Stibnite Gold Project

Scenic Resources Specialist Report

Prepared by:
USDA Forest Service
Payette National Forest

for:
Payette and Boise National Forests

August 2022

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List of Acronyms

ASAOC	Administrative Settlement Agreement and Order on Consent
BNF	Boise National Forest
BOR	Bureau of Reclamation
CFR	Code of Federal Regulations
CR	County Road
East Fork SFSR	East Fork South Fork Salmon River
FCRNRW	Frank Church-River of No Return Wilderness

Forest Service	United States Forest Service
FR	Forest Road
FRTA	Forest Road and Trail Act
ICT	Idaho Centennial Trail
IPCo	Idaho Power Company
IRA	Idaho Roadless Area
ITD	Idaho Transportation Department
KOP	key observation point
kV	kilovolt
M	modification
MM	maximum modification
MMP	Modified Mine Plan
NEPA	National Environmental Policy Act
NFS	National Forest System
NFST	National Forest System Trail
OSV	Over-snow vehicle
Perpetua	Perpetua Resources Idaho Inc.
P	preservation
PNF	Payette National Forest
PR	partial retention
PRSB	Payette River Scenic Byway
R	retention
RAMP	Restoration and Access Management Plan
ROW	right-of-way
SGLF	Stibnite Gold Logistics Facility
SGP	Stibnite Gold Project
TSF	tailings storage facility
U.S.	United States
USDA	U.S. Department of Agriculture
VQO	visual quality objectives

1.0 Introduction

The United States (U.S.) Department of Agriculture Forest Service (Forest Service) received the Stibnite Gold Project (SGP) Plan of Restoration and Operations, (Midas Gold Idaho, Inc. 2016) for review and approval in accordance with regulations at 36 Code of Federal Regulations (CFR) 228 Subpart A for the proposed SGP in central Idaho. A revised Plan, also known as ModPRO,[1] was submitted to the Forest Service in 2019 (Brown and Caldwell 2019). A further modified Plan, also known as ModPRO2[2], was then submitted in October of 2021 (Perpetua 2021a). Midas Gold changed their name to Perpetua Resources Idaho Inc. (Perpetua[3]) in February 2021.

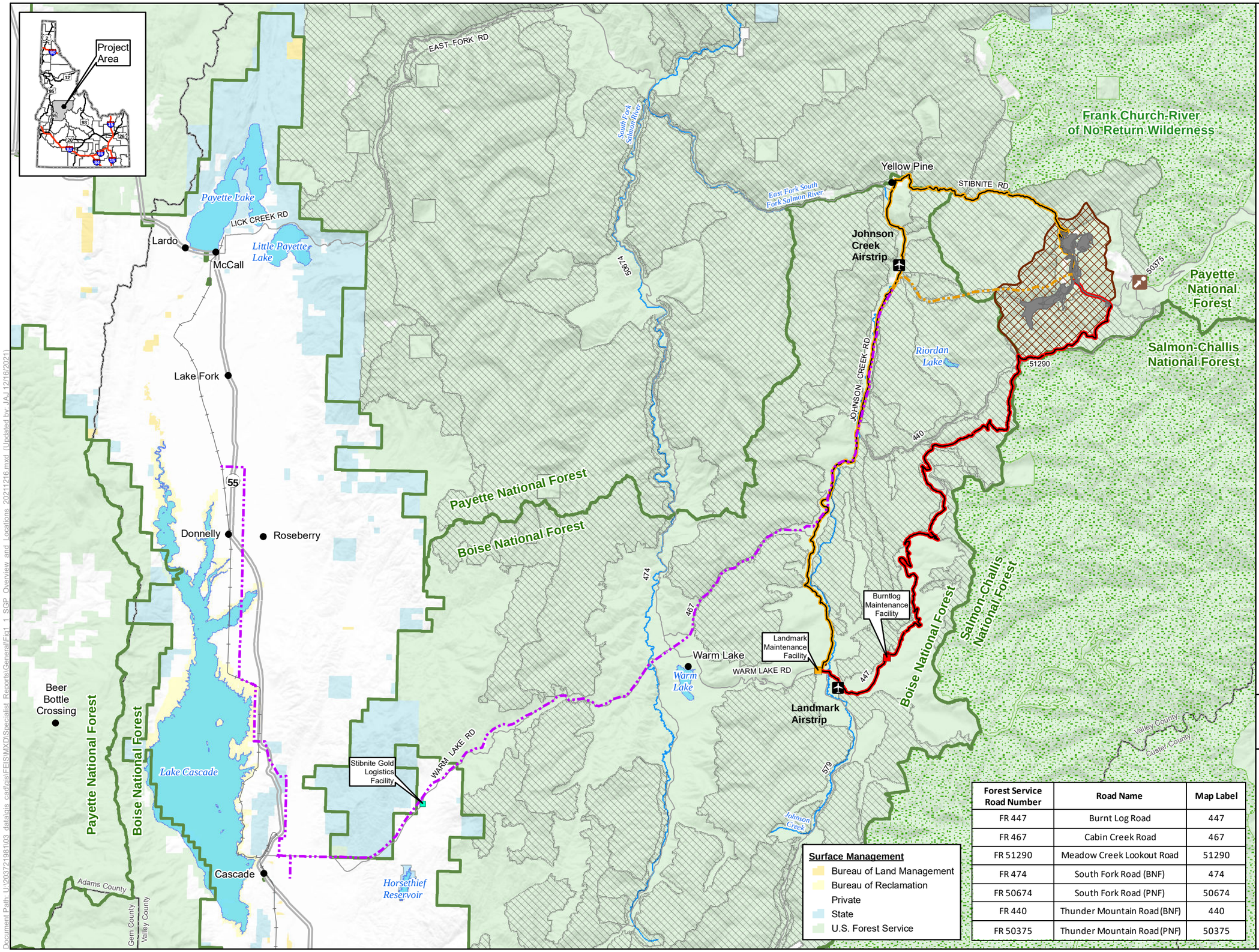
The SGP would consist of mining operations, including an open pit hard rock mine and associated processing facilities, located within Valley County in central Idaho on federal, state, and private lands (**Figure 1-1**). The SGP would produce gold and silver doré, and antimony concentrate, for commercial sale by Perpetua. The SGP would have a life (construction, operation, closure, and reclamation), not including post-reclamation monitoring, of approximately 20 years, with active mining and ore processing occurring over approximately 15 years.

