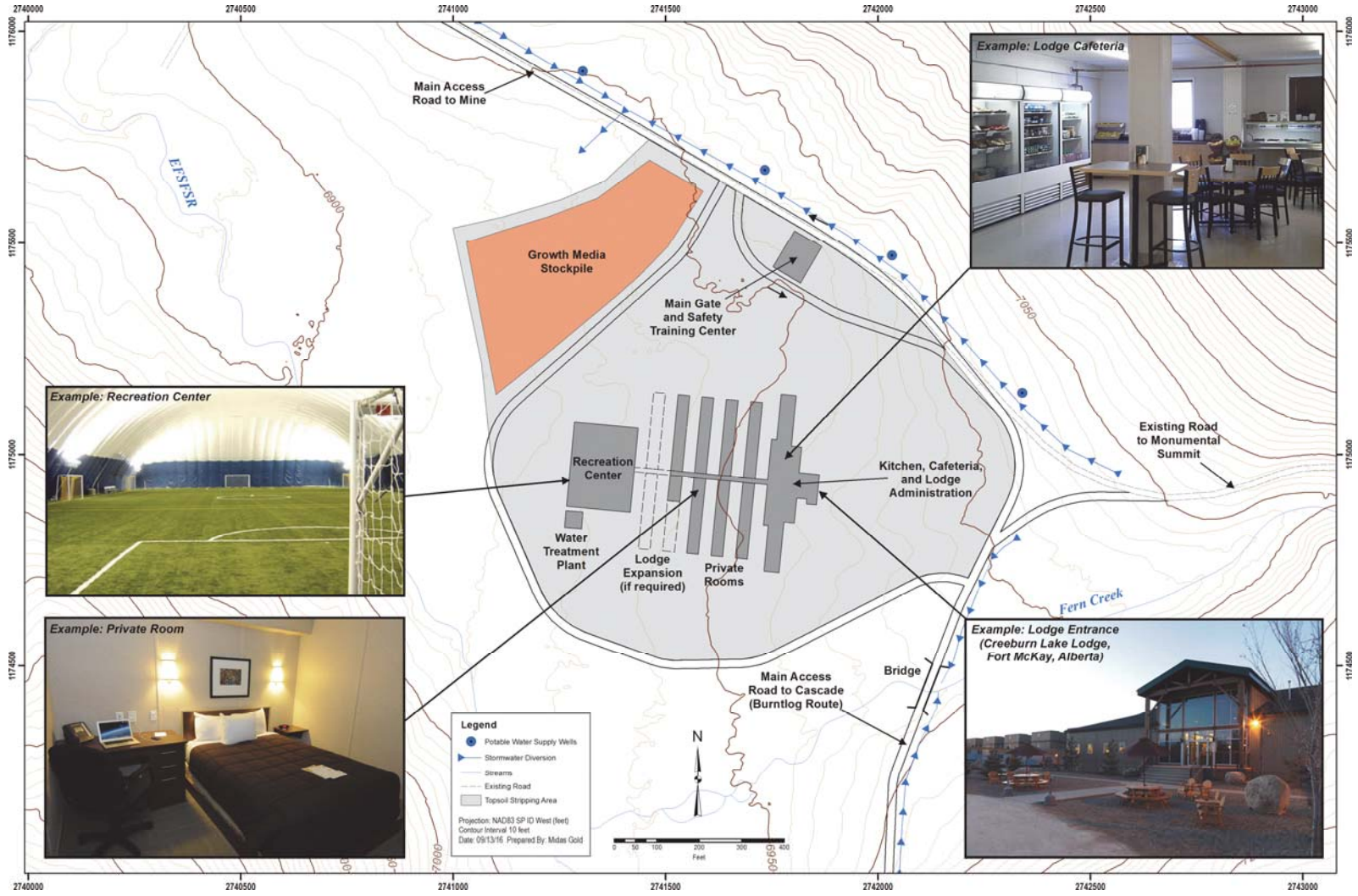
8.2 ONSITE EMPLOYEE HOUSING: STIBNITE LODGE

Round-trip good weather (summer) commute times utilizing buses and travelling by road to the Project are approximately five hours from McCall and four hours from Cascade; longer commute times can be expected during bad-weather (winter) conditions. Such daily commuting would create additional traffic on regional and site access roads, increase driving-related safety risks, and decrease the quality of life for Midas Gold workers and contractors. When added to normal 10- or 12-hour work shifts, these travel times would result in very long days for employees and increase the risk of fatigue and accidents. While off-site housing was considered, the distance from the main populated areas and towns in Valley County (Cascade, Donnelly and McCall) are too great for safe regular daily commuting to the Project site; consequently, workers at the Stibnite Gold Project will be provided onsite housing at Stibnite Lodge.

Midas Gold has been conducting exploration activities at the site since 2009 and, as a result, has a facility capable of housing up to 60 workers onsite. This exploration housing facility will be expanded to house initial construction personnel. In parallel with this initial construction work, Stibnite Lodge will be constructed in an area adjacent to the existing Thunder Mountain Road, approximately 1½ miles southeast of the confluence of Meadow Creek and the EFSFSR.[4] This location is quiet, yet located close enough to the site to allow for minimal daily commute times to the mine, and is easily accessible from the proposed new access road. A conceptual layout for Stibnite Lodge is provided on Figure 8-2.

[4] Midas Gold does not plan to house any employees or contractors in the community of Yellow Pine during mine operations. After the Burntlog Road is upgraded and extended, Midas Gold proposes that Forest Service Road 412 will be closed from the confluence of Sugar Creek and the EFSFSR to Stibnite (see Section 8.5 for additional details).

Figure 8-2, Stibnite Lodge Conceptual Layout



Stibnite Lodge will provide accommodations for approximately 500 people; this will include employees and contractors who will work at the Project site, as well as consultants and visitors. The Lodge will be comparable to a hotel with amenities such as meal services, laundry, housekeeping, first aid and health services, Wi-Fi, recreation facilities and 24-hour access to food and beverages. The housing will have self-contained water, trash and sanitation facilities that will conform with applicable Idaho health codes and other regulatory requirements for such a facility.

Midas Gold will utilize buses or vans to transport workers to and from the SGLF at the beginning and end of their work cycles (see Section 12.2).

Onsite transport of employees from Stibnite Lodge to the various Project facilities and workstations will be accomplished by a small fleet of buses and vans. Additional details on Stibnite Lodge, including water supply, wastewater management, solid waste management, recreation facilities, etc. are provided in Section 8.1.

8.3 EMPLOYEE RECREATION FACILITY

Midas Gold will facilitate a variety of recreational amenities at Stibnite Lodge that may include an indoor multiuse sports facility (for football, soccer, running, etc.), exercise facilities with weights and exercise equipment (treadmills, exercise bikes, elliptical trainers, etc.), television and movie areas, pool tables, table tennis, library and video game areas. Outside facilities, such as a sports field (for baseball, football, soccer, etc.) may be considered to allow for summer activities outside, while cross-country ski trails may be flagged for winter use.

In order to manage worker impacts on the recreational resources in the Project area:

- Midas Gold will prohibit the possession of unsecured or unauthorized firearms and the discharge of firearms within the Project area. Any firearms brought to the site will be stored in a secure manner upon arrival at site.
- Midas Gold will inform employees, contractors and subcontractors that long-term camping (greater than 14 days) is prohibited on federally administered lands.
- Recreational activities, equipment, and infrastructure will be provided to employees at the Stibnite Lodge facility (see Section 8.2).

8.4 EMPLOYEE & VISITOR PARKING

During initial site restoration and construction, there will be several on-site parking areas for buses, vans, light vehicles and other miscellaneous construction equipment. The primary sites to be used for parking will be located at Stibnite Lodge, near the contractor/construction laydown areas, and at the Tunnel portals.

As the Project transitions from initial restoration and construction to operations and concurrent restoration, parking areas will be maintained for buses, vans and other miscellaneous vehicles for employees, contractors, vendors and visitors at Stibnite Lodge, at the shop area and equipment ready lines, and near the mine administration office. Gates and fences will be installed to prevent unauthorized vehicular access to the ore processing facility and mine areas.

8.5 ONSITE ROADS & TRAIL SYSTEM

The majority of personnel employed at the Project site will use haul roads as access to the reclamation and construction areas, pits, development rock storage facilities, the tailings area, the ore processing facility, and maintenance areas. Midas Gold will also construct and maintain internal service and access roads and trail system, designed specifically for smaller vehicles and foot traffic, to facilitate access to certain sites and facilities for safety and maintenance. These sites include the Stibnite Lodge, water quality monitoring sites, well sites, the radio communications tower, around the perimeter of the TSF, and various other monitoring sites.

The light vehicle maintenance roads will typically be 12 to 15 feet wide. Some will be graveled or covered with rock aggregate to provide all weather access, while others will be dirt two track roads. There will be no planned public use of these internal roads. Midas Gold will also maintain a narrow trail system to enable foot traffic to move safely throughout the Project site.

Public access to the existing Thunder Mountain Road (Forest Service Road 375) will be provided via the Burntlog and Trapper Flats routes. Midas Gold proposes that the Stibnite Road (Forest Service Road 412) will be closed from near the confluence of Sugar Creek and EFSFSR to the area southeast of the employee housing facility, once the upgrades to the Burntlog and Trapper Flats roads are completed. To provide off-highway vehicle (OHV) access around the Project site, Midas Gold will coordinate with the Forest Service and Valley County to link the Horse Heaven/power-line road with the Meadow Creek Lookout Road in order to enhance road connectivity for recreational users.

8.6 SANITARY WASTE HANDLING FACILITIES

Midas Gold currently has and uses existing sanitary waste handling facilities at the onsite exploration housing facility and other facilities that were approved by Valley County, IDEQ and Idaho Department of Health and Human Services (**IDH&HS**).

