

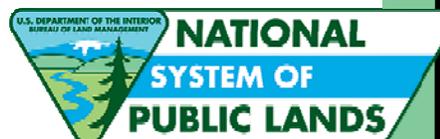
**U.S. Department of the Interior
Bureau of Land Management**

**Environmental Assessment
DOI-BLM-ID-B010-2012-0031-EA**

**Four Rivers Field Office
Gold Hill Reclamation and Mining, Inc.
Environmental Assessment**

August 8, 2012

U.S. Department of the Interior
Bureau of Land Management
Four Rivers Field Office
3948 Development Avenue
Boise, ID 83705



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Gold Hill Reclamation and Mining, Inc.

1.0 Introduction

The Gold Hill Lode was discovered in August 1863 approximately 1,000 feet southeast of the town site of Quartzburg, Idaho. From 1863 to 1938, the underground mining activities at the Gold Hill site generated approximately 180,000 tons of broken rock material that would have been considered “low grade” or “waste grade” because it did not contain sufficient gold to be economically processed at the gold price of the day. The material was hauled from the mine and placed, or stockpiled, in mine dumps (i.e., stockpiled unconsolidated material). These mine dumps are located on the now-patented lode mining claims which encompass the town site of Quartzburg and on adjacent public lands to the south.

In 2009, the Gold Hill site was leased to Gold Hill Reclamation and Mining, Inc. (Gold Hill). Most of the site is on private land; however, a 1.1 acre area under lease is located on Bureau of Land Management (BLM) administered lands. Due to high gold prices and improved recovery techniques, Gold Hill recognized the economic potential of the roughly 180,000 tons of former mine dumps from early mining activities and began processing material by means of gravity separation in 2011 (Photo 1). To date, Gold Hill has moved and begun processing approximately 100,000 tons of the mine dump material formerly residing on the patented property. The removal of historic mine dumps by excavation and processing is in line with the restoration goals of state and federal agencies (Section 1.5). Mine dumps are potential sources of environmental contaminants and are an unnatural feature on the landscape.

1.1 Need for and Purpose of Action

Gold Hill has submitted a Mining Plan of Operations (MPO) for BLM review and approval, which includes mining the 1.1 acre BLM site that contains a mine dump from the historic Gold Hill Mine (see Appendix A). The entire site contains a mine dump and, therefore, has been previously disturbed by historic lode mining operations.

On May 16, 2012 Gold Hill submitted a MPO in accordance with the 1872 Mining Law. The 43 Code of Federal Regulations (CFR) 3809 (411 (a) (3)(ii)) state that an environmental review, required under the National Environmental Policy Act (NEPA), is to be completed prior to approving mining operations proposed under a MPO.

BLM reviewed the MPO submitted by Gold Hill and identified potential action alternatives. The action alternatives should meet the following objectives:

- Restore the landscape to its pre-mining topography
- Restore vegetation conditions through use of BLM-approved seed mixes
- Implement measures to protect public safety on haul roads
- Maintain hydrologic function in Granite Creek

- Maintain acceptable water quality in Granite Creek
- Maintain at current state or improve fisheries habitat in Granite Creek
- Improve slope/soil stability in proposed action area
- Comply with all federal, state, and local laws and regulations
- Provide for standard operating procedures and best management practices to prevent or mitigate undue and unnecessary degradation

1.2 Summary of Proposed Action

The existing mine dumps would be removed from the 1.1 acre BLM site and hauled off site to be processed. The 1.1 acres includes additional mine dumps that have been used as road base for the existing Granite Creek Road and the mine dumps immediately to the east of Granite Creek Road that Gold Hill intends to mine on BLM property. The BLM reviewed Gold Hill's MPO and developed Standard Operating Procedures (SOP's) that would prevent undue or unnecessary degradation to public land.

1.3 Location and Setting

The Boise Basin is located approximately 30 to 40 miles northeast of Boise, Idaho and is accessed by State Highway 21. It consists of private, state, and federal (BLM) lands surrounded by the Boise National Forest. Idaho City, the county seat of Boise County, is located 38 miles from Boise on Highway 21. Quartzburg lies 16 miles northwest of Idaho City in the northwest section of the Boise Basin along Granite Creek. The BLM manages sections in the Boise Basin where the towns of Centerville, Placerville, Pioneerville, and Quartzburg were originally located (see Section 6 for maps).

Gold Hill's proposed operations would be conducted in Section 9 of Township 8 North, Range 4 East, Boise Meridian. The mine dump is adjacent to Granite Creek Road, which is maintained by the County and is the main access to Quartzburg (see Section 6 for maps).

1.4 Conformance with Applicable Land Use Plan

The proposed action would conform to the July 1988 Cascade Resource Management Plan (RMP) (U.S. Department of Interior 1988). The project area lies within an area that, because of adjacent historic mining activity, has been classified L-1 for limited Use in Historical, Cultural or Paleontologic Sites/Areas.

“The general policies for managing a limited use class are to fully protect and enhance sensitive and significant resources, while providing for other compatible uses. These areas will be managed for relatively low intensities of use and with strict environmental controls to protect sensitive and significant values” (Page 21).

“Goals and Guidelines: Emphasis will be on protection of these values. Livestock grazing generally may be permitted where established. Utility ROW development generally will not be permitted. Timber management activities will be prohibited on those sites added to the National Register of Historic Places. Withdrawal from mineral entry may be sought and limitations on other mineral operations may be imposed. Public lands within these areas will remain in public

ownership. ORV recreation use may be either limited or closed depending on the values needing protection” (Page 21).

To date, no L-1 areas identified in the Boise Basin or specifically in the project area that lies to the south and adjacent to the private/patented Quartzburg historic mining area have been withdrawn from mineral entry, nor has the proposed 1.1 acre project area, in whole or in part, been added to the National Register of Historic Places.

“Consistency with Other Plans, Minerals (Energy and Nonenergy): The local land use plan supports the development of mineral resources in a manner compatible with environmental goals (protects streams and minimizes unfavorable visual impacts).” (Page 63)

“Implementation, Minerals (Energy and Nonenergy): Procedures outlined in current laws and regulations (federal and state) will be applied to all applications. Mineral reports and environmental assessments will be prepared and appropriate clearances obtained. Standard and special stipulations will be followed.” (Page 65)

1.5 Relationship to Statutes, Regulations, and Other Requirements

The following section outlines statutes, regulations, and other requirements that apply to the Proposed Action.

National Environmental Policy Act (NEPA)

Any action conducted on federally-administered lands or an action that utilizes federal dollars must be evaluated to determine if significant economic, social, or environmental effects may occur as a result of the Proposed Action. The assessment of the Proposed Action must also identify a reasonable range of Action Alternatives and the associated environmental effects of the Actions.

Federal Land Policy and Management Act

The BLM is mandated by the Federal Land Policy Management Act of 1976 to manage for multiple uses on BLM-administered lands. Land use planning is based on multiple use and sustained yield principles. This includes grazing, mining, land sales, acquisitions, and exchanges.

Mining Law

The 1872 Mining Law [30 United States Code (U.S.C.) 22 *et seq.*] states that a person has a statutory right consistent with other laws and Departmental regulations to go upon the open (unappropriated and unreserved) public land for the purpose of mineral prospecting, exploration, development, and extraction.

The Federal Land Policy and Management Act (FLPMA) of 1976 (Public Law 94-579) require that the Secretary of the Interior regulate mining operation to prevent undue or unnecessary degradation of the public lands.

Clean Water Act

Section 313 of the Clean Water Act of 1972 requires federal agencies be in compliance with all federal, state, interstate, and local requirements. In Idaho, the Idaho Department of Environmental Quality (IDEQ) implements the Clean Water Act. Additionally, the IDEQ develops total maximum daily loads (TMDL's) for water bodies.