Scenic resources are the visible physical features on the landscape (e.g., land, water, vegetation, structures, and other features). This report describes the existing qualities of the landscape, as well as people's scenic experiences of the landscape. The analysis area for scenic resources is not a definitive boundary as it includes all areas where the viewshed would potentially be affected by the SGP and/or SGP components; in other words, those areas where the SGP would potentially be visible to the public. The analysis area generally extends north of and along the East Fork Road segment and the Stibnite Road segment of the McCall-Stibnite Road (County Road [CR] 50-412), to the east into portions of the Frank Church-River of No Return Wilderness (FCRNRW), south of and along Warm Lake Road (CR 10-579), and west of Lake Cascade.

[1] Associated project documents may reference the Revised Plan as the ModPRO.

[2] Associated project documents may reference the Modified Plan as the ModPRO2.

[3] Documents provided by Perpetua prior to the February 2021 name change will still be cited and referenced as Midas Gold.



LEGEND

Project Components
- SGP Features
- Operations Area Boundary

Access Roads and Trail System
- Burntlog Route *
- Johnson Creek Route

Utilities
- Upgraded Transmission Line
- New Transmission Line

Offsite Facilities
- Burntlog Maintenance Facility *
- Landmark Maintenance Facility **
- Stibnite Gold Logistics Facility

Other Features
- U.S. Forest Service
- Wilderness
- IRA and/or Forest Plan Special Area
- County
- City/Town
- Monumental Summit
- Airport/Landing Strip
- Railroad
- Highway
- Road
- Stream/River
- Lake/Reservoir

Surface Management
- Bureau of Land Management
- Bureau of Reclamation
- Private
- State
- U.S. Forest Service

Forest Service Road Number	Road Name	Map Label
FR 447	Burnt Log Road	447
FR 467	Cabin Creek Road	467
FR 51290	Meadow Creek Lookout Road	51290
FR 474	South Fork Road (BNF)	474
FR 50674	South Fork Road (PNF)	50674
FR 440	Thunder Mountain Road (BNF)	440
FR 50375	Thunder Mountain Road (PNF)	50375

* Associated with 2021 MMP only
** Associated with Johnson Creek Route Alternative only
Note:
The McCall – Stibnite Road (CR 50-412) consists of Lick Creek Road, East Fork South Fork Salmon River Road (East Fork Road) and Stibnite Road.

0 2 4 Miles
1 inch = 4 miles when printed at 11x17

Figure 1-1
SGP Overview and Location
Stibnite Gold Project
Stibnite, ID

Base Layer:
Other Data Sources: Perpetua; State of Idaho Geospatial Gateway (INSIDE Idaho); Boise National Forest; Payette National Forest

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2.0 Alternatives, Including the Proposed Action

The SGP 2021 Modified Mine Plan (MMP) Alternatives Report (Forest Service 2022a) contains the details of the alternatives that are being considered and fully analyzed in this report. For reader usability, the alternatives are briefly summarized here.

2.1 No Action Alternative

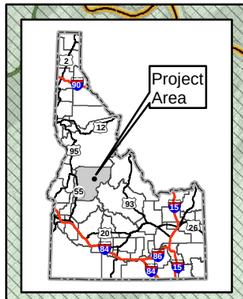
The No Action Alternative provides an environmental baseline for comparison of the action alternatives. Under the No Action Alternative, the mining, ore processing, and related activities under the 2021 MMP or the Johnson Creek Route Alternative would not take place. In addition, certain legacy and existing mining impacts would be addressed as directed in the 2021 Administrative Settlement Agreement and Order on Consent (ASAOC), including installation of stream diversion ditches designed to avoid contact of water with sources of contamination and removal of development rock and tailings currently impacting water quality. However, existing and approved activities (i.e., approved exploration activities and associated reclamation obligations) would continue and Perpetua would not be precluded from subsequently submitting another plan of operations pursuant to the General Mining Law of 1872.

2.2 2021 MMP

The 2021 MMP is based upon Perpetua's Revised Plan (ModPRO2) and is considered the Proposed Action. The description of this alternative has been updated per the Revised Plan submitted in 2021 (Perpetua 2021a). The SGP operations footprint has been modified but would still be within the previously identified Operations Area Boundary (**Figure 2-1**).

The following mine components would be common to the action alternatives:

- Mine pit locations, areal extents, and mining and backfilling methods
- Transportation management on existing and proposed roads
- Pit dewatering, surface water management, and water treatment
- Ore processing
- Lime generation
- Tailing storage facility (TSF) construction and operation methods
- TSF Buttress construction methods
- Water supply needs and uses
- Management of mine impacted water and stormwater runoff
- Stibnite Gold Logistics Facility (SGLF)
- A road maintenance facility
- Surface and underground exploration
- Stibnite Gold Project worker housing facility



Surface Land Management

Private

U.S. Forest Service

North Security Gate
Stibnite Lake
West End Pit
Yellow Pine Pit & Backfill
Midnight Backfill
Midnight Pond
Growth Media Stockpile
Crusher ROM Stockpile Area
Scout ROM Stockpile Area
Process Plant Area
Substation
Explosives Facility
Cell Tower
Transmission Line
Water Treatment Plant
Laydown
Hangar Flats Pit Backfill, & Stockpiles
Truck Shop Area
TSF Embankment
TSF Buttress
TSF Impoundment
SODA Pond
Radio Communications Tower
Main Gate
Growth Media Stockpile
Worker Housing Facility
Radio Communications Tower