As the Project transitions from exploration to restoration and mining, Midas Gold will upgrade and install additional sanitary wastewater treatment facilities. The ore processing facility, administration and warehouse buildings, truck shop, and the employee housing facility will be connected to sanitary waste treatment plants connected to leach fields or NPDES permitted discharge points for the treated water; alternatively, sanitary waste can be pumped or hauled to a central water treatment facility. The designs of the sanitary wastewater treatment plants will be capable of handling the expected peak flow to each system. Midas Gold will obtain IDEQ (design), IDH&HS, and Valley County (construction) approval for the engineering designs and specifications prior to construction of these systems.

Through all Project phases, Midas Gold or its construction contractors will place portable chemical toilets at work sites around the operation in areas where there is no access to plumbed-in sanitary facilities. These toilets will be periodically cleaned and emptied by a contractor. Such sanitary waste will be transported off site to an approved facility for disposal by the contractor.

8.7 SOLID WASTE HANDLING FACILITIES

Midas Gold will continue to use successful materials management techniques that maximize reuse and recycling and minimize waste. Midas Gold will work with Valley County and local contractors to develop a comprehensive site-wide program for composting, recycling and proper management of remaining waste, if any.

8.7.1 Biodegradable Materials

Midas Gold will establish and operate a facility to compost organic materials and chipped organics from land clearing activities and other potential onsite sources of organic material. Composting is the decomposition of organic materials by microorganisms, and the end product compost would be used for reclamation activities at the Project.

Midas Gold will likely explore a combination of windrow composting and in-vessel composting as appropriate for the material and depending upon results. The size of the composting operation is currently unknown but will likely fall within a Tier I or Tier II facility status, which would be regulated under Idaho's Solid Waste Management Rule and require permitting, design and oversight with IDEQ and the local Health District. To prevent unwanted intrusion by wildlife, the compost area will have wildlife exclusion fencing.

In the event that the composting system becomes an unacceptable attractant for wildlife, such that it becomes unsafe to the employees and, in order to provide a back-up/redundant or alternative to the composting system, Midas Gold may construct an onsite solid waste incinerator near Stibnite Lodge. This incinerator would be powered by propane, diesel and/or used oil, and would be fitted with high quality burners and smoke filters. The use of the incinerator would provide an alternative to reduce the volume of garbage that would have to be hauled offsite in the event the composting system could not be used.

To further reduce its waste generation and enhance reclamation opportunities Midas will explore the option of composting bio-solids from its wastewater treatment plants. This activity is currently regulated by EPA and standards are included in 40 CFR 503.

8.7.2 Recycling

Midas Gold will maintain and expand its current successful recycling program. Valley County offers local recycling drop off points in Cascade, Donnelly and McCall for a fee. Recycling may be hauled offsite by the garbage contractor, or by a separate, recycling specific contractor.

Midas Gold will strive to continue to maximize recycling by providing bins of various categories giving employees the opportunity to recycle. Recycling bins will accompany regular trash bins. Recycling bins (typically yellow or blue in color) will be clearly labelled with a listing of products that are recyclable. As part of the onsite Project environmental training program, Midas Gold will include instructions and information about the Project recycling program.

The recycling component of the materials management program will include clearly marked "recycling" containers at strategic places throughout the Project site for items such as metal, cardboard, paper, plastics and other recyclable materials.

8.7.3 Onsite Landfill & Non-Hazardous Inert Waste Management

Any materials that cannot be composted or recycled will be collected in onsite receptacles. Midas Gold will install an onsite waste transfer station to handle municipal waste material, which will be hauled offsite for disposal, and inert waste materials[5] which will either be hauled offsite for disposal or be placed in an onsite landfill located on private property (see Figure 8-1).

[5] Acceptable inert waste materials includes non-recyclable scrap metals, untreated wood wastes, paper products, uncontaminated piping and liner material, and construction and demolition debris material.

Midas Gold will place only inert waste materials in the onsite transfer station and landfill and will not put materials in this station that meet the definition of municipal or hazardous waste nor any waste that could produce pollutants or contaminants that may degrade the waters of the State or waters of the U.S.

Midas Gold will operate and maintain the onsite transfer station and landfill under the following guidelines:

- Restrict public access (landfill solely for Midas Gold use);
- Erect signs identifying the site and indicating acceptable and unacceptable wastes;
- Employee training with respect to what material can and cannot be placed in this station;
- Control litter with portable fencing and periodic cleanup;
- Implement stormwater run-off and erosion control;
- Protect any surface water from pollutants; and
- Install wildlife exclusion fencing.

8.7.4 Resource Conservation & Recovery Act & Other Wastes

The Resource Conservation and Recovery Act (**RCRA**) is a federal law that creates a framework for the proper management of hazardous and non-hazardous solid wastes anticipated to be generated at the Project; these wastes include fluorescent bulbs and batteries that are considered "universal wastes". Empty aerosol product containers will also be managed appropriate to RCRA standards and the Project's generator status. Management of solid wastes, including storage, disposal and reporting, will conform to RCRA requirements.

The majority of the hazardous materials used on site will be spent or consumed during operations. Materials that are not spent or consumed (e.g. oils, antifreeze, etc.) will be recycled, to the extent practical, or disposed offsite in an approved depository in accordance with applicable federal and state regulations.

Used petroleum products will be stored on site in approved containers that will be separate from other trash and garbage products, and these used petroleum products may be reused on site or will be transported off site for recycling or disposal in an approved facility. Midas Gold will maintain a land farm[6] near the site support facilities to address any petroleum-contaminated soils. Midas Gold will maintain a Spill Prevention Control and Countermeasure Plan that establishes procedures for responding to accidental spills and releases of petroleum products.

Midas Gold will maintain a Hazardous Materials Handling and Emergency Response Plan that will address procedures for responding to accidental spills or releases of hazardous materials to minimize health risks and environmental effects.

Due to extensive disturbance and historical operations in the area, other legacy materials may be encountered during construction and operations. As identified, these materials will be characterized as appropriate to determine suitable potential for re-processing, reuse, and on-site or off-site disposal.

[6] Landfarming is a biological waste treatment process wherein contaminated soils or sediments are spread and incorporated into the upper soil zone and periodically tilled to aerate the mixture, using equipment typically seen in agriculture. In this way, natural microbial action breaks down contaminants, particularly hydrocarbons.

8.8 WAREHOUSE FACILITIES

Midas Gold will maintain offsite warehousing at the SGLF (see Section 7.3) for some supplies, however warehouse facilities for regular daily needs will be an important part of the overall operations and will be constructed on site. Warehouse buildings will be configured for ease of delivery with a loading dock and an outdoor, fenced, partially covered storage area.

Trucks transporting materials to/from the Project may need to be weighed to maintain appropriate load sizes for vehicles departing the site and verifying delivery of loads to site. The truck scale will be located adjacent to the ore processing facility.

8.9 SITE DISTRIBUTION OF ELECTRIC POWER

The proposed onsite mining and ore processing facilities at the Project will require reliable electric power at a total instantaneous demand of approximately 40 to 50 megawatts.

As discussed in Section 7.2, Midas Gold plans to connect to IPCo electric grid system for the site's electric service, which is eminently preferable to generating power on site using diesel, coal or natural gas, which would emit significantly higher levels of greenhouse gases, and require fuel transportation to site, with the attendant higher fuel consumption during power generation and transportation, dust generation and risk of spills. However, during construction, Midas Gold will utilize solar power and propane or diesel generators to supply electricity for construction activities. The solar power and some construction generators will remain on site during operations and site closure for supplemental and emergency (back-up) electric power generation.

The 138 kV line will be routed to the Project site's main substation where transformers will step down the voltage to 24.9 kV. Electricity will be distributed from the main substation to various facilities via 24.9 kV electric distribution line. Main corridors for power distribution to miscellaneous site facilities such as the primary crusher, oxygen plant, autoclave, reclaim water pumps at the tailings storage facility, administration office, maintenance facilities (truck shop), underground portals and permanent housing facility will be overhead. Electric power within the ore processing facility area will be located in underground conduits. Midas Gold also plans to expand upon its solar power experience to date with potential additional solar arrays on the roofs of the Stibnite Lodge and other buildings, reducing the overall external power consumption for the Project.

8.10 SURFACE WATER MANAGEMENT

Water quality and water quantity is of great importance to Midas Gold and protective features are integral to the Stibnite Gold Project design. Midas Gold will install and maintain water management infrastructure at the Project site with the primary objective of preventing perennial and ephemeral streams, and stormwater, from coming into contact with mining facilities, while also minimizing erosion and sediment generation, promoting fish passage and increasing spawning habitat, and rehabilitating existing areas of previous disturbance. To maximize the efficiency of the water management system, Midas Gold will phase the installation of the water management infrastructure to coincide with the expansion of the TSF, DRSFs and open pit mines.

Pre-construction water management activities will be designed to minimize impacts to local streams and waterways through the installation of facilities and BMPs designed to reduce erosion and fine sediment delivery to streams. These activities would include such features as sedimentation ponds, silt fences, water bars, culverts, energy dissipation terraces, and other features installed ahead of construction.

Meteoric water that does come into contact with mining facilities (tailings, mine pits, DRSFs, spent heap leached ore and tailings from past mining operations, or any other mining-related surface) has the potential to introduce increased levels of sediment and other possible contaminants into the ground and surface water and, in order to avoid this, Midas Gold will implement appropriate water collection and treatment measures during construction, operations and closure to meet any applicable NPDES or IDEQ permit standards prior to discharge to the environment. In addition, as practical, water that does come into contact with mining facilities will be recycled to the ore processing facility or used for dust control, thereby reducing freshwater requirements (see Section 8.11).

The following sections discuss key components of the Stibnite Gold Project water management system, including restoration activities associated with development of the system, with particular focus on water diversions for Meadow Creek, East Fork of Meadow Creek (Blowout Creek), EFSFSR, Fiddle Creek, Hennessy Creek, West End Creek and Midnight Creek. Smaller-scale water diversions will be installed to intercept hill-slope runoff around mining areas, ore processing infrastructure, growth media stockpiles, and other mining facility areas.