Migratory Birds

Executive Order 13186 expressly requires that Federal agencies evaluate the effects of proposed actions on migratory birds (including eagles) pursuant to the NEPA “or other established environmental review process;” restore and enhance the habitat of migratory birds, as practicable; identify where unintentional take reasonably attributable to agency actions is having, or is likely to have, a measurable negative effect on migratory bird populations; and, with respect to those actions so identified, the agency shall develop and use principles, standards, and practices that would lessen the amount of unintentional take, developing any such conservation efforts in cooperation with the United States Fish and Wildlife Service (USFWS).

Cultural Resource Laws and Executive Orders

BLM is required to consult with Native American tribes to “help assure (1) that federally recognized tribal governments and Native American individuals, whose traditional uses of public land might be affected by a proposed action, will have sufficient opportunity to contribute to the decision, and (2) that the decision maker will give tribal concerns proper consideration” (U.S. Department of the Interior, BLM Manual Handbook H-8120-1). Tribal coordination and consultation responsibilities are implemented under laws and executive orders that are specific to cultural resources which are referred to as “cultural resource authorities,” and under regulations that are not specific which are termed “general authorities.” Cultural resource authorities include: the National Historic Preservation Act of 1966, as amended (NHPA); the Archaeological Resources Protection Act of 1979 (ARPA); and the Native American Graves Protection and Repatriation Act of 1990, as amended (NAGPRA). General authorities include: the American Indian Religious Freedom Act of 1979 (AIRFA); the National Environmental Policy Act of 1969 (NEPA); the Federal Land Policy and Management Act of 1976 (FLPMA); and Executive Order 13007-Indian Sacred Sites. The proposed action is in compliance with the aforementioned authorities.

Southwest Idaho is the homeland of two culturally and linguistically related tribes: the Northern Shoshone and the Northern Paiute. In the latter half of the 19th century, a reservation was established at Duck Valley on the Nevada/Idaho border west of the Bruneau River. The Shoshone-Paiute Tribes residing on the Duck Valley Reservation today actively practice their culture and retain aboriginal rights and/or interests in this area. The Shoshone-Paiute Tribes assert aboriginal rights to their traditional homelands as their treaties with the United States, the Boise Valley Treaty of 1864 and the Bruneau Valley Treaty of 1866, which would have extinguished aboriginal title to the lands now federally administered, were never ratified.

Other tribes that have ties to southwest Idaho include the Bannock Tribe and the Nez Perce Tribe. Southeast Idaho is the homeland of the Northern Shoshone Tribe and the Bannock Tribe. In 1867 a reservation was established at Fort Hall in southeastern Idaho. The Fort Bridger Treaty of 1868 applies to BLM's relationship with the Shoshone-Bannock Tribes. The northern part of the BLM's Boise District was also inhabited by the Nez Perce Tribe. The Nez Perce

signed treaties in 1855, 1863 and 1868. BLM considers off-reservation treaty-reserved fishing, hunting, gathering, and similar rights of access and resource use on the public lands it administers for all tribes that may be affected by a proposed action.

1.6 Scoping and Development of Issues

A meeting was held on May 31, 2012 with Four Rivers Field Office Interdisciplinary Team staff to identify relevant issues to the Gold Hill MPO. In addition, the public was notified on June 6, 2012 when the BLM listed the project for 2012 on the ePlanning [NEPA Register](https://www.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do) webpage¹ (“Interested Public Letter”). The Interested Public Letter (Scoping/Information Package) was also mailed to interested individuals and organizations on June 6, 2012. Comments were received from the Idaho Conservation League and Boise County.

The following preliminary issues were discussed at the May 31, 2012 meeting and several of these issues were raised in the comments received during scoping for the NEPA document:

- ***Air Quality*** - Air quality could be impacted on a short-term basis from increased particulates as material is staged and loaded for hauling offsite and from increased truck traffic on Granite Creek Road.
- ***Cultural/Historic*** - Items of historical importance could be un-earthed in the process of digging and loading the dump material.
- ***Vegetation/Noxious Weeds/Invasive Species/Soils*** - Loss of native vegetation could occur if machinery strays from existing road(s) and/or beyond the reclamation area. Introduced seeded grasses could spread into adjacent plant communities or occupy the 1.1-acre reclamation area (shifts in community components from native to seeded/introduced species). Noxious weed populations could increase in number and size. Disturbance of the soil horizon in the original topography could result in increased rill erosion and accentuated waterflow paths.
- ***Wildlife/Migratory/Threatened, Endangered or Candidate Animal Species*** - Proposed activities could disturb animals during nesting, brood-rearing, and migration periods. However, no federally endangered, threatened, or candidate animal or plant species would be affected by the implementation of the Proposed Action.
- ***Wetlands/Riparian/Water Resources/Quality/Fisheries*** - Increased sediment in Granite Creek could affect water quality and fish spawning. Temporary bank failures on Granite Creek could alter the hydrology and increase overland flow. Reduction of current rill erosion could affect water quality and fisheries habitat.
- ***Lands/Access/Recreation/Visual Resources*** - Temporary road closures to accommodate heavy truck traffic could affect recreational activities. Removal of the mine dump

¹ https://www.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do

material and subsequent reclamation could affect visual resources. There were no potential issues or effects to public health and safety identified as a result of the proposed action.

The proposed project was presented to the Shoshone-Paiute Tribe at a June 21, 2012, Boise District Wings and Roots Native American Campfire consultation. The tribe did not request any additional consultation.

2.0 Description of the Alternatives

2.1 Alternatives Considered But Not Analyzed in Detail

The 43 Code of Federal Regulations 3809 limits the MPO alternatives submitted by the mining claimant. Alternatives that propose moving the claimant's operations to another area are not reasonable because the material to be mined and the mining claims are tied to a specific tract where the mine dumps are located. As such, the mining regulations require that BLM review the submitted MPO to identify and mitigate impacts to insure that unnecessary or undue degradation to public lands does not occur.

2.2 Description of Proposed Action and Alternatives

2.2.1 Alternative A - No Action/Continue Present Management

Gold Hill would manage the mine dump site in its current, abandoned state. The waste dump material is estimated at 36,000 tons, ranges in thickness from 1 foot to 25 feet deep, and encompasses an area of 1.1 acres, Photo 1. The section of Granite Creek Road that traverses the project site and the mine dump would remain in its current state. There is currently no existing use of the mine dumps except for the use of Granite Creek Road to access this area.

2.2.2 Alternative B - Proposed Action

Gold Hill, as outlined in the MPO (see Appendix A), would excavate and haul 36,000 tons of unconsolidated rock material to a processing site on private lands a few miles to the south of the proposed project area.

Gold Hill proposes to use a Caterpillar Dozer to push the material down slope into a live loading pile, where it would be loaded by a track-mounted excavator into six haul trucks and transported offsite. The haul trucks would loop on approximately 20-minute cycles. The removal portion of the proposed project is estimated to take approximately fifteen consecutive days and would take place sometime between August 31, 2012 and September 30, 2012. Reclamation would take an additional three days to complete.

The material would be removed down to the original paleo-surface/soil horizon. The soil underlying the existing pile would be left in place and remain undisturbed. After on-site excavation and hauling activities are complete, Gold Hill would apply a BLM-approved seed mixture to the disturbed area and place wattling to control erosion, as needed. The reseeding and erosion control measures would be performed by Groundfx, a company responsible for reseeding and slope stabilization on Gold Hill's adjacent private property. An Environmental

Protection Agency (EPA) regulated Storm Water Pollution Prevention Plan (SWPPP) would be implemented that addresses water quality issues on Granite Creek. A SWPPP was implemented on the adjoining private parcel to the north of the BLM parcel, which was mined by Gold Hill. The SWPPP for the project on BLM land would be implemented with similar erosion and sedimentation measures put in place to control potential sedimentation into Granite Creek.

Proposed project activities would use Granite Creek Road to access the mine dump. Granite Creek Road currently exists as mine dump material above the natural road base. After on-site excavation and hauling activities are complete, Gold Hill would re-construct the Granite Creek Road to its natural road base using Best Management Practice's (BMP's) for road specifications outlined below.