East Fork South Fork Salmon River
Stibnite Rd
Sugar Creek
West End Creek
Hennessy Creek
Midnight Creek
Fiddle Creek
Garnet Creek
Robbin Creek
East Fork South Fork Salmon River
Blowout Creek
Meadow Creek

T19NR09E
T18NR09E
T19NR10E
T18NR10E

Frank Church-River of No Return Wilderness

Boise National Forest
Payette National Forest
Payette National Forest
Salmon-Challis National Forest

LEGEND

Project Components *

SGP Features

- Pit Backfill
- Growth Media Stockpile
- Mining Pit
- Laydown
- Plant Site
- TSF Buttress
- TSF Liner
- Alluvial Stockpile
- Workers Housing
- Stockpile
- Explosive Facility
- Operations Area Boundary
- Patented Claim Boundary
- Tailings Pipeline
- Clean Water Diversion **
- Clean Water Diversion - Piped **
- East Fork South Fork Salmon River Tunnel ***
- Stream ****
- Pond
- Stibnite Lake
- Light Vehicle Road
- Haul Road
- Helicopter Pad

Access Roads

- Burntlog Route
- Johnson Creek Route
- Cell Tower Access Road
- Public Access Road *****

Utilities

- Transmission Line
- Substation ******
- New Cell Tower
- Existing Communication Tower

Other Features

- U.S. Forest Service
- Wilderness
- IRA and Forest Plan Special Areas
- Monumental Summit
- Road

* Project Components are associated with all Alternatives
** Some surface clean water diversions are not discernible at this figure scale (e.g., the diversions associated with the TSF/buttress north, Fiddle culvert, Midnight Outfall, Scout ROM). Please refer to Figures 2.4-14 and 2.4-15 which provide greater detail regarding the Water Management Plan and its facility/diversion locations.
*** The East Fork South Fork Salmon River Tunnel would only be utilized as a contingency to manage high flows upon completion of the restoration of the East Fork SFSR across the backfill in the Yellow Pine Pit.
**** Perennial streams are not depicted for the entire map area. Only perennial streams within the Operations Area Boundary are depicted.
***** Public Access Road associated with 2021 MMP
****** Substation locations are approximate.

0 0.35 0.7 Miles

1 inch = 0.7 miles when printed at 11x17

Figure 2-1
Mine Site Layout
Stibnite Gold Project
Stibnite, ID

Base Layer: Hillshade derived from LiDAR supplied by Midas Gold
Other Data Sources: Perpetua; State of Idaho Geospatial Gateway (INSIDE Idaho); Boise National Forest; Payette National Forest

Document Path: U:\2037\216\103_data\gis_cad\gis\FEIS\MXD\Specialist Reports\General\Fig2_4-2_SGP_MineSite_Layout_20220407.mxd (Updated by JAJ 4/6/2022)

For access, the 2021 MMP would utilize Warm Lake Road, Johnson Creek Road, and Stibnite Road during construction of the proposed Burntlog Route; then once constructed, the Burntlog Route would be utilized during operations and reclamation. The actions proposed under the 2021 MMP would take place over a period of approximately 20 years, not including the long-term, post-closure environmental monitoring or potential long-term water treatment.

2.3 Johnson Creek Route Alternative

The Johnson Creek Route Alternative was developed to evaluate potential reductions in impacts to various resources. The mining portion of this alternative would be the same as under the 2021 MMP. Therefore, the primary focus of the Johnson Creek Route Alternative would be using an existing road for mine access through operations and reclamation instead of the Burntlog Route that under the 2021 MMP requires new road construction in Inventoried Roadless Areas. The Johnson Creek Route Alternative would require extensive upgrades to both Johnson Creek Road and Stibnite Road. Construction schedule for upgrading the roads and construction of the SGP would increase from 3 years to 5 years.

The action alternatives are summarized in **Table 2-1**.

Table 2-1 Action Alternatives Summary

SGP Phase	Component/ Subcomponent	2021 MMP	Johnson Creek Route Alternative
All Phases	SGP timeline	• Construction: Approximately3 years. • Operations: Approximately 15 years. • Exploration: Approximately 17 years (during construction and operations). • Reclamation: Approximately 5 years (except for the TSF which would require an additional 9 years for tailings dewatering and consolidation). • Closure/Post-Closure Water Treatment: Approximately through Mine Year 40. • Environmental Monitoring: As long as needed.	Same as 2021 MMP except: • Construction: Approximately 5 years (upgrading the existing Johnson Creek and Stibnite Roads to provide permanent mine access).
All Phases	Access Roads	Construction/Operations: • Warm lake road from State Highway (SH) 55 to Johnson Creek Route intersection (34 miles). • Johnson Creek Route for SGP access during early construction with minor improvements within the road prism. • Burntlog Route (38 miles) for SGP access during last year of construction, mining and ore processing operations, and closure and reclamation. Includes	• Warm lake road from SH 55 to Johnson Creek Route intersection (34 miles). • Johnson Creek Route (39 miles: Johnson Creek Road 25 miles, Stibnite Road 14 miles) upgraded and used for access throughout life of mine (LOM) instead of the Burntlog Route. • Access route around the Yellow Pine pit for public access, employee access, and deliveries of supplies and equipment to the processing, warehouse, worker