Figure 8-3 illustrates the Meadow Creek and Blowout Creek stormwater management plan and Figure 8-4 presents plan and cross-sections for the proposed Blowout Creek restoration; Figure 8-5 presents the Fiddle DRSF, Yellow Pine and West End pit stormwater management plan; Figure 10-2 presents the ore processing area stormwater management plan; and Figure 8-2 presents the Stibnite Lodge stormwater management plan.

Surface water channels will either be constructed in rock cut (hillsides) or lined with rock riprap and/or geo-synthetic or geomembrane liner to prevent erosion and to minimize seepage (within alluvium/colluvium or fill).

8.10.1 Tunnel

Currently, the EFSFSR runs through the historical Yellow Pine open pit, which has been a barrier to fish passage since the initial excavation of the pit in 1938. During initial site restoration, construction and development work, Midas Gold will construct a tunnel (**Tunnel**) to direct the EFSFSR around the west side of the pit (see Figure 8-5 and Figure 8-6). Managing the EFSFSR via the Tunnel will provide access for mining of the Stibnite Gold Project Yellow Pine open pit mineral reserves. The Tunnel was selected as the preferred alternative following an assessment of the environmental, technical and financial evaluation that is summarized in Appendix G, and is the only option that supports fish passage into the headwaters of the EFSFSR during mine operations.

The Tunnel will be approximately 0.8 miles long, approximately 15 feet high by 15 feet wide. The Tunnel will feature a low-flow channel to facilitate upstream and downstream fish passage and to allow maintenance access during low flow conditions. The Tunnel will have a capacity to handle a 500-year flood event. By diverting around the west side of the Yellow Pine pit, EFSFSR water will be returned to the same drainage system it comes from, thereby not affecting flow and volumes in this or other drainages (unlike the 1950s-era tunnel which diverted the EFSFSR into Sugar Creek), and reducing the Tunnel gradient to be supportive of fish passage.

Construction and operation of the Tunnel, including the inlet (upstream) and outlet (downstream) portals will be completed and maintained to foster passage for anadromous and resident fish species. Upstream passage to fish will be opened early in the Project life, once construction of the mine related facilities is complete. Use of the Tunnel is preferable to other alternatives as it supports fish passage during the operating period as opposed to waiting for the backfilling and restoration of the Yellow Pine

pit, whereas use of a pipe would prevent fish passage during the operating period (see alternatives analysis in Appendix G). A surface channel was evaluated, but the steep topography makes such an option difficult to maintain, requires a significant safety bench and access to prevent blockage from landslides or avalanches, and presents a safety hazard to mining operations in the pit below.

To support construction of the Tunnel, Midas Gold will utilize office and safety trailers, portable shop and compressor facilities, shotcrete facilities, ventilation fans, and lay-down areas for underground equipment and supplies. The ventilation fans and associated infrastructure may also be needed during operation of the Tunnel, and would remain until mine closure. Underground construction support facilities will be removed once the Tunnel is completed and commissioned. Upon removal, the area where temporary underground support facilities were placed will be reclaimed.

Key fish passage considerations for the Tunnel include water velocities associated with high flow events, water depths associated with low flow periods, and vertical height of structures over which fish would need to leap while swimming in the upstream direction. The Tunnel will be designed so that fish are able to swim through its entire length in both directions. As appropriate to encourage natural conditions and fish passage, low energy lighting will be installed in the Tunnel and set on timers to simulate daylight.

A trash rack will be constructed at or near the entrance to the Tunnel to prevent large wood and other debris from entering the Tunnel. The spaces between the trash rack rails will be sized so that adult Chinook salmon will be able to pass through them.

Migrating fish are sensitive to external stimuli; consequently, the low-flow section of the Tunnel will incorporate natural occurring materials such as pools, riffles and rocks, arranged to produce hydraulic conditions and other attributes that are typical of natural stream channels and that can be successfully navigated by fish; the rocks will provide quiescent zones where fish can rest following periods of exertion. Larger resting pools will be created within muck bays (short side tunnels placed at intervals to facilitate loading and removal of excavated rock).

At closure, the lighting and ventilation equipment will be removed, Tunnel portals will be closed and sealed through construction of concrete bulkheads inside the portals, the portal areas will be backfilled with development rock material, and the EFSFSR will be re-established over the backfilled Yellow Pine pit. See Section 14.2.2 for additional details on the Tunnel closure and Section 14.2.6 for the restoration of the EFSFSR.

The Tunnel is a prime example of one of the key net environmental benefits of the Project. This opportunity to offset legacy impacts to natural resources at the front end of the Project meets the primary policies and intent of the Presidential Memorandum and other agency guidance regarding mitigation.

In the event the Tunnel is administratively unacceptable or proves ineffective at passing upstream migrating fish, well-established techniques such as capture and haul are available to provide fish passage upstream during operations until the final reclamation of the Yellow Pine Pit and subsequent completion of the newly constructed surface channel for the EFSFSR across the backfilled pit. These techniques support an adaptive management strategy to help achieve the goal of opening the upper EFSFSR basin to anadromous fish passage.

8.10.2 East Fork of Meadow Creek Restoration

The East Fork of Meadow Creek (EFMC) is commonly and locally known as "Blowout Creek". The name "Blowout Creek" results from a past (1966) water dam failure in the upper Blowout Creek watershed, which resulted in: substantial incising, head-cutting and erosion of the EFMC; a substantial drop in the water table and impairment of the wetlands in the EFMC valley; failure of several downstream bridges; and massive initial and ongoing turbid flows into the EFSFSR water system. Appendix D provides some historical photographs of the water dam failure and Appendix E includes present day photographs of Blowout Creek.

Following the 1966 failure, multiple private and public restoration efforts were undertaken during the 1980s, 1990s, and 2000s with the goal of rehabilitating Blowout Creek (from the water dam failure) and Meadow Creek (from past mining activities as well as sedimentation from the dam failure); however, EFMC watershed continues to introduce substantial sediment loading to Meadow Creek and to the EFSFSR due to ongoing erosion within the gully and alluvial fan created by the failure. This sediment degrades the quality of the gravels for salmon redds in Meadow Creek and adds sediment into the EFSFSR below its confluence with Meadow Creek. In addition, the head cutting by the EFMC has resulted in the water table falling by more than 14 feet in the valley above the dam failure, significantly impairing the quality and functionality of approximately 20 acres of wetlands in the EFMC valley.

In recent years, spawning beds in Meadow Creek have been utilized by planted Chinook salmon. The spawning beds are located in a heavily impacted reach of Meadow Creek (due to legacy tailings discharge in the valley), and the shallow gradient of this reach is susceptible to sedimentation from the upstream EFMC erosional features. Consequently, salmon spawning redds in Meadow Creek are commonly inundated with fine sediment, significantly impairing their value.

The EFMC restoration, as described below and in the Mitigation Plan included as Appendix F, is another clear example of a natural resource restoration plan designed to establish a net benefit goal as part of the Project. These mitigation measures are designed to address existing legacy environmental harm over the long-term. Durability of these plans is a key factor in incorporating them into this Plan of Restoration and Operations. This PRO also describes necessary financial assurances associated with the mitigation measures.

As part of its construction and operation activities, Midas Gold plans to rehabilitate Blowout Creek to substantially reduce the amount of sediment generated from this watershed. Midas Gold will implement a phased approach to solving the multiple environmental impacts associated with the EFMC water dam failure that will include the following elements:

- Construct a French drain (coarse rock) in the main erosional cut feature that is a major sediment contribution source for the District. This constructed drain will route the flow of that portion of EFMC, reducing the amount of sediment entering the creek and minimizing the impact of further erosion of the head and side walls of the gully, which erosion is still occurring after 50 years and is likely to continue for many more given the topography and nature of the underlying materials in the EFMC valley;
- Construct erosion control, grade control, and water retention features near the old dam location to raise the level of the valley water table and stream base level to restore and enhance approximately 20 acres of impaired wetlands in the EFMC valley and restore the pre-reservoir conditions to encourage the formation of functional wetlands and riparian features; and,

- Establish a new surface channel from the old dam location downstream to Meadow Creek as part of mine closure to provide a stable and functional stream channel with aquatic and riparian habitat, and hydraulic and stability characteristics similar to conditions which existed in the early 1900s.

8.10.3 Meadow Creek

Section 11.8 presents plan and cross-section details of the proposed surface water channel system that is required to route Meadow Creek around the TSF, Hangar Flats Pit and the Hangar Flats DRSF. As a result of the historical mining activity in the Yellow Pine pit, Meadow Creek is not directly accessible to anadromous fish species, but hosts some salmon redds as a result of human intervention, where spawning salmon are captured, transported to Meadow Creek and released. Meadow Creek does host small populations of bull trout, cutthroat trout and hybrids (see Section 6.2.4 for additional details of fisheries).

Figure 8-3 illustrates the Meadow Creek surface water management plan; surface water channels will either be constructed in rock cut (hillsides) or lined with rock riprap and geomembrane or geo-synthetic clay liner to prevent erosion and to minimize seepage (within alluvium/colluvium or fill).

As part of channel reconstruction efforts required for the safe mining of the Hangar Flats pit, the Meadow Creek channel will be reconstructed at a steeper gradient to create more sustainable and self-cleaning spawning habitat, as well as provide healthy riparian habitat along a reconstructed flood plain feature (see Section 14.2.5 and the Mitigation Plan in Appendix F for additional details of the restoration plans). This feature will be underlain by low-permeability synthetic liner to minimize seepage of water from the channel into the Hangar Flats pit or its dewatering well system, and the resulting potential pit wall instability or loss of stream habitat through dewatering of the stream.

Surface water diversions around the active TSF will route Meadow Creek around the TSF during construction, operations and active closure activities. At closure, Midas Gold will re-establish the surface channel of Meadow Creek over the Hangar Flats DRSF and TSF to restore fisheries, wetlands, and riparian habitat disturbed during operations. See Sections 14.2.3 and 14.2.4 for additional details of these restoration activities.