The SWPPP contains the following BMPs to prevent erosion and stormwater discharge:

- Stormwater is prevented from coming in contact with polluting materials to the extent possible
- Structural control measures are used together to minimize pollutants from entering the stormwater
- Graded berms are in place along all sections of roadway near the West Fork of Granite Creek and around the Mud Flats processing facility
- All areas adjacent to the West Fork of Granite Creek are lined with perimeter controls (silt fencing or fiber rolls along the downslope toe of disturbed areas)
- Disturbed slopes would be regraded, reseeded with a BLM-approved seed mix, and protected to prevent erosion

The site would be monitored until reclamation objectives are met. The following Stipulations, Standard Operating Procedures, and Post-Construction Reclamation Treatments and Objectives would be implemented.

2.2.2.1 Standard Stipulations

1. The plan of operations would be conducted in accordance with 43 CFR Subpart 3809 - Surface Management under the Mining Laws.
2. The approved mining and reclamation plan and environmental assessment would be part of this plan of operations as special conditions governing all operations under the plan of operations.
3. Claimant/operator would not mine in the area covered by this plan of operations without a financial guarantee (43 CFR Section 3809.582) that has been approved by BLM's Authorized Officer.
4. If claimant/operator stops conducting operations then subchapter 3809.424 of 43 CFR must be followed. Requirements may include the removal of all equipment, personal property, and other improvements from the area and reclaim the area according to the approved reclamation plan.
5. Claimant/operator would indemnify and save harmless the United States of America against any liability for damages to life, person, or property arising from the use of the lands under this plan of operations.

6. This plan of operations does not grant the claimant/operator exclusive use of the public lands identified herein.
7. No construction waste material, other materials or debris may be hauled onto the site, stockpiled or used as fill material.
8. Claimant/operator would maintain the area free of trash and refuse during operations and termination of the contract.
9. The claimant/operator would ensure that vehicles and equipment used in his operation are free of vegetative material before entering the project area to mitigate the spread of noxious weeds.
10. Whenever possible, reclamation would proceed concurrently with excavation.
11. For final reclamation, the claimant/operator would follow the approved reclamation objectives outlined in the Special Stipulations and as part of the Post-Construction Reclamation Objectives outlined below and developed initially as part of the MPO in Appendix A.
12. Claimant/operator would be responsible for suppression costs of any fires resulting from actions under this permit or contract.
13. Proper mufflers and spark arresters would be maintained on equipment used in this project to reduce noise levels and to limit the potential for fires. In addition, the claimant/operator and any contractors or subcontractors would maintain and have on the site adequate fire prevention and extinguishing equipment including water, fire extinguishers, and shovels.
14. The subject site and haul roads would be sprayed as necessary with water or other suitable material to hold down the dust created by these activities.
15. Claimant/operator would follow the SWPPP and its BMPs for this project.
16. Claimant/operator would immediately notify the BLM's Authorized Officer of any human remains unearthed during mining operations. (25 USC 3002 Section 3 (d) "*Inadvertent discovery of Native American remains and objects*").
17. The BLM Authorized Officer may cancel the plan of operations if the claimant/operator fails to observe its terms and conditions (to include these stipulations), or if the plan of operation has been issued erroneously (43 CFR §3809.602).
18. Any deviations from the approved MPO (Appendix A) would be subject to approval by the BLM authorized officer prior to such actions.

2.2.2.2 Special Stipulations

1. Claimant/operator would monitor disturbed and reclaimed areas and notify the BLM's Authorized Officer of the presence of any noxious weeds. Monitoring would occur each year in spring for a minimum of 3 years along Granite Creek Road leading to the project site and within and adjacent to the 1.1 acre BLM parcel with mine dumps proposed to be removed and hauled off site. The 1.1 acre BLM parcel would be reclaimed as well with appropriate seeding based on BLM seed mix recommendations. The reseeded of the 1.1 acre BLM parcel would also be monitored once each spring for a minimum of 3 years to evaluate the success of reseeded. Success means that within 3 years no visible erosion of the 1.1 BLM parcel would be noticeable during spring monitoring.

2. Any natural vegetation between the road and Granite Creek would be protected from disturbance and erosion by silt fencing.
3. Claimant/operator would operate no more than three to eight tractor trailer vehicles per day from 8:00 am to 5:00 pm, Monday through Friday and noting school bus hours of 7:00 am to 8:00 am and 3:15 pm to 4:40 pm.
4. Claimant/operator would operate between March 1 and December 25, 2012 and be closed on federal holidays.
5. Claimant/operator would take all possible noise mitigation measures and would keep noise level at 65 decibels or less from the edge of the project area.
6. Claimant shall work with a three person neighborhood task force to mitigate concerns, per request of Boise County.
7. Claimant shall submit an analytical report immediately after operations are complete that outlines water quality downstream, air and soil quality, and noise.
8. Signs would be posted during excavation and hauling operations to warn the traveling public and OHV users of equipment use along and near the Granite Creek Road.
9. Claimant/operator would purchase a wood permit from the BLM before removing the three standing ponderosa pine trees greater than 12 inches diameter breast height (dbh) in the mine dump area.

2.2.2.3 Post-Construction Reclamation

Objectives

1. Increase stability of the slopes and soil to ensure public safety and maintain acceptable water and fisheries quality in Granite Creek.
2. Promote the growth of re-introduced native vegetation that would blend with existing, undisturbed vegetation.
3. Prevent the introduction or spread of noxious weeds or invasive species.
4. Improve visual resources by restoring the land to its previous topography and natural vegetation.

Vegetation Treatments and Objectives

Treatments*

Recommended treatments include, but are not limited to the following:

1. Seed perennial forbs and grasses. Plant seedlings and/or seed shrubs (e.g., mountain sagebrush, basin big sagebrush, snowberry, and antelope bitterbrush). Seeds and/or seedlings would be from locally collected or locally adapted (if locally collected is infeasible) stock. Overall rate of seeded plants should total approximately 10 pounds. The use of hydro mulch and mycorrhizal inoculants is also recommended.

Recommended species and rates (seeding)

<i>Life Form</i>	<i>Species</i>	<i>Pounds/acre</i>
Grasses	Idaho fescue	4
	Bluebunch wheatgrass	3

Forbs	Penstemon	1
	Lupine	1
	Arrowleaf balsamroot	0.5
	Lewis or blue flax	0.1
Shrubs	Big sagebrush (mountain and/or basin)	0.2
	Snowberry (common or mountain)	0.2

2. Treat any noxious weeds within the reclaimed area. Inventory weeds prior to reclamation and treat (2012). Treat any infestations over the subsequent three springs and/or summers as necessary (2013, 2014, and 2015). Weed treatment would include BLM approved chemicals and adhere to all manufacturers' recommendations.

Objectives

1. Shrubs = 10% cover; herbaceous plants (forbs and grasses) = 50% cover.

- **Monitoring** – measure basal gap of vegetation along 2 100-meter transects bisecting the treatment area.

2. Eliminate (or contain if elimination is not possible) existing noxious weeds from reclamation area to prevent weed expansion and minimize future infestations.

- **Monitoring** would include a complete survey of the 1.1-acre reclamation area following treatment(s) (see Special Stipulations, page 8 of EA).

*Treatments would be further refined (i.e. techniques and rates of application, etc.) via consultation between BLM specialists and contractor prior to reclamation. All monitoring and inventory results would be provided to BLM annually. Overall efficacy of treatments would be evaluated by BLM specialists after the 3-year term. If results are unsatisfactory, further reclamation efforts may be negotiated and implemented.



Photo 1 - Gold Hill mine dump materials to be removed from BLM parcel located within the right side of the photo. The left side of the photo shows post mine dump removal conditions where mine dump materials have been removed within the private land located adjacent to the BLM site containing mine dumps.