SGP Phase	Component/ Subcomponent	2021 MMP	Johnson Creek Route Alternative
		improvements of existing segments (23 miles) and road construction for new segments (15 miles). • Up to eight borrow areas developed along Burntlog Route for materials needed for road improvements and maintenance. • Access route around the Yellow Pine pit for public access. Closure and Reclamation: • New sections of Burntlog Route to be reclaimed after the closure and reclamation period.	housing facility, and administration areas. • No improvements or construction of new segments for Burntlog Route. • Up to seven borrow sources developed along the Johnson Creek Route for materials needed for road improvements and maintenance. Closure and Reclamation: • Improved Johnson Creek and Stibnite roads would not be reclaimed to pre-existing conditions.
All Phases	Public Access	Construction: • Temporary groomed over-snow vehicle (OSV) trail on the west side of Johnson Creek from Trout Creek to Landmark while Burntlog Route is constructed (8 miles). • OSV trail on west side of Johnson Creek from Wapiti Meadows to Trout Creek campground closed during construction (9 miles). • OSV trail from Warm Lake to Landmark closed during construction through operations (8.5 miles). • Cabin Creek Road Groomed OSV trail (11 miles). • Public roads remain open through the SGP with temporary closures as needed to accommodate construction. Operations: • Groomed OSV trail moves from west side of Johnson Creek Road to Johnson Creek Road from Landmark to Wapiti Meadows (16.7 miles). • Stibnite Road (County Road [CR] 50-412) / Thunder Mountain Road (FR 50375) closed through the SGP. • Seasonal public access through the Operations Area Boundary provided by constructing new road through Yellow Pine pit and	Construction and Operations: Same as 2021 MMP except: • OSV trail on the west side of Johnson Creek from Wapiti Meadows to Trout Creek campground would be closed from construction through mine closure (9 miles). • Groomed OSV trail on the west side of Johnson Creek from Trout Creek to Landmark lasting from construction through mine closure. Closure and Reclamation: Same as 2021 MMP.

SGP Phase	Component/ Subcomponent	2021 MMP	Johnson Creek Route Alternative
		below mine haul road to link Stibnite Road (FR 50412) to Thunder Mountain Road (FR 50375). • Public access allowed on Burntlog Route to Thunder Mountain Road (FR 50375). Closure and Reclamation: • New road constructed over the Yellow Pine Backfill (backfilled Yellow Pine pit) connecting Stibnite Road (FR 50412) to Thunder Mountain Road (FR 50375).	
Operations	Utilities – Transmission Lines	• Upgrade approximately63 miles of the existing 12.5 kilovolt (kV) and 69 kV transmission lines. • New approximate 9-mile, 138 kV line would be constructed from the Johnson Creek substation to a new substation at the mine site. • Upgrade the substations located at Oxbow Dam, Horse Flat, McCall, Lake Fork, and Warm Lake. • Reroute approximately 5.4 miles of transmission line to avoid the Thunder Mountain Estates subdivision. • Reroute approximately 0.9 miles of transmission line between Cascade and Donnelly to use an old railroad grade on private property. • Installation of approximately 3 miles of new underground distribution line along Johnson Creek Road from the Johnson Creek substation south to Wapiti Meadows.	Same as 2021 MMP.
Operations	Utilities - Communication Towers and Repeater Sites	• One cell tower located north of the Hangar Flats pit. • Locations along Burntlog Route for very high frequency (VHF) repeater sites. • Use existing access roads to repeater site locations along Burntlog Route. • Communication site at the SGLF. • Upgrades to existing communication site.	Same as 2021 MMP except: • Cell tower sites constructed and maintained using helicopter (instead of constructing access roads) for sites within IRAs managed for Backcountry/Restoration. • Locations along Johnson Creek route for repeater sites.

SGP Phase	Component/ Subcomponent	2021 MMP	Johnson Creek Route Alternative
Operations	Off-site Maintenance Facility	• SGLF located along Warm Lake Road. • Burntlog Maintenance Facility located at one of the borrow source locations 4.4 miles east of the junction of Johnson Creek Road and Warm Lake Road along the proposed Burntlog Route.	• SGLF same as 2021 MMP • Landmark Maintenance Facility located at junction of Warm Lake Road at Johnson Creek Road.
Closure and Reclamation	Access road segments	• Removal and reclamation of new road segments constructed for Burntlog Route. • Return of previously existing road segments to pre-construction width and condition.	• No removal or reclamation of pre-existing access routes.

Source: Perpetua 2021

2.4 Applicable Environmental Design Features

The SGP must comply with all laws and regulations that apply to the proposed activities (Forest Service 2022a). Standards and guidelines in the Payette and Boise National Forest Land and Resource Management Plans (Forest Service 2003, 2010) that are designed to reduce or prevent undesirable impacts resulting from proposed management activities are incorporated into the action alternatives by reference. In addition, best management practices outlined in the Best Management Practices for Mining in Idaho (Idaho Department of Lands 1992) would be implemented where appropriate and applicable for operations to minimize site disturbance from mining and drilling activities.

In the design of the 2021 MMP, Perpetua has already considered many of the potential environmental impacts that might be caused by the SGP. This has led to an internal evaluation of project design features and operational characteristics that may have the effect of reducing and/or eliminating potential environmental impacts of the SGP. Such project-specific measures intended by a proponent to inherently reduce and/or avoid potential environmental impacts of a proposed action are referred to as environmental "design features".

Based on the application of permits and regulatory compliance requirements (Forest Service 2022a) to the project, regulatory requirements, standards and guidelines, best management practices, and likely permit conditions are listed in **Table 2-2**. The environmental design features that have been proposed and committed to by Perpetua are listed in **Table 2-3**. All of these environmental design measures have been assumed to be effective in conducting the environmental analysis presented in **Section 7.0**.