8.10.4 Fiddle Creek

The Fiddle Valley is proposed for the location of a development rock storage facility (see Section 9.3); the valley was chosen for a DRSF because it does not currently host populations of anadromous fish and has little habitat that would be suitable for such species. Using this valley for a DRSF preserves more of the Meadow Creek valley, which will become suitable spawning habitat for anadromous fish (including Chinook salmon) on completion of restoration. In order to accommodate the Fiddle DRSF, the proposed Fiddle Creek water surface water channel system will be similar to the system developed for Meadow Creek (around the TSF and Hangar Flats DRSF). Figure 8-5 presents a plan view of the Fiddle Creek surface water channel system. Surface water channels will either be constructed in rock cut (hillsides) or lined with rock riprap and/or geo-synthetic clay liner to prevent erosion and to minimize seepage (within alluvium/colluvium or fill) as needed.

Surface water channels around the active Fiddle DRSF will route Fiddle Creek around the development rock storage facility during construction, operations and active closure activities. At closure, Midas Gold will re-establish the surface channel of Fiddle Creek over the Fiddle DRSF to restore fisheries, wetlands

and riparian habitat disturbed during operations (see Section 14.2.7 and the Mitigation Plan included as Appendix F for additional details of these restoration plans).

8.10.5 West End Creek

The proposed West End Creek surface water channel system is required in order to mine the ore contained within the Waste End pit, and will be similar to the system developed for Fiddle Creek but a portion of the surface water management system will be piped to minimize the potential for erosion on steeply sloping terrain. The section of West End Creek to be diverted, and everything upstream, is currently barren of fish due to the steepness of the terrain and the presence of a French drain for approximately 2,800 feet of the former West End Creek channel below the existing legacy DRSF. Figure 8-5 presents a plan view of the West End creek surface water channel system. Surface water channels will either be constructed in rock cut (hillsides) or lined with rock riprap and geo-synthetic clay liner to prevent erosion and to minimize seepage (within alluvium/colluvium or fill). A portion of the West End Creek surface water channel may include segments of pipe over steeply sloping terrain during operations to minimize the potential for erosion in those areas, and to avoid historically mining-disturbed areas.

At closure, West End Creek will feed constructed wetlands on the surface of the reclaimed West End DRSF. Remaining West End Creek flows will report to the West End open pit where a small lake will form in the north portion of the pit (see Sections 14.2.8 and 14.2.9 and the Mitigation Plan included as Appendix F for additional West End Creek closure information).

8.10.6 Hennessy Creek

The proposed Hennessy Creek surface water channel system differs from other surface water channel systems in that the creek has already been diverted via ditches on the west side of the Yellow Pine pit and routed through the legacy development rock dumps, across the county road, and then down a steep embankment to join the EFSFSR below the Sugar Creek confluence.

During the initial site restoration, construction and operating period, Midas Gold will develop and maintain several cased boreholes to intercept Hennessy Creek, above the existing diversions, and introduce the flows directly into the Tunnel. Water ingress will be managed through spacing of drill holes, baffles, energy dissipation structures, rock berms and other velocity reducing methods to ensure that fish passage in the tunnel is not impeded. This surface water system will place water from Hennessy Creek into the EFSFSR closer to its original route until the end of mining and filling of the Yellow Pine pit. Following completion of Yellow Pine closure activities, Hennessy Creek will flow over the west highwall of the Yellow Pine pit to join the restored EFSRSR.

Legacy diversions have resulted in decreased water quality in Hennessy Creek and directing the flow into the Tunnel will effectively remove a source of degraded water quality, thus mitigating the loss of that stream segment through water quality improvements.

8.10.7 Midnight Creek

Lower Midnight Creek, near the confluence with EFSFSR, has been moved due to past mining activities in the area and currently flows across legacy development rock dumps and over the highwall of the Yellow Pine Pit into the existing pit lake. The proposed Midnight Creek surface water channel system will route the lower portion of Midnight Creek, from where it currently enters the Yellow Pine pit lake, toward the south where it will enter the EFSFSR upstream of the Tunnel upstream portal. This Tunnel is needed to accommodate the mining and backfilling of the Yellow Pine pit. The Midnight Creek surface water

channel will manage flows in Midnight Creek during Yellow Pine pit operations and Yellow Pine pit backfill activities until the newly developed EFSFSR realignment (over the backfilled pit) is complete and stabilized. Following Yellow Pine pit closure activities, Midnight Creek will be restored to an alignment and functionality consistent with pre-mining conditions.

8.10.8 Yellow Pine & Hangar Flats Groundwater Wells

Midas Gold expects to implement a program to manage groundwater at both the Yellow Pine and Hangar Flats Pits. Because most of the area's groundwater occurs in alluvial materials, a series of the wells will be located in the alluvial material upstream of the pits.

Midas Gold will have the option of pumping or routing water from the wells to different locations: (1) the ore processing facility for use in processing or other beneficial site uses, (2) rapid infiltration basins located in the downstream alluvial material or in the backfilled areas of the Yellow Pine Pit to re-establish alluvial groundwater levels, and/or (3) discharge into the EFSFSR at NPDES discharge points.[7]

[7] At this time, the determination of whether EPA or the Idaho Department of Environmental Quality will be responsible for NPDES permitting in Idaho is pending, as well as what discharge water quality standards would 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 NPDES permit.