3.0 Affected Environment and Environmental Consequences

General Setting

The proposed mining site is located on BLM-administered lands (all surface and mineral rights reserved) with active unpatented mining claims. The site is located on a west-facing open hillside, east of Granite Creek Road and west of Granite Creek. Access to the project area is gained through the Boise National Forest from Granite Creek Road to the south. Granite Creek Road is accessed by Harris Creek Road/Centerville Road (National Forest Road 307).

The project area ranges in elevation from approximately 4,600 feet to 4,700 feet. Granite Creek runs south on the eastern boundary of the project area and drains to Grimes Creek and Mores Creek, tributaries of the Boise River.

3.1 Soils

3.1.1 Affected Environment – Soils

The area contains one soil type, Charters-Shirts-Kosh complex, which is classified as 25 to 65 percent slopes. The surrounding topography is hilly and relatively steep, but soils in the area have low potential for erosion (i.e., low K-factors; 0.1 – 0.17). The area also has low potential for biological soil crusts. Soil samples taken from tailings piles below Gold Hill did not contain elevated concentrations of any constituents of concern to human or environmental health (Idaho Department of Environmental Quality 2004a). Rill erosion has been observed in the project area, especially in areas of the mine dumps along Granite Creek Road.

3.1.2 Environmental Consequences – Soils

3.1.2.1 Alternative A - No Action/Continue Present Management

Wind and water erosion could occur from vehicle traffic, recreation, and weather on existing roads, trails, and cross-country areas. The lack of vegetation would cause wind and water erosion to remain consistent or increase over time. Concentrations of metals that are found in soil samples would likely remain consistent or increase over time as rain and wind erodes mine dump materials into soils.

3.1.2.2 Alternative B – Proposed Action

Soil profiles, primarily surface and subsurface organic material that developed since historic mining activities, would be removed in excavated areas. Approximately 1.1 acre of disturbed areas would be susceptible to wind and water erosion. Erosion as a result of the Proposed Action would be considered minor due to: the size of the project area; BMP's used to control erosion; and the Post-Construction Reclamation Objectives. Soil movement from disturbed areas would generally be expected to be captured in adjacent forested areas or by erosion protection methods (i.e., straw wattles, geotextiles) utilized around the project area boundary which includes Granite Creek. Removal of the dump mine material would eliminate current rill erosion there, however, disturbance of the soil horizon in the original topography could result in increased rill erosion, accentuated waterflow paths, and pedestalled grasses. Reclamation efforts would minimize or eliminate erosion from disturbed areas after seeded species become established, generally within two to three growing seasons. Soil stabilization is anticipated after successful seeding efforts.

3.2 Vegetation

3.2.1 Affected Environment – Vegetation

In 1931 a wildfire destroyed vegetation in the region of Quartzburg, including the project site. Regrowth in areas adjacent to the project site are characterized as Mountain Shrub and Conifer cover types (PNNL 2001). Specifically, the forested habitat type is Douglas-fir/mallow ninebark-ponderosa pine phase. Vegetation in the disturbance/reclamation area (i.e., the mine dump) consists of less than 10 saplings to pole-sized ponderosa pine and Douglas-fir with sparse herbaceous vegetation (less than 5% total cover). No reclamation activities were initiated to re-establish vegetation after historic mining activities.

Two noxious weed species were documented in the area and on the project site, spotted knapweed and rush skeletonweed. The BLM Four Rivers Field Office considers spotted knapweed a high priority noxious weed (early detection rapid response/control).

Based on a May 17, 2012 field survey by a Stantec senior biologist and BLM records, no federally listed threatened, endangered, candidate plant species, or other BLM special status plants or habitat are located in the project site; therefore none would be impacted by the project.

3.2.2 Environmental Consequences – Vegetation

3.2.2.1 Alternative A - No Action/Continue Present Management

The current vegetation community of sparsely vegetated conifer trees would persist. Some re-establishment and growth of conifer species could occur over the long term (i.e., greater than 3 years). Because the area is in a degraded condition and has not been reclaimed, it would remain susceptible to new infestations of noxious and non-native plant species spread by outside sources (e.g. livestock, off-highway vehicles, wildlife). Abundance and diversity of noxious weed species would remain static or increase over the short term (i.e., less than 3 years) and long term.

3.2.2.2 Alternative B – Proposed Action

Vegetation would be directly impacted in the short term as a result of the Proposed Action. Up to 1.1 acres of sparse vegetation (less than 5% total cover) would be disturbed where Gold Hill excavates mine dump material. No vegetation would be affected along Granite Creek Road. Approximately three trees greater than 12 inches dbh would be removed from the mine dump site.

Loss of vegetation could occur if project machinery strays from existing roads and if introduced seeds are allowed to spread into adjacent areas. Sparks from mining equipment could start fires which would reduce or eliminate herbaceous vegetation over the short term and shrubs and trees over the long term. Implementing safety precautions would reduce the potential for fires from mining activities, especially during the fire season. Specific noxious weed control to avoid spreading of these species would be implemented during the removal of the mine dumps. In the long term, direct positive impacts would occur as a result of the Proposed Action. In reclaimed areas, seeded grasses and forbs would become established within two to three growing seasons. Shrubs would become established in two to four years and reach full size within 10 to 20 years. Trees would be established primarily by natural processes and would take from several years to decades to reach pre-disturbance size and diversity. Disturbed areas would be most susceptible to the establishment and spread of noxious weeds in the short term (i.e., first year) until seeded species become established. Monitoring for noxious weed species would help ensure early treatment and minimize the potential for weeds to become established and spread, which would occur each spring for a minimum of 3 years. In the long term, noxious weed species would decrease in abundance and diversity.

3.3 Wildlife/Migratory Birds/Special Status Animals

3.3.1 Affected Environment – Wildlife/Migratory Birds/Special Status Animals

Mammals

The lands surrounding the project site provides habitat for big game species including elk and mule deer. Due to limited vegetative cover within the project site, foraging and sheltering habitat for big game is likely marginal. The open hillside on the south-facing slope may be suitable winter habitat for thermoregulation. The project site may represent a travel corridor or connect adjacent areas of more suitable habitats. Habitat for other mammals including small mammals such as rodents occurs in the project site. Due to the project site being previously disturbed from mining activities and having limited vegetative cover, habitat for most mammals is marginal.

Migratory, Special Status, and Other Birds

The project site and surrounding area provide foraging and breeding habitat for many species of raptors (e.g., red-tailed hawk), songbirds (e.g., American robin, western tanager, northern flicker), and game birds (e.g., dusky grouse). Due to the site having limited vegetative cover, foraging and breeding habitats are likely limited or marginal. The available trees and shrubs that are found in the project area would provide nesting or foraging (i.e., perching) sites for birds. Forested areas adjacent to the project site would provide more suitable foraging and breeding habitats.

Reptiles and Amphibians

Common reptile and amphibian species that may occur in the project site and adjacent areas, particularly along Granite Creek, include western toad and gopher snake. Areas of the project upland to Granite Creek may provide suitable movement corridors. Due to the site having limited vegetative cover and disturbed and compacted soils, foraging habitat for reptiles and amphibians in the project site is likely limited or marginal.

Fish

See Section 3.4 Water Quality/Riparian/Fisheries

Special Status Species

Based on a May 17, 2012 field survey by a Stantec senior biologist and a May 31, 2012 meeting with the BLM, no federally threatened, endangered, or candidate wildlife species or their habitats are located in the project area and would not be impacted by the project. The federally threatened Canada lynx is listed in Boise County, but habitat or designated critical does not occur within the project area.

Bald eagles and golden eagles may use habitat in the adjacent areas for between-habitat flights or migratory movements. Bald and golden eagle breeding, foraging, and roosting habitat are limited within the area of the project site.

Other special status species (i.e., BLM Sensitive Species List) including northern goshawk, flammulated owl, Lewis' woodpecker, Williamson's sapsucker, whiteheaded woodpecker, and calliope hummingbird may inhabit adjacent forested, montane ecosystems. Many special status species have specific habitat requirements that do not overlap with the project area. However,

special status species may use the project area as marginal habitat or during migratory or transient movements.