Table 2-2 Prominent Regulatory and Forest Plan Requirements for Scenic Resources

Description	Type	Reference
Architectural designs would follow principles and concepts outlined in the Built Environment Image Guide (BEIG). Facilities identified as necessary should blend with the surrounding landscape character and the ROS setting. ROS descriptions in the BNF and PNF Forest Plans Appendix F should be used to help guide facility development and recreation activity management within each ROS class. When a structure or facility is created for other than public use, the materials, color, and location should be chosen to reduce visual contrast of the structure. Natural or neutral colors should be used in to help structures blend with the landscape. The use of natural or neutral colors and non-reflective surfaces would be considered for structures. An exception to this would be when the function of the structure is to be seen.	FP Component	BNF and PNF: FRGU13, SCGU13, SCGU14, SCGU15 BNF: REGU12, REGU15 PNF: REGU13, REGU16
To minimize adverse effects of lighting to TEPC, MIS, or Sensitive species, where necessary and in accordance with MSHA and OSHA, Perpetua could utilize actions in line with, but not limited to, the below: • To the extent practicable, limit construction activities to the time between dawn and dusk. • Utilize, where possible, use down shielding or directional lighting such as 'Cobra' style lights rather than an omnidirectional light system. • While allowing for public and worker safety, utilize low intensity energy saving lighting (e.g., low pressure sodium lamps). • If possible, minimize illumination of lighting on associated construction or operation structures by using motion sensors or heat sensors. • If possible, place light shields over outside lights, confining light to the immediate area. • Whisper Quiet light plants could be utilized used to mitigate visual impacts from night operations.	Design Feature	Design Feature developed for compliance with BNF and PNF: WIST03, WIST04 TEST29
To minimize adverse effects of noise to TEPC, MIS, or Sensitive species, where necessary and in accordance with MSHA and OSHA, Perpetua could utilize actions in line with, but not limited to, the below: • Construction equipment engines would be equipped with adequate mufflers, intake silencers, and engine enclosures when feasible. • When practicable, pumps, generators, and engines would be turned off when not in use. • Temporary wooden structure could be erected around portions of the drill, pumps, and heaters, with acoustic absorbent panels. These temporary structures would not be put in place if they created safety issues related to exhaust vapor build-up. When feasible, activities such as helicopter use and blasting, could be scheduled at the same time.	Design Feature	Design Feature developed for compliance with BNF and PNF: WIST03, WIST04, TEST29

Table 2-3 Proponent Proposed Environmental Design Features for Scenic Resources

Description
Suitable surface coatings or exterior design features would be used on SGP buildings and other structures to reduce visual impacts.
Lighting would be managed within active mining areas to avoid unintended lighting of natural, wildlife usage areas. External lighting would be kept to the minimum required for safety and security purposes. Lights would be directed down toward the interior of the SGP and shielded, where appropriate.

In addition to the environmental design features listed in **Table 2-3**, Perpetua has proposed additional environmental measures for the SGP as described in the Stibnite Gold Mitigation Plan (Perpetua 2021b).

3.0 Relevant Laws, Regulations, and Policy

3.1 Land and Resource Management Plans

3.1.1 Forest Service

The Payette National Forest Land and Resource Management Plan and Boise National Forest Land and Resource Management Plan (Forest Service 2003, 2010) each state that the desired condition for the scenic environment is that "scenic quality is maintained or enhanced in areas of high scenic value and other highly used recreation areas." The following goals and standards have been developed in support of this desired condition and are pertinent to the SGP.

Goals:

- SCGO01 – Manage the Forest's scenic resources to maintain the recreation and visual resource values while meeting other resource needs.

Standards:

- SCST01 – All projects shall be designed to meet the adopted visual quality objectives (VQOs) as identified in Management Area direction and represented on the Forest VQO map.
- SCST02 – Allow for short-term reductions in VQOs to accommodate Burned Area Emergency Rehabilitation projects, emergency needs for protection of investments, and public safety needs. When reducing VQOs, attempt to meet the next-highest objective at the closest viewer distance or most relevant distance given the probably sensitive viewer.

The management plans include maps showing the VQOs in each management area and the specific guidelines that apply to actions in those management areas.

3.1.2 Bureau of Reclamation

The U.S. Bureau of Reclamation Lake Cascade Resource Management Plan (BOR 2002) includes Goals and Objectives that pertain to Scenic Resources on land that it manages. The pertinent goals are:

- **Scenic Quality Goal NAT 5:** Protect the scenic quality and open space values on Reclamation lands at Lake Cascade.

  - Objective NAT 5.1: Ensure that siting and design of all new facilities on Reclamation lands maximize compatibility and integration with the open, rural environment of the reservoir and surrounding area.

- **Land Use, Access, and Implementation Goal LAI 1:** Balance the need for expansion of recreation opportunities (or other development) with preservation of open space and scenic values.

3.2 Federal Laws, Regulations, and Policy

Scenic quality is a measure of the visual appeal of a parcel of land. Section 101(b) of the National Environmental Policy Act (NEPA) states that the Federal Government should use all practical means to assure aesthetically pleasing surroundings be retained for all Americans (42 USC 4331.101[b][2]).

3.3 State and Local Policy

3.3.1 Valley County Comprehensive Plan

The purpose of the Valley County Comprehensive Plan is to promote the health, safety, and general welfare of the people of the State of Idaho, in part, to ensure that "the development on land is commensurate with the physical characteristics of the land" (Valley County 2018). The plan contains land use goals related to scenic resources and the rural character of the landscape. Specifically, Land Use Goal I states, "Retain the rural atmosphere of Valley County by protecting its natural beauty and open characteristics and preserving its historical and scenic beauty."

3.3.2 Payette River National Scenic Byway

The Payette River National Scenic Byway is located on State Highway 55 between Eagle and New Meadows, Idaho, which serves as an important corridor for tourist traveling between Boise and central Idaho. The Payette River Scenic Byway (PRSB) Corridor Management Plan notes that the PRSB Advisory Council does not have regulatory authority and relies on Valley County and the communities along the corridor to preserve the scenic qualities of the PRSB (PRSB Advisory Council 2013). The plan does not specify guidance with regard to scenic resource management along the corridor; however, the PRSB Advisory Council "will collectively review all zoning ordinance proposals to determine if the ordinances support principal goals by preserving historic or culturally valuable assets and viewsheds, [and] limit undesired land uses within close proximity of the byway…"

3.3.3 City of Cascade

The City of Cascade Comprehensive Plan (City of Cascade 2017) recognizes Natural Resources as a management element that includes scenic resources as part of Goal 4.1, which states, "Protect wildlife habitat, the environmental and hydrologic functions of lands and streams, and scenic vistas." The City of Cascade Comprehensive Plan also identifies State Highway 55 (PRSB) as a scenic corridor with qualities that attract visitors. It also identifies mountain ranges surrounding Cascade and the riparian corridor along Payette River as critical areas for scenic resources.