Figure 8-3, Meadow Creek and Blowout Creek Water Management Plan

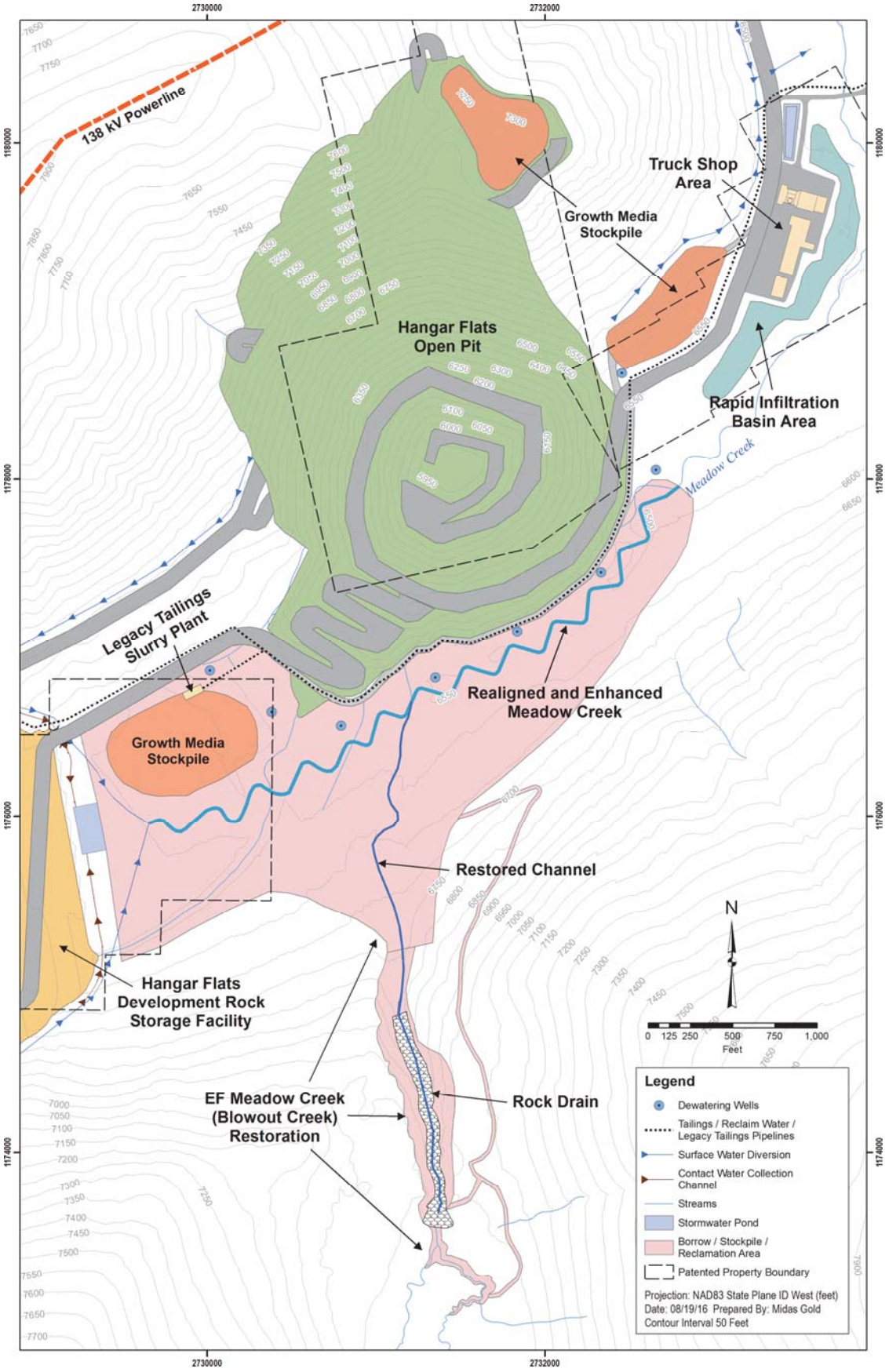


Figure 8-4, Blowout Creek Restoration Plan Details

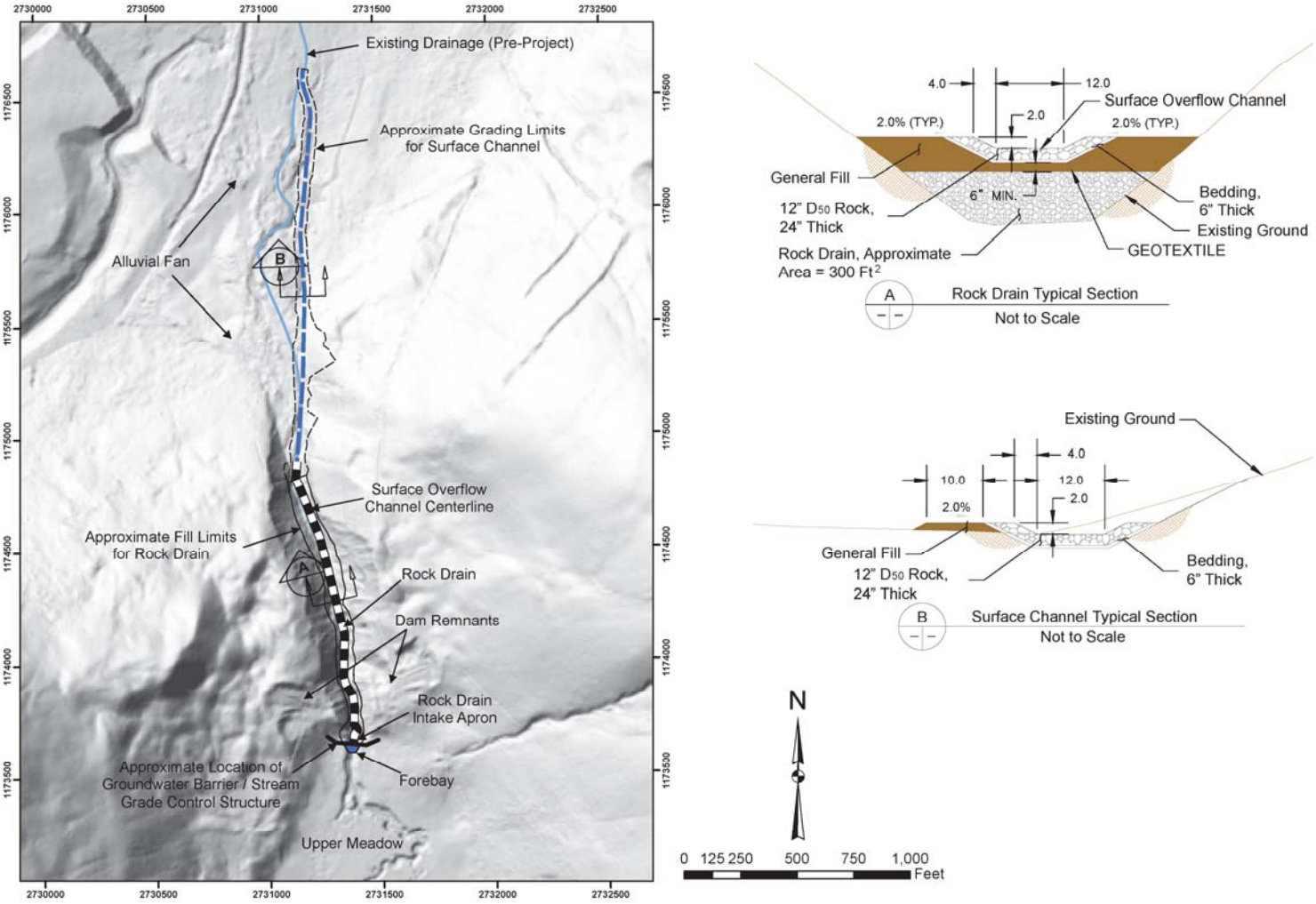


Figure 8-5, Fiddle DRSF, Yellow Pine Pit and West End Pit Water Management Plan

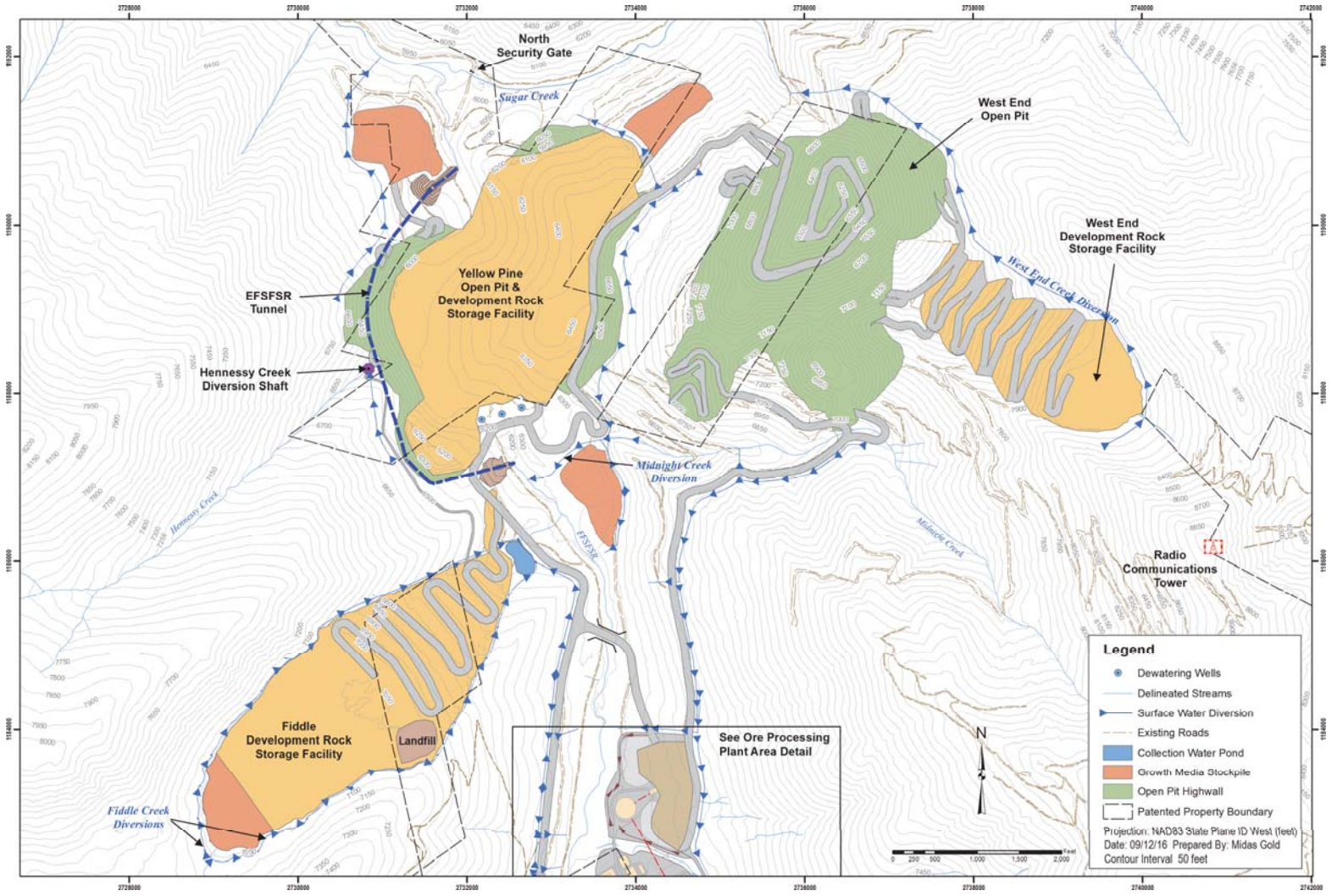
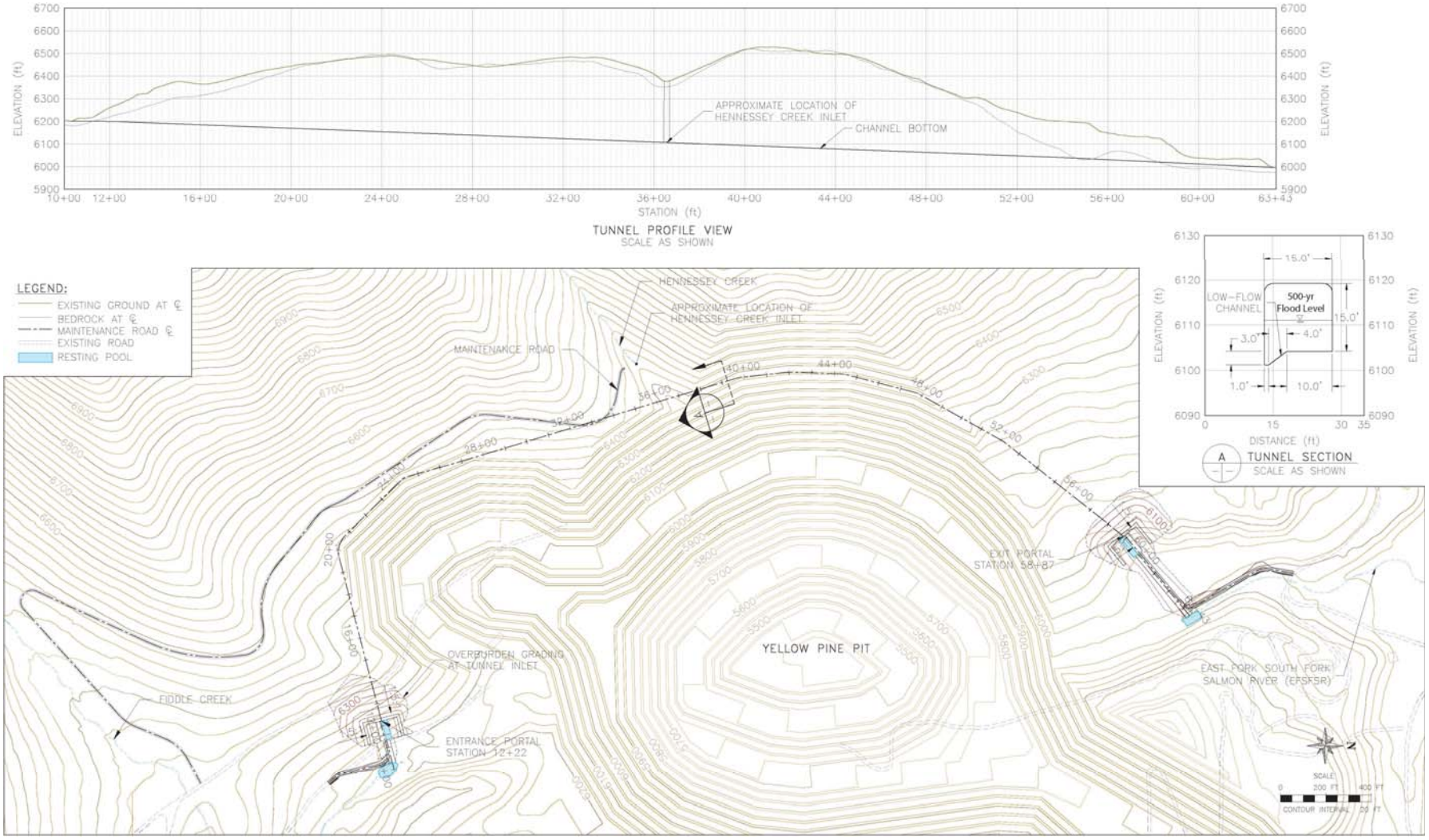