3.3.2 Environmental Consequences– Wildlife/Migratory Birds/Special Status Animals

3.3.2.1 Alternative A - No Action/Continue Present Management

Mammals

Mammals would continue to use the marginal habitats found in the project area. Many direct and indirect impacts occurred to mammals and their habitats during initial development of the mine dump site in previous years. As a result of the No Action Alternative, abundance and diversity of mammals in the vicinity of the project area would likely remain constant during the short and long term.

Migratory, Special Status, and Other Birds

The foraging and breeding habitats (e.g., sparse trees and vegetation) in the project area would continue to be used by bird species. From the current condition, there would be no indirect or direct impacts to bird species as a result of the No Action Alternative in the short term. In the long term, some vegetation (e.g., trees) on site would be allowed to mature and provide suitable nesting or foraging habitat for some bird species such as raptors.

Reptiles and Amphibians

All habitats used by reptiles and amphibians in the project area would continue to be used with no direct or indirect impacts in the short term. As a result of the No Action Alternative, reptile and amphibians may be indirectly impacted as aquatic habitats in Granite Creek are continually degraded by erosion of sediments into the Creek from the mine dump.

Fish

See Section 3.4 Water Quality/Riparian/Fisheries

Special Status Species

Any special status species that use the marginal habitats of the project area would not be directly or indirectly impacted. As a result of the No Action Alternative, the presence or abundance of special status in the vicinity of the project area would likely remain constant during the short and long term.

3.3.2.2 Alternative B – Proposed Action

The greatest impact to wildlife from the proposed project would be short-term disturbance from the excavating and hauling activities. Wildlife would experience low levels of disturbance from human activity and operation of motorized equipment, primarily during times when breeding (April through July) overlaps with project activities (August through September). Breeding habitats for most wildlife are marginal in the project site and the Proposed Action should not significantly impact breeding wildlife. The removal of the existing patches of vegetation in the project site may impact some breeding birds including migratory and special status species.

Reclamation activities including revegetation of the project site would benefit wildlife in the adjacent forested areas. It is anticipated that wildlife populations would increase within the project site if reclamation efforts are successful.

Mammals

There would be direct and indirect impacts to mammals as a result of the Proposed Action in the short term (less than 1 month). Any mammals using the project area, especially those unable to flee from the site (e.g., rodents using underground burrows), may be crushed or injured during removal of the mine dump. Disturbance from construction activities may indirectly impact all mammals in the vicinity, including big game. Actively used features such as roads can impact wildlife in a variety of ways including causing mortality and disturbance. As road density and traffic increases, the presence of disturbance intolerant species is reduced or eliminated. No habitat for any species in the vicinity of Granite Creek Road would be adversely affected. Direct and indirect disturbances would be limited to non-breeding periods for most species of mammals and these disturbances would be related to vegetation removal within the mine dumps and noise disturbance from hauling and mine dump removal.

In the long term, there would be positive direct and indirect impacts to mammals as a result of the Proposed Action. As a result of project reclamation activities, vegetation and wildlife habitat would improve from current conditions. Mammal species use of the project area for foraging and breeding would increase as vegetation and soils are improved and restored towards their natural state. Once the mine dump is removed from the project area, future mining projects are not anticipated in the long term.

Migratory, Special Status, and Other Birds

There would be direct and indirect impacts to bird species as a result of the Proposed Action. Disturbance from construction activities would negatively impact bird use of the project area in the short term (less than 1 month). Construction activities would occur outside of bird breeding periods and would not directly impact breeding and nesting birds. Birds may be directly impacted from construction equipment or vehicle collisions. The removal of large trees used as nest sites may impact birds in the following seasons or years. The requirement to notify BLM prior to removing trees greater than 12 inches dbh would help insure that any active nest trees would not be disturbed. Based on field surveys, there are approximately three trees that would be removed from the project site that have a dbh greater than 12 inches.

In the long term, the Proposed Action would have positive direct and indirect impacts on bird species. As site vegetation is restored, foraging and nesting habitats would improve. As a result, bird abundance and diversity would increase in the project area and vicinity.

Reptiles and Amphibians

There would be direct and indirect impacts to reptiles and amphibians as a result of the Proposed Action. Disturbance from construction activities, including ground vibration and noise, would indirectly impact reptiles and amphibians in the short term. Reptiles and amphibians would be directly impacted by crushing and injury from construction equipment and vehicles. In the short term, habitats would be degraded as restoration occurs.

Fish

See Section 3.4 Water Quality/Riparian/Fisheries

Special Status Species

In the project area's current state, there would be few short term direct or indirect impacts to special status species as a result of the Proposed Action. Special status species using adjacent habitats may be disturbed from construction activity in the short term (less than 1 month). Special status species may be susceptible to collisions with construction equipment and vehicles in the project area or on project roads.

In the long term, there would be positive direct and indirect impacts from the Proposed Action. As a result of project reclamation activities, vegetation and wildlife habitat would improve from current conditions. The project area may become more suitable for foraging, breeding, or migratory activities for special status species.

3.4 Water Quality/Riparian/Fisheries

3.4.1 Affected Environment – Water Quality/Fisheries

Granite Creek is located west of the mine dump on BLM administered lands and the project site drains westward to the creek. Granite Creek is a perennial stream and receives most precipitation during the winter months. Rain water that flows across the project site flows directly into Granite Creek. The use of water from Granite Creek services recreational fisheries, wildlife, and livestock.

Riparian Areas

Riparian areas around Granite Creek are in a natural condition, consisting of plant species representing the potential natural plant community. Plant species include willows, red osier dogwood, mountain maple, spirea, snowberry, native sedges, rushes, grasses, and forbs. BLM personnel have examined the stream on several occasions over the years and rated Granite Creek in high proper functioning condition (BLM 2012 pers. comm.).

The functional hydrology of Granite Creek at the project site is in near reference reach condition, with width/depth ratios, pool/riffle frequency, entrenchment ratios, and all other stream metrics in congruence with valley type and slope, annual hydrographic characteristics, and substrate type.

Water Quality

Water quality in Granite Creek is considered good. Granite Creek (HUC ID # 170 50112 SW01 4_02) is categorized in the Idaho Department of Environmental Quality (DEQ) 2010 Integrated Report as fully supporting beneficial uses. Gold Hill has sampled and tested the water in Granite Creek semi-annually. Results show that all metal contaminants were below detection limits, with the exception of barium (0.66 ppm). Water samples collected by DEQ (2004b) in the project site and surrounding area showed no substantial signs of water degradation. However, a sample collected from an area approximately 500 feet north of the project site on private land at the toe of an adjacent mine dump had metal (e.g., arsenic, barium, cadmium, lead, silver,

selenium) concentrations that were elevated and higher than other water samples taken in the area. However, samples taken in Granite Creek had no substantial signs of water degradation.

During excavation and hauling activities associated with this project, erosion along Granite Creek Road and sedimentation into Granite Creek could occur. However, implementation of the SWPPP and its BMPs, including the placement of silt fencing or fiber rolls along the downslope toe of disturbed areas would minimize any sedimentation into Granite Creek. Jute matting and revegetation along the natural soil surface following excavation of the stockpile would also occur; therefore, BMPs for sediment control would mitigate potential pollutants from reaching the stream.

Fisheries

In general, fisheries resources and recreational fishing opportunities are excellent in Granite Creek. Species including redband trout (*Oncorhynchus mykiss gairdneri*), rainbow trout (*Oncorhynchus mykiss*), and introduced brook trout (*Salvelinus fontinalis*) are present in Granite Creek.

Bull trout

Bull trout is federally threatened in Boise County but habitat or critically designated habitat for bull trout does not occur in the Grimes Creek drainage which includes Granite Creek (USFWS, 1998). Bull trout are not present in Granite Creek (BLM 2006). In addition, designated critical habitat (USFWS, 201075 Federal Register 2270-2431 [2010-01-14]) is not present within the greater Mores Creek watershed (4th field Hydrologic Unit Code # 17050112), to which Granite Creek is a tributary. The proposed action would have a no-effect rating on bull trout, and this species will not be addressed further.