3.3.4 City of Donnelly

The City of Donnelly Comprehensive Plan (City of Donnelly 2014) identifies goals and policies related to Community Design. One of the city's goals is to, "Preserve and enhance the visual appearance and unique character of the City," and its second objective is to "Preserve and enhance the landscape views around

the City." Policy 3 states that, "Utilities shall be installed underground whenever possible to minimize visual impacts." Goals and policies related to Public Services and Utilities includes the following objective, "Provide adequate public utility infrastructure to meet the needs of current and future residents while minimizing its visual impact."

3.4 Other Guidance

The Visual Management System (Forest Service 1974) has been used since the mid-1970s to determine effects to scenery from proposed activities and is the basis of this analysis. The Boise and Payette National Forest System lands have been inventoried in accordance with the Visual Management System, as described below, to provide measurable standards for the management of scenic resources and VQOs (Forest Service 1974):

- *Character Type* is an area of land that has common distinguishing visual characteristics of landform, rock formations, water forms, and vegetative patterns.
- *Characteristic Landscape* is the naturally established landscape being viewed.
- *Variety Classes* classify landscapes into different degrees of variety: A – Distinctive, B – Common, and C – Minimal.
- *Distance Zones* are the portions of a particular landscape seen from roads, trails, use areas, and waterbodies. The three distance zones are: foreground (extends 0.25 to 0.5 mile from observer), middle ground (extends from foreground 3 to 5 miles), and background (extends from middle ground to horizon).
- *Sensitivity Levels* are a measure of people's concern for the scenic quality of the National Forests (Forest Service 1974): Level 1 – Highest Sensitivity, Level 2 – Average Sensitivity, and Level 3 – Lowest Sensitivity. Forest Service sensitivity levels are determined for the land viewed from use areas, travel routes, and waterbodies.

Combining these attributes, national forests that utilize the VMS assign a VQO to be used during project planning and implementation for the purpose of maintaining or enhancing the scenic qualities of the forest's landscapes. VQOs are measurable standards or objectives that guide management of these lands and represent different degrees of acceptable alterations to national forest landscapes. The following are definitions of the five VQOs from the National Forest Landscape Management Volume 2, Chapter 1 of the Visual Management System (Forest Service 1974):

- "*Preservation (P)* – This VQO allows ecological changes only. Management activities, except for very low visual impact recreation facilities, are prohibited."
- "*Retention (R)* – This VQO provides for management activities that are not visually evident. Under Retention, activities may only repeat form, line color, and texture frequently found in the characteristic landscape. Changes in their qualities of size, amount, intensity, direction, pattern, etc. should not be evident."
- "*Partial Retention (PR)* – Management activities remain visually subordinate to the characteristic landscape when managed according to the Partial Retention VQO. Activities may repeat form, line, color, or texture common to the characteristic landscapes but changes in their qualities of size, amount, intensity, direction, pattern, etc. should remain visually subordinate to the characteristic landscape. Activities also may introduce form, line, color, or texture which are

found infrequently or not at all in the characteristic landscape, but they should remain subordinate to the visual strength of the characteristic landscape."

- "*Modification (M)* – Under the modification VQO management activities may visually dominate the original characteristic landscape. However, activities of vegetative and land form alteration must borrow from naturally established form, line, color, or texture so completely and at such a scale that its visual characteristics are those of natural occurrences within the surrounding area or character type."

- "*Maximum Modification (MM)* – Management activities of vegetative and land alterations form may dominate the characteristic landscape. However, when viewed as background, the visual characteristics must be those of natural occurrences within the surrounding area or character type. When viewed as foreground or middle ground, they may not appear to completely borrow from naturally established form, line, color, or texture. Alterations also may be out of scale or contain detail which is incongruent with natural occurrences as seen in foreground or middle ground."

In general, VQOs for highly scenic and/or highly sensitive and visible landscapes require the retention of a natural appearance yet would allow for activities with a low level of visual change. A greater degree of landscape alteration is acceptable in landscapes that are inherently less scenic, seen from a greater distance, or seen from less sensitive locations.

4.0 Issues and Resource Indicators

4.1 Significant Issues

Significant issues are those which are used to formulate alternatives to the Proposed Action and to develop mitigation measures. No significant issues were identified for scenic resources.

4.2 Resource Issues and Indicators

Although scenic resources were not identified as a significant issue, they were identified by the public, the Forest Service, and cooperating agencies as a relevant considerations. The analysis of effects to scenic resources includes the following issue and indicators:

Issue: Construction and operation of SGP infrastructure may impact scenic integrity and quality and may result in change of the Forest Plan(s) VQOs.

Indicators:

- Visual contrast.

- SGP component visibility.

Scenic resources were analyzed using geographic information system spatial analyses, scientific literature reviews, visual simulations, and information and analysis documented in reports prepared for the SGP.

Visual contrast and daytime/nighttime SGP visibility are the primary indicators used to evaluate potential impacts to scenic resources that could result from construction, operation, and closure and reclamation of the SGP, including:

- Change in landscape character and scenic quality of the analysis area.

- Change in distance zone.
- Change in nighttime lighting.
- Context of impacts, including that directed by forest plan standards and guidelines.
- Change in scenic integrity.

5.0 Methodology

This section summarizes the methods used to evaluate the indicators and assess the potential consequences listed in **Section 4.2** for scenic resources.