Figure 8-6, EFSFSR Tunnel Details



8.11 WATER USE & SUPPLY

The majority of the water entering the Project site will flow around the Project's facilities via natural watercourses and constructed water channels. Water will be needed for every phase of the Project, including ore processing, and some water will be necessary for consumption by employees, for fire protection and for maintenance of air quality by control and suppression of dust. Midas Gold will prioritize groundwater as the source of Project makeup water.

8.11.1 Water Rights

Midas Gold has four permanent and three temporary water rights in the district (collectively, "Water Rights"), which are detailed in Table 8-1.

Table 8-1, Water Rights Summary

Water Right ID	Type	Source	Diversion Point	Priority Date	Beneficial Use	Diversion Rate (cfs)(1)	Max Total Usage (acre-feet)
77-7285	Ground Water	Well	SE ¼ of the NE ¼, Section15, T18N, R9E	11/7/1988	Storage and Mining	0.50	39.2
77-7293	Surface Water	Unnamed Stream (Hennessy Creek)	SW¼ of the NE¼, Section3, T18N, R9E	4/19/1989	Mining	0.25	20.0
77-7122	Surface Water	EFSFSR	NW ¼ of the NW ¼ , Section 14,T 18N, R9E	4/16/1981	Storage and Mining	0.33	7.1
77-7141	Ground Water	Well	SW ¼ of the SW ¼, Section 11, T18N, R9E	6/9/1981	Domestic	0.20	11.4

Notes:
(1) cfs = flow in cubic feet per second

Additional water rights will be needed for the Project, and will be secured through direct permit application and subsequent approval of such rights from the Idaho Department of Water Resources (**IDWR**). Preliminary hydrologic modeling indicates that an estimated additional 2.39 cfs and 1,730 acre-feet of groundwater rights will need to be secured to support ore processing during the life of the Project, and an additional 0.01 cfs and 10 acre-feet will be needed for potable water supply. Under certain conditions (prolonged severe drought occurring early in operations), an estimated temporary seasonal withdrawal of up to 5.63 cfs over the present water right may be required to maintain ore processing operations. Such peak withdrawals would be uncommon and limited in duration. The water use estimates herein are the best presently available, and will be refined as additional hydrologic modeling is completed. Midas Gold plans to submit an application for permit seeking a maximum diversion rate of approximately 5.63 cfs from groundwater sources to support mining and ore processing.

8.11.2 Water Supply & Storage

Because of the remote location of the Project, Midas Gold will expand, develop and maintain water supply systems dedicated to the Project. The water supply for human consumption, mining-related activity and ore processing activity will be provided by three types of water systems: freshwater, reclaim water, and potable water.

8.11.2.1 Potable Water

Midas Gold will provide potable water for individuals working in the offices and other facilities at the ore processing facility, maintenance (truck shop), and surface support facilities for underground exploration from an existing well located near the current Midas Gold exploration housing facility in the EFSFSR drainage, below its confluence with Meadow Creek. This well has a filtration and chlorination system already installed.

A separate wellfield will be developed in the EFSFSR drainage adjacent to Stibnite Lodge to provide potable water for people using that facility. Potable water for Stibnite Lodge will be filtered and chlorinated, making it amenable for use in cleaning, cooking, showering, and drinking.

8.11.2.2 Fresh Water for Ore Processing

The majority of the water used for ore processing is recycled from the TSF; any addition of fresh water for the ore processing facility is known as make-up water. Make-up water will be supplied from groundwater wells located in the Meadow Creek drainage around the Hangar Flats pit and the EFSFSR drainage around the Yellow Pine pit. These groundwater wells will be strategically placed to allow for dewatering of the Yellow Pine and Hanger Flats pits (see Section 8.11.4 for additional detail). Any additional water needing to be withdrawn to support dewatering that is not strictly needed to support high quality makeup water will be discharged into rapid infiltration basins (**RIBs**) or discharged via an NPDES discharge point as appropriate to help balance surface water and alluvial aquifer flows (see Figure 8-8).

Water will be pumped from the sources (other than the TSF) into equalization tanks (holding tanks that allow for equalization of outflow with variable inflow) and then pumped via a buried or surface pipeline to the freshwater/firewater head tanks that will be located east of the ore processing facility site. Freshwater for the ore processing facility needs will be drawn from the freshwater tank from an elevated nozzle to allow the water in the bottom of the tank to remain available for fire suppression use, even when there is no power. These tank facilities will also have the potential to fill water trucks so that the water can be used for exploration drilling, development drilling, and road dust control, if needed. The fresh/fire water tank is sized to store approximately 360,000 gallons of water; 240,000 will be available for process uses while 120,000 gallons will be reserved for fire suppression.

8.11.2.3 Reclaim Water

Reclaim water (influenced by evaporation and augmented by precipitation water) will be pumped from the supernatant water pond at the TSF to a reclaim water tank located at the ore processing facility site. Water from the reclaim water tank will be distributed for use in the ore processing facility.

8.11.3 Water Use

Projected water use for the Project is set forth in Table 8-2. The Project water balance flow diagram is shown as Figure 8-7.

Table 8-2, Estimated Water Usage

Project Component	Estimated Water Usage[1] (gallons per minute)		
	Construction and Start-Up	Operations	Closure and Reclamation
Underground[2] and surface[3] exploration	50	50	0
Surface dust control (seasonal basis)[4]	208	416	104
Ore processing facility[5]	0	4,100	0
Potable or domestic use[6]	26	12	4
Sub-Total Use	**284**	**4,578**	**108**
Contingency (10%)	28	458	11
Total Estimated Use[7]	**312**	**5,036**	**119**

Notes:

(1) Usage projections are best estimates using currently available knowledge. Operational experience will result in usage modification and optimization.

(2) Underground usage mainly for dust control, washing walls, and removal of drill cuttings and cooling the drill bits.

(3) Water is used to lubricate drill bits and drill rods of the exploration drill rigs.

(4) Assumed that during operations 2 - 15,000-gallon capacity water trucks apply their full water load in 1 hour for 15-20 hours per day during dry periods of the year. Usage is assumed to be half that of mine operations during construction, and one-fourth the operations usage during closure and reclamation. Usage will be less if chemical dust control agent is applied to roads and during the closure and reclamation period. Numbers rounded up to the nearest five.

(5) The major water use at the Project will be for ore processing facility operations, and this value represents the estimated water usage, including recycled water. Following initial start-up, Midas Gold can begin to recycle water back to the ore processing facility from the supernatant pond and thereby reduce the amount of fresh water make-up. During operations, it is anticipated that, on average, 20% (approximately 890 gpm) used in the ore processing facility will be fresh water make-up, while the remaining process water (estimated at 80% of the total) will be recycled from within the ore processing facility itself, contact water collection points, and/or from the TSF. The total water consumed by the process averages approximately 2,300 gpm over the life of the project (included in the 4,100 gpm total above), and includes water entrained with the tailings, evaporated from the TSF, and evaporated or chemically combined in the process reactions.

(6) Potable water demands are estimated based on 50 gallons per day (gpd) per person usage on site. Personnel estimates are rounded up to nearest five and flows measured in gallons per minutes (gpm) throughout the Project life are as follows:

- For initial site restoration and construction: $\frac{(750 \text{ people})(50 \text{ gpd})}{(24 \text{ hr/day})(60 \text{ min/hr})} = 26 \text{ gpm}$
- For concurrent restoration and operations: $\frac{(350 \text{ people})(50 \text{ gpd})}{(24 \text{ hr/day})(60 \text{ min/hr})} = 12 \text{ gpm}$
- For closure and reclamation: $\frac{(100 \text{ people})(50 \text{ gpd})}{(24 \text{ hr/day})(60 \text{ min/hr})} = 4 \text{ gpm}$

(7) Storage volumes and flow capacity will be available for fire suppression, but this water would only be used in emergency situations and is not accounted for under daily gpm values.

8.11.3.1 Potable Water

Water will be necessary for potable and sanitary use at the site, in particular at Stibnite Lodge. Potable water will also be used by personnel working at the mine office, maintenance facility, underground facilities, and ore processing facility complex (see Table 8-2).

Midas Gold has an existing potable water system that is used for the onsite exploration administration, maintenance and housing facilities; this facility uses filtration and chlorination to provide potable water for workers. Midas Gold expects that filtration and chlorination will continue to be used to provide potable water for the site; the Company will expand its system to meet expected demands at the site and to comply with IDEQ regulations for a non-transient, non-community drinking water system. "Grey" water will be handled through the septic and leach field systems associated with the various site facilities (see Section 8.1).

8.11.3.2 Fire Protection Water Use

Midas Gold is committed to supporting Valley County, the Village of Yellow Pine and other emergency response teams as practicable. In the event of an emergency, Midas Gold would be able to use water stored in the onsite fresh water tank for fire protection. Emergency power is available by diesel/propane generators. This water can also be fed by gravity in the event of a power outage; see Section 8.11.2.1 for additional details.