3.4.2 Environmental Consequences – Water Quality/Riparian/Fisheries

3.4.2.1 Alternative A - No Action/Continue Present Management

In the short term, water quality would not be directly or indirectly impacted from the No Action Alternative. The concentrations of metals that are found in water samples would remain static. In the long term, concentrations of metals may slightly increase over time as rain slowly erodes dump mine materials into Granite Creek.

Riparian areas would not be directly or indirectly impacted in the short or long term by the No Action Alternative.

Fisheries would not be directly or indirectly impacted in the short term by the No Action Alternative. In the long term, fisheries may be directly or indirectly impacted if water quality is degraded as mine dump materials are eroded into Granite Creek.

3.4.2.2 Alternative B - Proposed Action

In the short term, water quality may be directly or indirectly impacted by construction activities. Transport of materials from the site would occur along Granite Creek Road and therefore, erosion and sedimentation of the road and waste dump materials could temporarily impact

Granite Creek, but would not exceed applicable EPA or DEQ water quality standards, as BMPs for sediment control would mitigate potential pollutants from reaching the stream. In the long term, concentrations of metals found in water samples in Granite Creek may be reduced after the dump mine materials are removed from the project site. Reconstruction of the Granite Creek Road would include the removal of the existing mine dumps that make up the existing road bed within the project area. Approximately 0.25 miles of mine dumps that make up the existing road bed would be removed to the natural road level. This may improve water quality by limiting sediment and contaminants yielded from the road surface into the creek, both in the short and long term.

In the short and long term, riparian vegetation would not likely be directly or indirectly impacted as BMPs would be in place between the road and existing riparian vegetation along Granite Creek in the project area. This would limit any potential indirect impact from sedimentation on riparian vegetation.

In the short term, construction activities could indirectly impact the quality of fish habitat (i.e., water quality) in Granite Creek through sedimentation. Implementation of the SWPPP and its BMPs designed to limit sedimentation and erosion into Granite Creek would mitigate any short term adverse impacts to aquatic organisms and fish in Granite Creek. There would be no direct impact on Granite Creek from the implementation of the project. Over the long term, fisheries in Granite Creek would likely benefit from reclamation activities that would reduce erosion and sedimentation of contaminants into the creek.

3.5 Air Quality

3.5.1 Affected Environment – Air Quality

The existing air quality in the project area is typical of air quality in the surrounding forested areas. There is no known specific air quality data for this area; however, in general, remote forested areas have relatively better air quality than areas with heavy residential and industrial uses. Particulate matter (e.g., PM₁₀) can be raised from increased vehicle traffic within the project site along the access road and gravel roads in the surrounding forested areas. The amount of compaction at the waste dump pile varies and some waste dump material may be subject to minor levels of wind dispersal within the project site. However, given the remoteness and small extent of the project area, increases in particulate matter would be minor and would not likely increase in the project area beyond the area of excavation and the haul road.

3.5.2 Environmental Consequences – Air Quality

3.5.2.1 Alternative A - No Action/Continue Present Management

Air quality may be directly impacted as a result of the No Action Alternative. Exposed soils and the lack of vegetation in the project area may lead to increases of particulate matter in the local air space. This impact could affect air quality in the short and long term.

3.5.2.2 Alternative B – Proposed Action

Air quality may be directly impacted in the short term as a result of the Proposed Action. Fugitive dust could be created in the short term when the waste dump materials are being excavated and hauled away in dump trucks. To minimize fugitive dust during hauling operations, the subject site and haul roads would be sprayed as necessary with water or other suitable material to hold down the dust created by these activities. In the long term, project area reclamation activities (i.e., revegetation) may directly improve air quality as exposed soil surfaces are decreased.

3.6 Visual Resource Management

3.6.1 Affected Environment – Visual Resource Management

The mine dump on BLM-administered lands currently represents a visual interruption of the surrounding natural landscape. The area is currently in an unnatural state with dirt roads, piles of mined materials, and areas of little or no vegetation.

The project site is classified as a VRM Class III management area. The objective of this class is to partially retain the existing character of the landscape, allow activities that may attract attention but should not dominate the view of the casual observer, and visual changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

3.6.2 Environmental Consequences – Visual Resource Management

3.6.2.1 Alternative A - No Action/Continue Present Management

Visual resources would remain in the current condition. The objectives of the VRM Class III would be met.

3.6.2.2 Alternative B – Proposed Action

During the short term (i.e., less than 1 month) visual resources would directly be impacted in the project area. Construction vehicles and activities would alter visual resources. After construction activities are finalized, reclamation efforts would restore the site to a natural landscape that existed prior to mining activities. In the long term, native vegetation would dominate the project area and blend in with natural features in the adjacent undisturbed areas. As a result of the Proposed Action, in the long term, impacts to visual resources at the project area would be substantially improved.

3.7 Recreation

3.7.1 Affected Environment – Recreation

Much of the Boise Basin area experiences high levels of recreational use. Activities include dispersed camping and picnicking, recreational gold panning, late spring and summer OHV riding, fall hunting, fishing, and winter over-snow activities. Off-highway vehicle travel is limited to existing or designated roads and trails. In the project area, the exposed mine dump provides marginal recreational activities. There is little suitable landscape available for activities

such as hunting, camping, and picnicking. In addition, the Granite Creek Road from the Mayflower Mine Road to the project site is closed due to the private land access and the presence of haul trucks.

3.7.2 Environmental Consequences – Recreation

3.7.2.1 Alternative A - No Action/Continue Present Management

Recreational resources in the project area would remain in their current condition. Recreational activities would not be impacted in the short or long term.

3.7.2.2 Alternative B – Proposed Action

In the short term (i.e., less than 30 days), the Proposed Action would temporarily inhibit or alter recreational use of the area due to construction activities and traffic. Excavations could be a safety hazard for recreationalists using cross-country areas. Placement of berms, signs, and other information around excavations areas within the project area would reduce safety hazards. In the long term, reclamation efforts would likely enhance the overall recreation and user experience in the project area by improving wildlife habitat, improving access to the area, and improving visual resources.

3.8 Cultural Resources

3.8.1 Affected Environment – Cultural Resources

Cultural resources around Quartzburg include historic scatters of domestic, residential debris, and industrial mining debris. The items could date to 1862 when gold was discovered in the Boise Basin. The debris is sparse due to fires, bottle hunters, and vandals. A fair amount of original materials were packed up, moved, and re-used in other subsequent mining camps or areas. Existing structures on private property are homes or summer residences of current Quartzburg residents. A historic records review and a cultural resource survey failed to locate any historic properties within the project area where the mine dump material would be removed from BLM land.

3.8.2 Environmental Consequences – Cultural Resources

3.8.2.1 Alternative A - No Action/Continue Present Management

Cultural resources at the project site would remain consistent with current conditions.

3.8.2.2 Alternative B – Proposed Action

The Proposed Action would not directly or indirectly impact historical resources on BLM land because no historical resources are known to exist within the project area.

3.9 Social and Economic

3.9.1 Affected Environment – Social and Economic

Both year-round and summer residents live in the communities of Centerville, Placerville, Pioneerville, and Quartzburg. The only town with a well-established residential and commercial population is Idaho City, the County seat of Boise County. In 2010, Idaho City had a population of 485 people, up from 458 people in 2000 (U.S. Census 2012). There were 216 occupied housing units in Idaho City in 2010 and the average household size was 2.4 people. The majority (94%) of residents are Caucasian. In Boise County, the unemployment rate in 2010 and 2012 was 12.3% and 12.0%, respectively (U.S. Bureau of Labor Statistics 2012).

3.9.2 Environmental Consequences – Social and Economic

3.9.2.1 Alternative A - No Action/Continue Present Management

Social and economic conditions would remain consistent with current median income and overall economic drivers.