5.1 Analysis Area

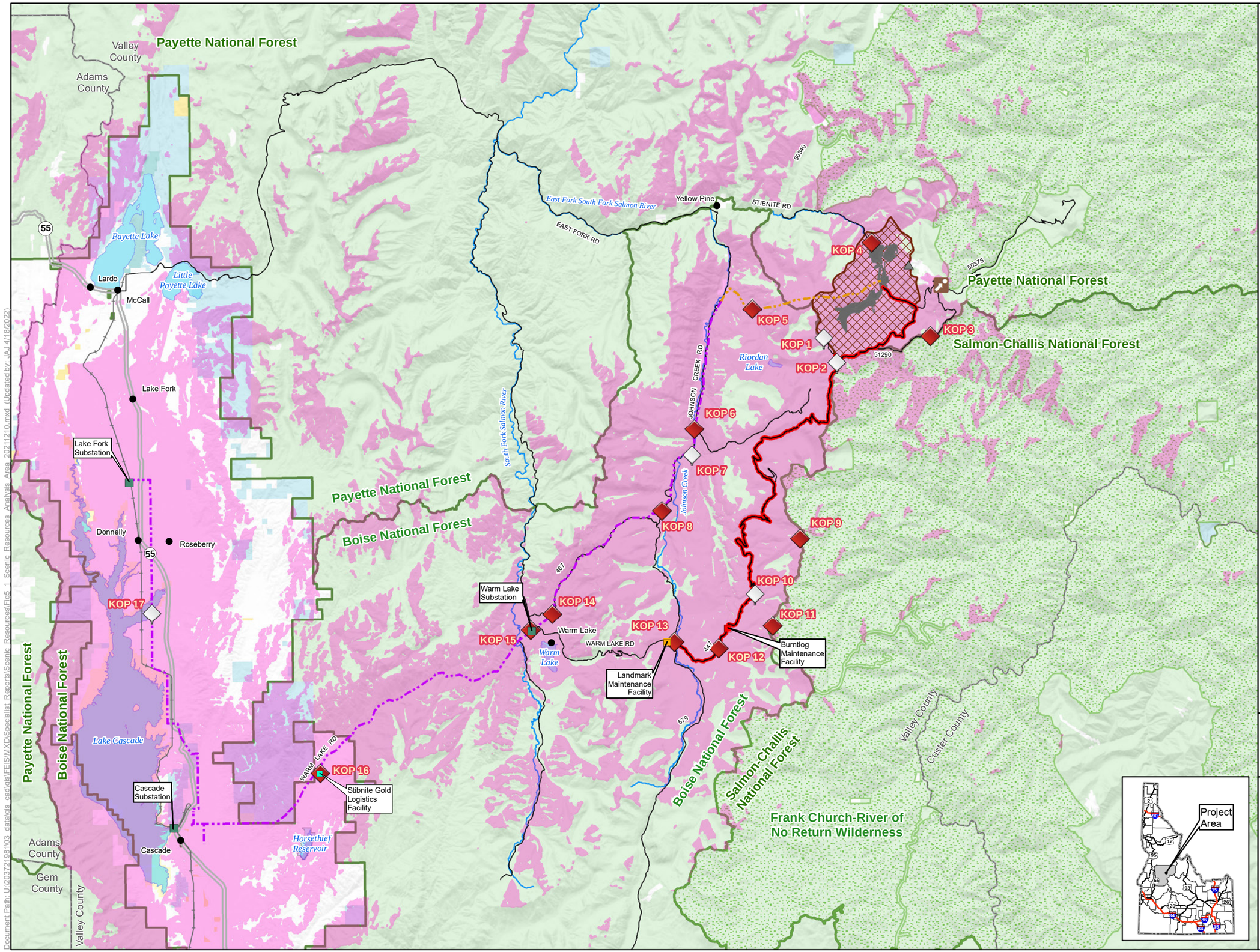
The analysis area for scenic resources includes the area where effects (direct/indirect and cumulative) may be caused by the proposed activities and can potentially be visible to the public.

5.1.1 Direct/Indirect Effects Boundaries

The direct and indirect effects area for scenic resources is within the Northern Rocky Mountain Province of the Rocky Mountain System in Idaho. The existing landscape is representative of the province, characterized as a continuous mountain landscape broken occasionally by wide valleys with flat or hilly floors. The FCRNRW is renowned for its rugged and wild character. Its designation as a wilderness makes it, at a minimum, regionally significant. The analysis area for scenic resources is not a definitive boundary as it includes all areas where the SGP would potentially be visible to the public. The analysis area generally extends north of and along the East Fork Road segment and the Stibnite Road segment of the McCall-Stibnite Road (CR 50-412), to the east into portions of the FCRNRW, south of and along Warm Lake Road (CR 10-579), and west of Lake Cascade, and represents a 25-mile viewshed analysis area (**Figure 5-1**). In addition, most of the SGP is within the Preservation (P) and Partial Retention (PR) VQOs (**Figure 5-2**), indicating scenic integrity is generally high to moderate and that scenic resources in the analysis area are regionally important at a forest-wide scale.

5.1.2 Cumulative Effects Boundaries

Past, present, and reasonably foreseeable future actions include activities, developments, or events that have the potential to change the physical, social, economic, and/or biological nature of a specified area. Existing and projected activities directly associated with past and present activities, and other reasonably foreseeable future actions, provide the basis for defining and analyzing cumulative impacts. A cumulative effect must overlap in space and time with the direct and indirect effects of the action. For scenic resources, the analysis area for cumulative effects is broader than the analysis area for direct and indirect effects; and in this case, includes areas on National Forest System lands in Valley and Adams counties, including several projects in the PNF and BNF.