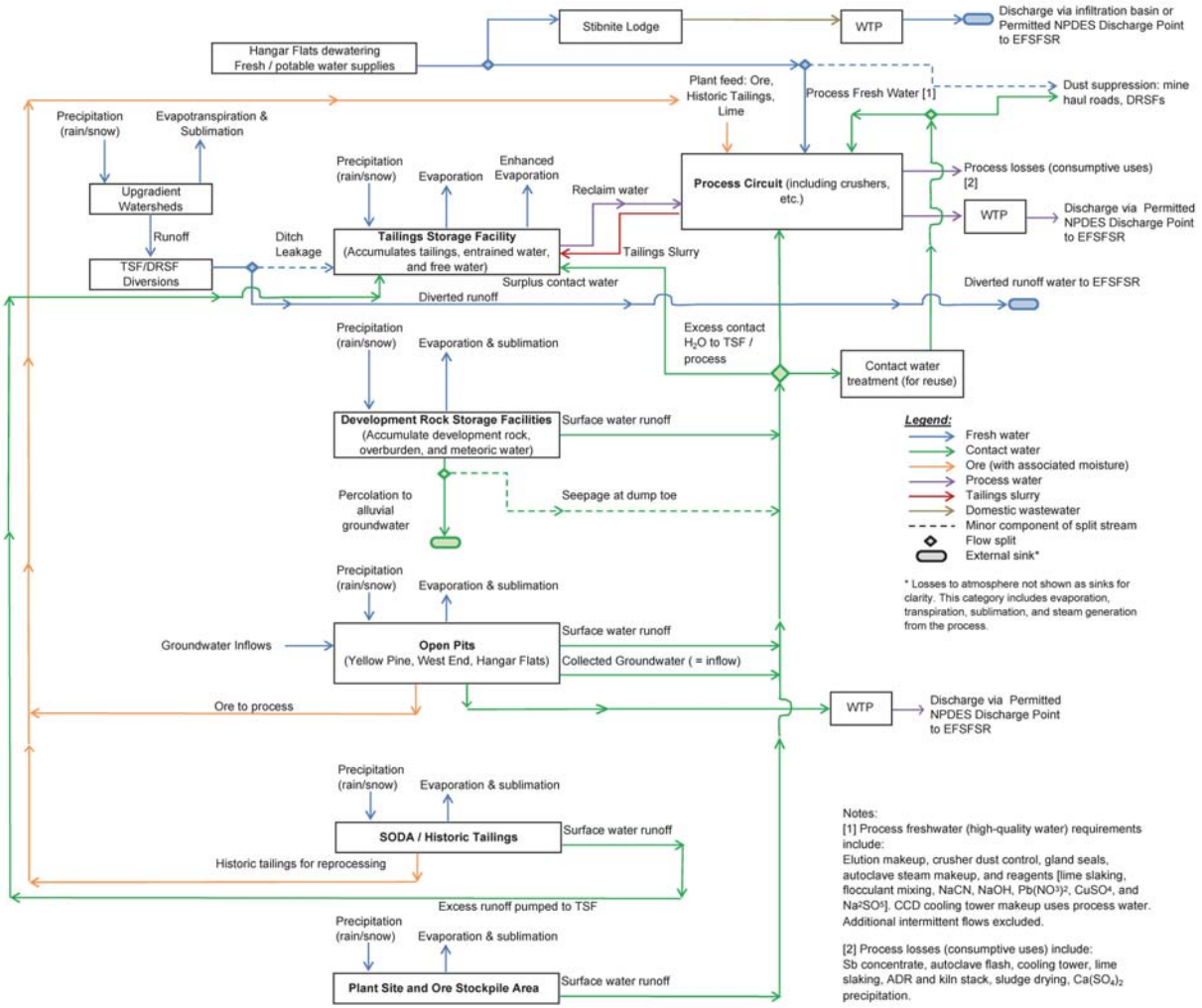
In the event of off-site forest fire, Midas Gold would supply water to professional fire fighters as available and necessary for protection of the forest.

8.11.3.3 Surface Dust Control

Another use of water at the Project, particularly during the drier summer and autumn months, will be for dust suppression (mainly on haul roads and at excavation and ore handling sites).

In some areas, water volumes used for road dust suppression will be reduced through the use of dust control chemicals, such as magnesium chloride or lignin sulfonate or other environmentally suitable products. When applied properly and maintained, these products are capable of providing dust control for extended periods and lessening the amount of water needed for dust control.

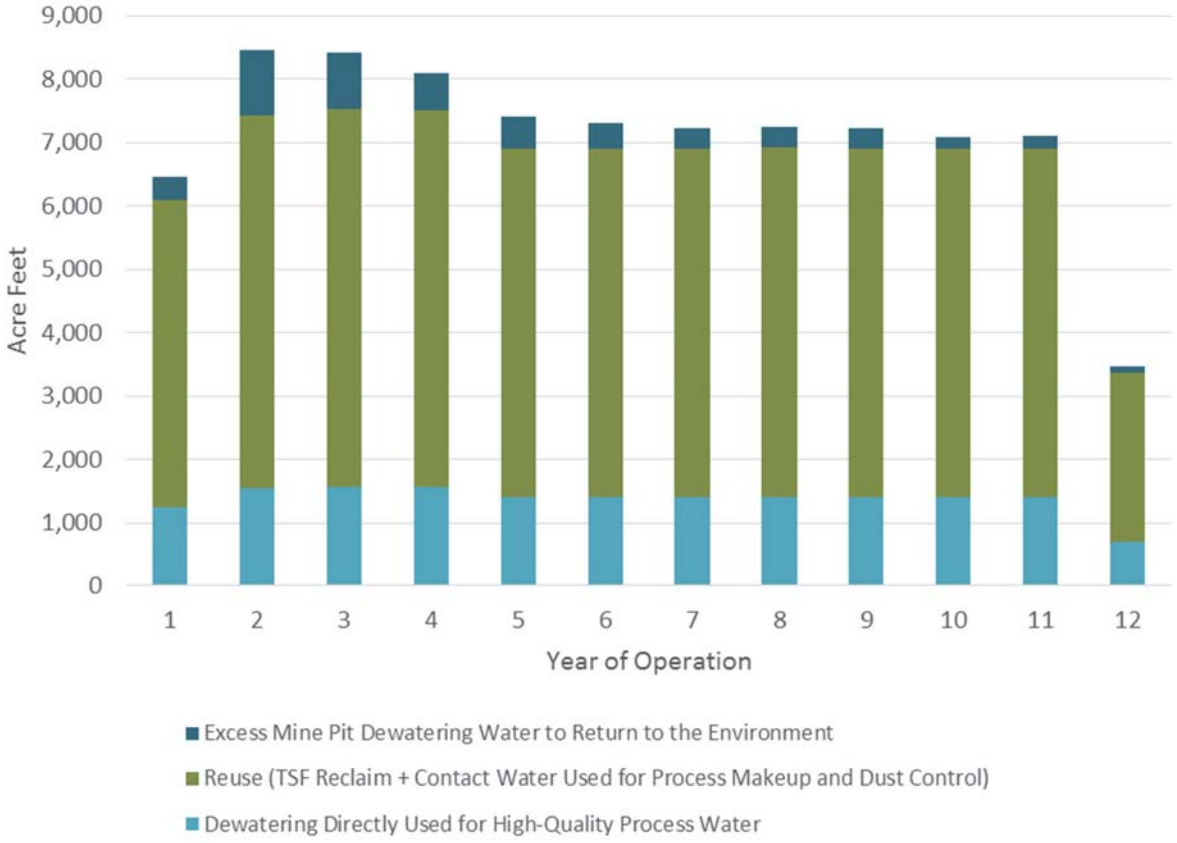
Figure 8-7, Water Balance Flow Diagram



8.11.3.4 Water for Ore Processing

The major water use at the Project will be for ore processing including the use for reprocessing of legacy tailings (see Section 10.3). The largest portion of the water used for ore processing is recycled from the TSF; see Figure 8-8.

Figure 8-8, Fresh Water Use, Recycle Water, and Excess Groundwater Infiltrated into RIBs



8.11.3.5 Surface Exploration

In the case of surface exploration activities, water is used to: lubricate drill bits and drill rods; supplement the effectiveness of drilling additives in lubricating and cooling the drill bit; provide the appropriate viscosity to assist in carrying cuttings up from the bottom of the borehole; and maintain hydrostatic pressure in the borehole. To minimize borehole wall erosion, Midas Gold's exploration drillers will use, as necessary, bentonite (water-clay) mixtures and water-soluble, biodegradable polymer mixtures that include silica (quartz) and soda ash, with lesser cellulose, anionic polymer, glass, and other naturally-occurring materials as drilling conditions warrant.

The following are typical drill additive products to be used:

Product Name	Example Manufacturer	Constituents
Quik-Gel	Baroid Industrial Drilling Products	Sodium Bentonite, silica
Soda Ash	Baroid Industrial Drilling Products	Sodium Carbonate
Quik-Trol Gold	Baroid Industrial Drilling Products	Cellulose Derivative
EZ-Mud Gold	Baroid Industrial Drilling Products	Anionic Polymer
N-Seal	Baroid Industrial Drilling Products	Glass (oxide)

Drill additives used by the exploration contractor will not contain toxic chemicals, petroleum products, or any substances considered hazardous. The products listed above do not contain toxic chemicals reportable under EPA Superfund Amendments and Re-Authorization Act (SARA) 313 regulations nor do any meet the criteria for hazardous waste as defined by EPA RCRA Hazardous Waste Classification.

Drilling generally requires the use of water at a rate of approximately 5-10 gpm, depending on drilling conditions, but much of this water comes from recycling from the drill sumps or tanks (see Section 13.1).