3.9.2.2 Alternative B - Proposed Action

Gold Hill's mining operations are typical of the small-scale mining occurring in the Boise Basin. Operations are to occur over a short period of time and would have a short term minor beneficial impact to the area's social or economic conditions from the presence of additional people working in the project area. In the long run, the social and economic conditions would remain consistent with current median income and overall economic drivers. The proposed action and alternatives would not have a disproportionately high and adverse effect on low income or minority populations.

3.10 Cumulative Impacts

The cumulative effects analysis area for this proposal is limited to Section 9 of Township 7 North, Range 4 East, Boise Meridian. The effects would not extend outside the project area because the proposed mining activity would be conducted at a small scale (1.1 acre) and none of the effects described above extend beyond the immediate area described in the proposed action. The effects area is limited to the 1.1 acre BLM parcel.

Past activities on this site include placer and lode mining that began in the 1860s on lands in the region. Areas immediately adjacent to the project site that contained historic mine dump materials have been excavated and reclaimed in recent years (see Photo 1). While extracting gold resources, the Proposed Action would restore and reclaim BLM administered lands to natural conditions seen prior to mining activities taking place. BMP's would be implemented to avoid impacts to resources. The proposed project site would have negligible effects to the defined cumulative effects analysis area. Additionally there are no other present or reasonably foreseeable future projects proposed in the cumulative effects analysis area; therefore, by definition, there are no cumulative actions or impacts. There is no need to analyze effects beyond those directly and indirectly associated with the proposed action and alternatives.

4.0 Consultation and Coordination

4.1 List of Preparers

Greg Matuzak, Senior Biologist, Stantec Consulting Services Inc.
Janice Huebner, Environmental Scientist, Stantec Consulting Services Inc.
Matthew McCoy, Assistant Field Manager, BLM Four Rivers Field Office, Boise, ID
Valerie Lenhartzen, Geologist, BLM Four Rivers Field Office, Boise, ID
Seth Flanigan, NEPA Coordinator, BLM Boise District Office
Jon Beck, Planning and Environmental Coordinator, BLM Boise District Office

4.2 List of Agencies, Organizations, and Individuals Consulted

Idaho State Office of Historic Preservation
Shoshone-Paiute Tribes

4.3 Public Participation

The public was notified on June 6, 2012 when the BLM listed the project for 2012 on the ePlanning [NEPA Register](https://www.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do) webpage² (“Interested Public Letter”). The Interested Public Letter (Scoping/Information Package) was also mailed to select individuals and organizations on June 6, 2012. Comments were received from the Idaho Conservation League and Boise County.

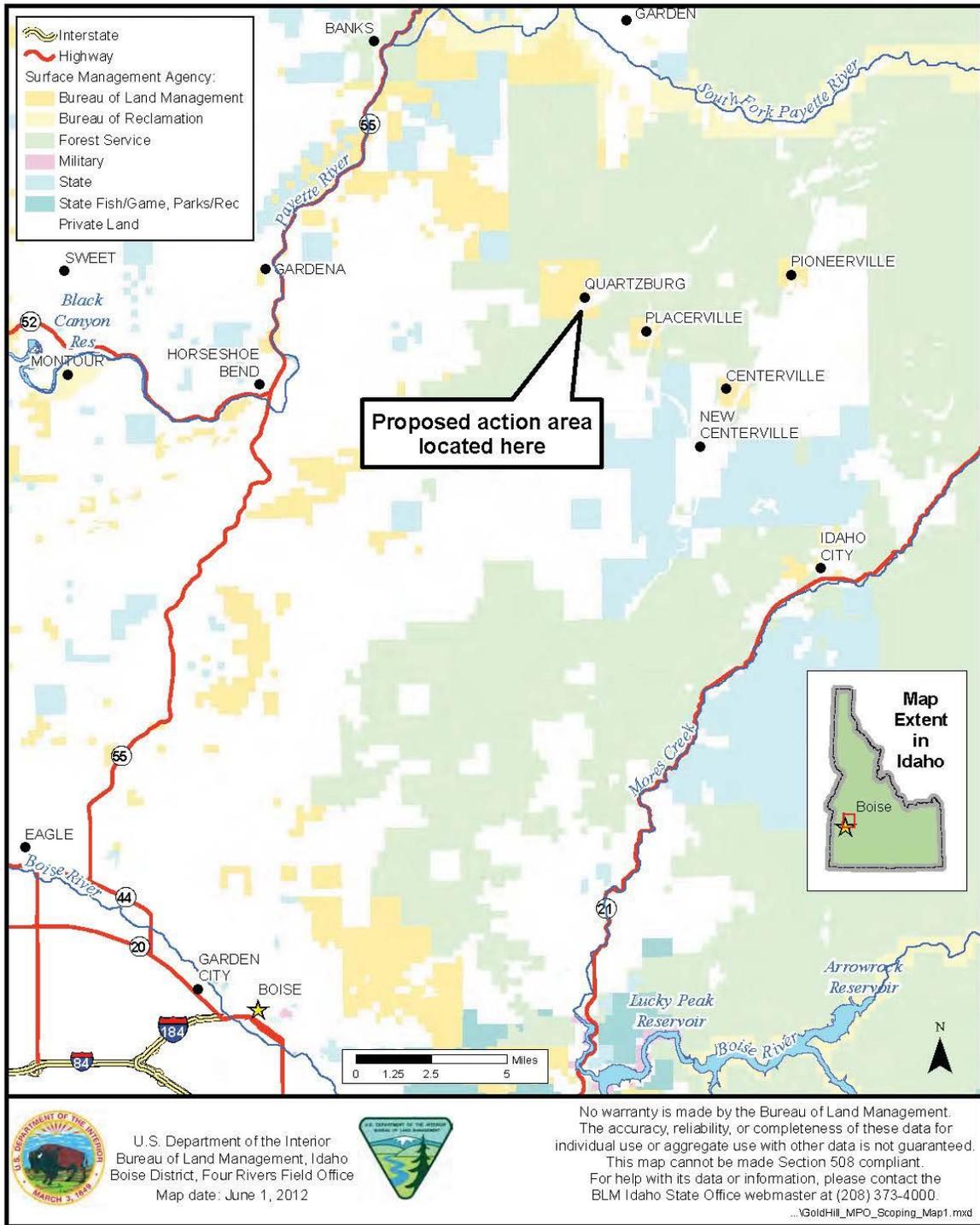
² https://www.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do

5.0 Literature Cited

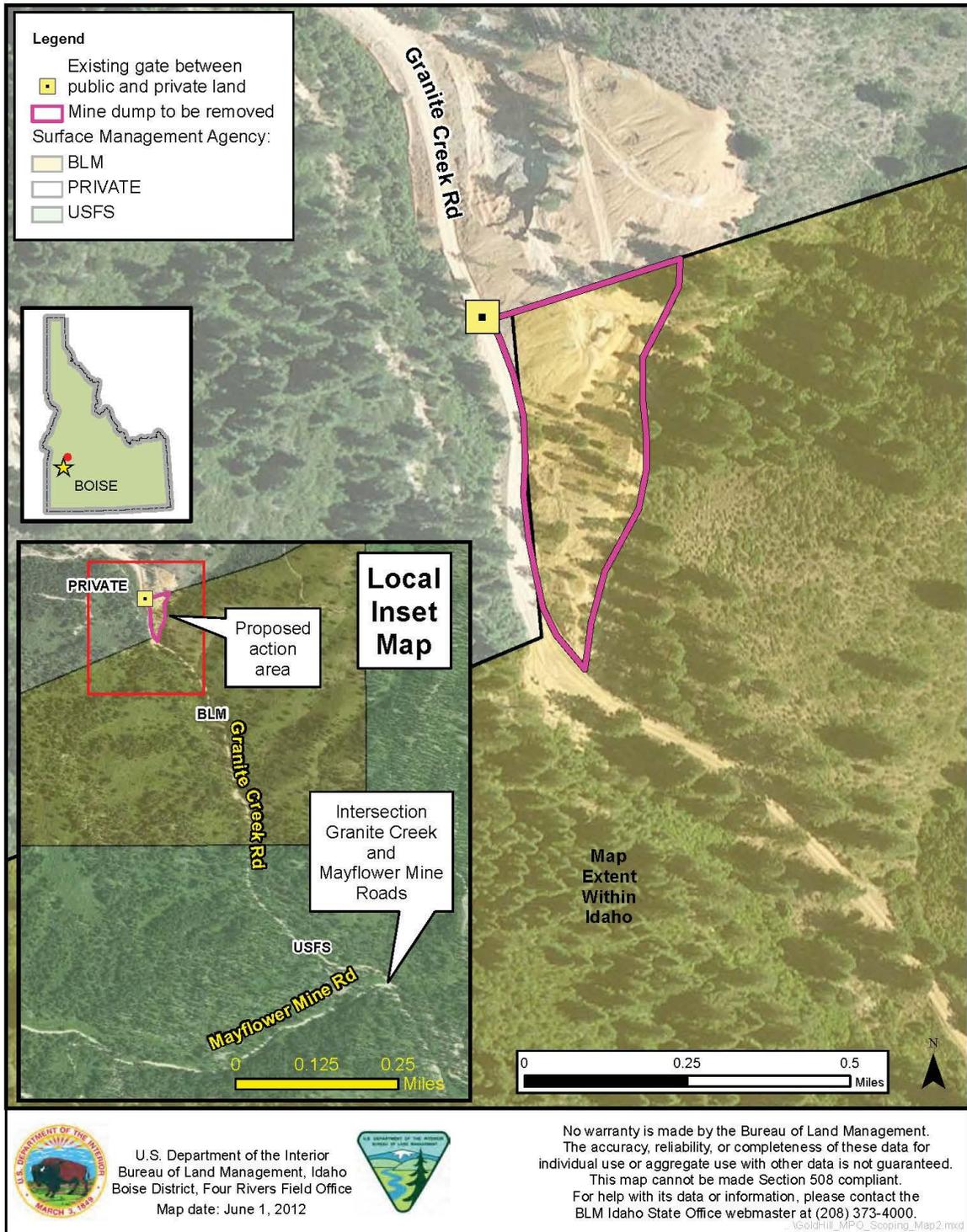
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6.0 Maps

Map 1: Regional Overview Gold Hill Reclamation and Mining, Inc. Mining Plan of Operations



**Map 2: Proposed Action Area
Gold Hill Reclamation and Mining, Inc.
Mining Plan of Operations**



7.0 Appendix A. Mining Plan of Operations

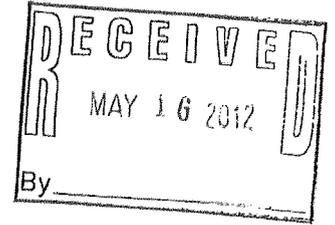


Gold Hill Reclamation & Mining

5085 S. Apple St
Boise, ID 83716

3809 Plan of Operations

BLM File Serial Number: NVN -
Project Name: Gold Hill Project



1. Operator/Claimant Information

Operator Information

Operator Name: Gold Hill Reclamation and Mining, Inc.
Mailing Address: 5085 S. Apple Street, Boise, Idaho 83716
Phone Number: (208)954-7039
Taxpayer EIN#: [REDACTED] - *see orange form at state office*
Point of Contact: Ryan McDermott - (208)954-7039, ryan@goldhill-mining.com

Claimant/Claim Information (if different than operator information)

Claimant Name: QHCLLC
Mailing Address: 1912 North 17th Street, Boise, ID 83702
Phone Number: (208)954-7039
BLM Serial Number of unpatented mining Claim(s): IMC192600, IMC192601
Primary Commodity: gold
Claim Names(s): Hillside No. 1, Hillside No.2

Claim Type: lode

2. Description of Operations (i.e., Proposed Action)

Legal Description: Township 7N, Range 40E, Sections 9 and 10
County: Boise County

Descriptions of Operations:

Operating Schedule: The proposed project site work is anticipated to take approximately 15 consecutive days to complete and is proposed to take place sometime between July 1 and August 30. An additional 3-days immediately following the 15 day period will be required for reseeding, slope stability and erosion control to be placed.

Equipment: Gold Hill will use the following heavy equipment for removal of the stockpiled ore material -

Caterpillar D8 Dozer - the dozer will be used to push material to loading excavator
Caterpillar 400 Series track-mounted excavator - a track-mounted excavator will scoop and load material to articulated haul-trucks
Caterpillar 740 Series Articulated Haul Trucks - Six 740 Series articulated haul-trucks will be loaded by excavator and haul material offsite. The trucks will loop on approximately 20-minutes cycles.

Devices: No devices will be used in the project.

Operating Practices: The project will be a standard dig-and-haul of unconsolidated rock material placed on the surface during historical mining activities in the late-1800s and early-1900s. Gold Hill proposes to mechanically push the material down slope into a live loading pile, where it will be loaded by excavator into haul-trucks and transported offsite. The material is currently sitting on a west facing slope (Figure 1) with a natural angle of approximately 12 degrees. The stockpiled material is estimated at 36,000 tons, ranges in thickness from 1 to 25 feet, and covers an area of 1.1 acres (46,856 square feet) by survey (Figure 1).

The material will be removed down to the original paleo-surface/soil horizon. The soil underlying the existing pile will be left in place and remain undisturbed. Gold Hill will apply a BLM seed mixture to the disturbed area and place wattling as needed to control erosion. The reseeding and erosion control measures will be performed by Groundfx, the same company responsible for reseeding and slope stabilization on Gold Hill's adjacent private property.

Mining Operations: No processing facilities of any kind will be constructed at this location. No waste piles, open pit or underground excavations, impoundments, ponds, pipelines, heap leach pads, ect. will exist at this location.

Ancillary facilities: No ancillary facilities, temporary or permanent, will be constructed at this location.

Water needs and uses: There will be no water needs or uses at this location.

Access and other roads: The existing access road will be the only road used for this project. No new roads, byways, or accesses will be constructed for this project. The existing road requires only periodic maintenance with a road grader. No expansion, widening, or extending of the existing road is necessary.

Hazmat: Gold Hill will not store, dispose, or dispense any chemicals of any kind on the project area. The heavy equipment used for the proposed project uses diesel, motor oil, 90-weight gear lube, and hydraulic fluid. The refueling and maintenance will be performed in an area already designated for such activities away from the proposed project site. In the event of a fuel or hydraulic leak, each crew is outfitted with spill kits and will contain the spill, overdig the impacted soil and containerize as per Gold Hill's SWPPP.

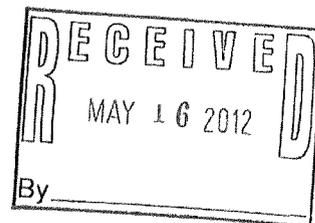
Exploration: No exploration activities will be conducted on the proposed site.

Environmental Management: Gold Hill currently operates the adjacent private property under an EPA regulated SWPPP, tracking number IDR05CR45. Upon approval of this plan, Gold Hill intends to extend the BMPs (silt fencing and straw waddling) already existing on the private property to the proposed project site.

Water Sampling: Gold Hill samples the surface water in the adjacent Granite Creek on a semi-annual basis. Zero impacts have been recorded. The analytical results of this sampling are attached.

Acid Generation: No waste rock will be created as a result of the proposed dig and haul, therefore no source of acid generating rock will exist.

Reclamation Plan: The 1.10 acre proposed area will not result in disturbance of the paleosurface. Only the rock that was placed on the surface in the early 1900s will be removed. The paleosurface will be reseeded using the following seed mix - 40% Oahe Intermediate Wheatgrass, 30% Praireland Altai Wildrye, 29% Hycrest Crested Wheatgrass, 1% inert material. The seed mix will be cast and at approximately 100# per acre. Filtrex waddle will be applied on 30 foot intervals across the topography of the slope to control erosion.



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