8.11.3.6 Underground Exploration

Water will be utilized in underground exploration activities for dust control, washing walls, and removal of drill cuttings and cooling of drill bits; much of this water will be recycled within the underground exploration activities, reducing net consumption. Potable water will also be necessary for showers and sanitary use in the change facility (dry) trailers, with a small amount of water being used in the office trailers and the shop facilities that support the underground exploration activities (see Section 13.2.4). During drier seasons of the year, Midas Gold will use water to control dust in and around the Scout portal area. Similar to surface haul road dust control, Midas Gold may use a chemical dust suppressant to minimize and conserve the use of water.

8.11.4 Water Treatment

Development of the Yellow Pine and Hangar Flats pits will require dewatering in the alluvium of the EFSFSR and Meadow Creek valleys ahead of mining in order to limit water infiltration to the pits and maintain stability of the pit slopes. High pore-water pressure from groundwater in alluvium or bedrock significantly reduces the geotechnical stability of these materials, which therefore need dewatering in order to reduce the risk of pit wall failures, which could jeopardize the safety of workers in the pit.

Dewatering water from the pits will be sent to the ore process facility as high quality make-up water. Excess dewatering water will be re-introduced to the groundwater system downstream of the Hanger Flats pit using RIBs. Midas Gold will treat water from these wells if needed to meet any applicable NPDES permit discharge standards. Components of the water treatment system design criteria will include removal of contaminants, filtration of particulates, and temperature control to avoid raising the temperature of the receiving waters. Treated water that is compliant with discharge standards will be directed to the EFSFSR as a surface discharge and/or to the alluvial groundwater down-gradient of the Yellow Pine Pit area via infiltration basins or wells.

Enhanced evaporation, using snowmaker-style misters, may be used to supplement the water treatment system, in particular to prevent surplus water accumulation in the TSF. Treatment and enhanced evaporation differ in their relative effectiveness, efficiency, usefulness in cold/wet conditions, and applicability to variable inflow water quality.

Primary treatment processes that provide broad-spectrum removal of contaminants within one or more of the water streams that the Project is expected to deal with are iron co-precipitation, membrane bioreactor technology, and reverse osmosis membrane separation. Treatment processes that can be utilized as "add-ons" to selectively treat constituents of concern include chemical oxidation and absorptive media column separation.

Iron co-precipitation is the preferred treatment alternative for mining-impacted water and dewatering well water. A secondary polishing train of absorptive media may be used to target naturally occurring low levels of mercury to levels below discharge limits as regulated by a future NPDES discharge permit.

Sanitary sewer effluent generated from the truck shop, process area, administrative buildings, warehouse, Stibnite Lodge and other buildings connected to, or serviced by, the sanitary sewer system will be processed by a membrane bioreactor system. Midas Gold has successfully permitted the use of this type of system for use at its exploration camp at Stibnite and anticipates its use in support of the Project.

A reverse osmosis membrane or similar separation system is anticipated to be needed to provide additional treatment of TSF supernatant water at the end of mine life to facilitate a timelier closure of the TSF. Active evaporation, supplemented by active water treatment, for constituents such as arsenic, antimony, nitrate and sulfate could be expected to finalize treatment of final supernatant solutions. This process will additionally utilize secondary treatment systems of absorptive media, to target naturally occurring low levels of mercury, and chemical oxidation to target metal cations like ferrous iron, thallous thallium, and residual cyanide.

The exact size and disposition of these treatment systems will depend upon discharge limits established from the NPDES discharge permit process and feasibility level engineering.

8.12 FIRE-FIGHTING EQUIPMENT & SUPPORT FACILITIES

Given the remote, forested location of the Project which has limited egress options, Midas Gold will develop and maintain a fire emergency response and evacuation plan for the site. This will part of the overall safety aspects of the Project to comply with both company and MSHA requirements.

Midas Gold will maintain capacity in the potable water tank(s) at the ore processing facility for firefighting needs (see Section 10.3). In case of a fire, water from these tanks can be gravity fed to a series of fire hydrants located at the ore processing facility and truck shop complexes and at the employee housing facility.

Midas Gold will also install and maintain fire extinguishers and fire hoses at strategic locations at the Project site facilities, such as the ore processing facility, shop, offices and employee housing facility. Midas Gold will also be able to use site water trucks, portable tanks and pumping apparatus for firefighting purposes. These mobile equipment and apparatus would also be available for wildland firefighting, if requested by the appropriate authorities.

8.13 SECURITY & FENCING

Safety is one of Midas Gold's core values and protection of workers and the general public is a guiding principle for the Project. In order to protect people, Midas Gold will install the main security gate and station at the main entrance to the Project, near Stibnite Lodge, and another (north) gate near the present bridge over Sugar Creek. A public turnaround area will be provided near the intersection of the Stibnite and Sugar Creek roads. The purpose of the gates is to prevent the public from straying into

active operational areas, where large off-road vehicles will be operating that have limited visibility, where dangerous chemicals are stored or used, or where hazardous conditions exist, such as large open pits or underground mining workings. In addition, given that explosives will be stored and used on site, and that valuable gold and silver will be produced and temporarily stored (prior to shipment) on site, security is critical for both safety and economic reasons and to comply with MSHA regulations.

The bus, employee vehicle, vendor and visitor parking area will be located adjacent to the main security gate. Space for approximately 50 vehicles plus 5 to 10 buses will be available at this area, which will be fenced and gated so that only authorized vehicles can enter the active mine and ore processing facility property. The north security gate will feature parking for approximately 20 vehicles, and turning room for vehicles with trailers. Midas Gold will control public access to the Project site as appropriate for worker and public safety and health (see Section 6.2.8).

While Midas Gold respects and appreciates wildlife, exclusion fencing (typically 7-8-foot-high chain link fencing) will be necessary to protect both wildlife and Project infrastructure. Fencing will be installed around the perimeter of the ore processing facilities (including process ponds and the substation), the TSF, the explosive storage areas, and the composting area. In addition, fencing will be installed at the main security gate and station at the main entrance to the Project site, near Stibnite Lodge as well as near the north security gate. This fencing will have warning signs posted to “Keep Out”, “No Hunting or Shooting” and, in the case of private land, “No Trespassing” and language to comply with MSHA regulations.

8.14 COMMUNICATIONS FACILITIES

Excellent communications facilities are necessary for safety, health and general well-being of employees at the Stibnite Gold Project; a two-way onsite communication system will provide rapid communications between moving equipment and ground personnel, and allow broadcast of emergency messages to personnel (whether fire, first aid, or other need), while offsite communications will allow communication with emergency services and others, if required.

Midas Gold installed a microwave relay tower in 2013 that was designed to enhance communication capacity for exploration activities, and also to allow future capacity expansion. The communications tower is located on private land atop a 9,000-foot peak to the east of the Project site, as shown on Figure 8-1. Midas Gold will upgrade the current onsite microwave telephone and internet communication system to enhance transportation safety and support restoration, construction and operations activities contemplated for the Project.

The current system provides up to 200 megabits per second (**Mbps**) of bandwidth. Upgrading the existing system for the Stibnite Gold Project will require:

- Anchoring of the existing tower pad;
- Addition of a 20-foot section to the existing tower;
- Upgrade of the antenna with a new dish or the addition of a second antenna; and,
- Installation of new high frequency radios capable of increasing bandwidth to 1,000 Mbps.

Mobile equipment will be fitted with two-way radios to allow vehicles to receive instructions, communicate with each other and with personnel on the ground, to ensure the efficient and safe operation of the site. Equipment operators will communicate their position regularly when moving from area to area in order to reduce the potential for collisions or incidents. The onsite two-way radio system will be supported by a series of repeaters placed on public and private land.

Company and contractor vehicles travelling to and from site will also be equipped with two-way radios in order to communicate their position to each other, pass on information about road conditions, and warn of public vehicles travelling on the access road without radio communication. This communication will reduce the risk of vehicle collisions and allow for rapid response in the event of an accident or incident. In order to maintain communications along the entire Burntlog route, radio repeaters will be placed at existing communications sites which may include the Meadow Creek Lookout site, the Thunderbolt Lookout communications site, the new Landmark Maintenance Facility, and on private parcels on the Stibnite property as needed. Alternative to the Meadow Creek Lookout site, a location along the ridge near the access road may be utilized. Additionally, cell towers may be located at these sites to facilitate area communications for safety and emergency communications. GPS communication and vehicle tracking systems and equipment will be utilized for certain equipment including mine support equipment, haul trucks, road graders, and some vendor equipment.

8.15 BORROW SOURCES

Midas Gold will require various types of granular borrow sources for restoration, construction, maintenance and closure related construction projects. Specific uses and materials include:

- Well-graded pit run, and crushed and screened granular materials for road base construction and road maintenance material, building and infrastructure foundations, and TSF embankment liner bedding;
- General rockfill for general earthworks needs, TSF embankment fill and primary crusher stockpile development;
- Rock riprap for energy dissipation structures, creek rehabilitation, surface water channel construction, and granular drain construction;
- Sands and silts for reclamation growth media creation; and,
- Crushed, screened, and possibly washed sands and gravels for concrete aggregate.

The majority of these materials can be sourced on site from existing development rock dumps, legacy spent heap leach ore in the SODA and Hecla heap leach facilities, and from development rock removed as part of surface mining and underground exploration activities. However, native alluvial and/or glacial materials will also be required for some applications. Specific areas of the Project site that possess large quantities of high quality native alluvial and glacial granular borrow materials that Midas Gold proposes to develop borrow areas within include:

- The alluvial soils in the Meadow Creek valley floor within the footprint of the TSF and Hangar Flats pit;
- The outwash soils in the lower Blowout Creek alluvial fan that resulted primarily from the failure of the Blowout Creek dam; and,
- Glacial soils in the Fiddle Creek valley walls, in the footprint of the Fiddle DRSF.

To obtain proper sizing of the construction rock, Midas Gold will, as necessary, use portable crushers and screening facilities.