LEGEND

- KOP & Simulation
- KOP
- Scenic Resources 25-mile Viewshed Area

Project Components

- SPG Features
- Operations Area Boundary
- Burntlog Maintenance Facility *
- Landmark Maintenance Facility **
- Stibnite Gold Logistics Facility
- Burntlog Route *
- Johnson Creek Route

Utilities

- Upgraded Transmission Line
- New Transmission Line
- Existing Substation ***
- Existing Communication Tower

Other Features

- U.S. Forest Service
- Wilderness
- County
- City/Town
- Monumental Summit
- Railroad
- Highway
- Road
- Stream/River
- Lake/Reservoir

* Associated only with 2021 MMP
** Associated only with Johnson Creek Route Alternative
*** Substation locations are approximate
Note:
The McCall – Stibnite Road (CR 50-412) consists of Lick Creek Road, East Fork South Fork Salmon River Road (East Fork Road) and Stibnite Road

0 2.5 5 Miles

1 inch = 4.5 miles when printed at 11x17

Figure 5-1
Scenic Resources Viewshed Analysis Area
Stibnite Gold Project
Stibnite, ID

Base Layer: USGS Shaded Relief Service
Other Data Sources: Perpetua; State of Idaho Geospatial Gateway (INSIDE Idaho); USGS; Boise National Forest; Payette National Forest

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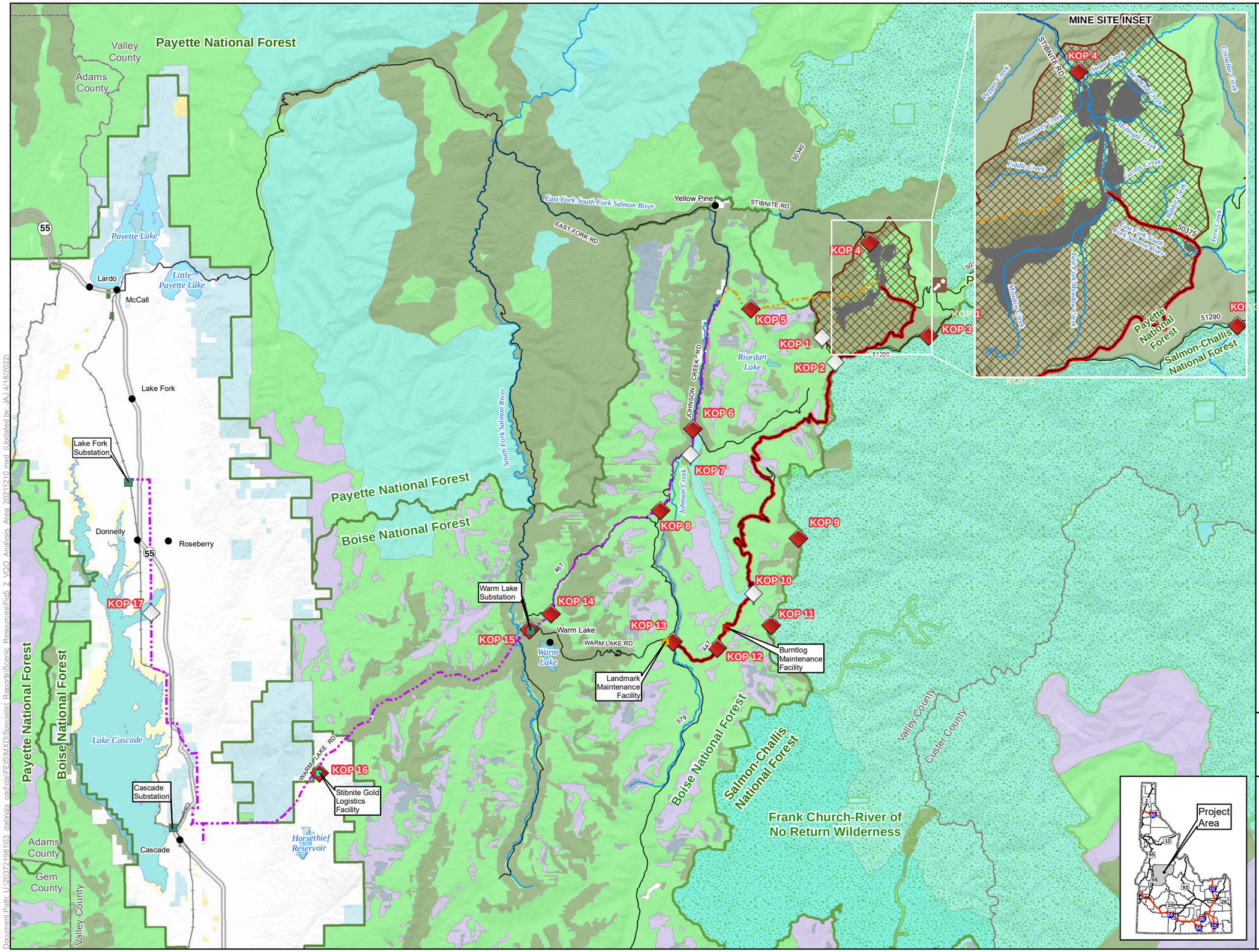

LEGEND

- KOP & Simulation
- KOP

Visual Quality Objectives

- Preservation
- Retention
- Partial Retention
- Modification
- Maximum Modification

Project Components

- SPG Features
- Operations Area Boundary
- Burntlog Maintenance Facility *
- Landmark Maintenance Facility **
- Stibnite Gold Logistics Facility
- Burntlog Route *
- Johnson Creek Route

Utilities

- Upgraded Transmission Line
- New Transmission Line
- Existing Substation ***
- Existing Communication Tower

Other Features

- U.S. Forest Service
- Wilderness
- County
- City/Town
- Monumental Summit
- Railroad
- Highway
- Road
- Stream/River
- Lake/Reservoir

* Associated only with 2021 MMP
** Associated only with Johnson Creek Route Alternative
*** Substation locations are approximate
Note:
The McCall – Stibnite Road (CR 50-412) consists of Lick Creek Road, East Fork South Fork Salmon River Road (East Fork Road) and Stibnite Road

0 2.5 5 Miles

1 inch = 4.5 miles when printed at 11x17

Figure 5-2
Visual Quality Objectives Within Analysis Area
Stibnite Gold Project
Stibnite, ID

Base Layer: USGS Shaded Relief Service
Other Data Sources: Perpetua; State of Idaho Geospatial Gateway (INSIDE Idaho); USGS; Boise National Forest; Payette National Forest

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5.2 Analysis Area Methodology

Visual Contrast Assessment. Visual contrast is defined as the degree of visual change that occurs in the characteristic landscape due to the introduction of SGP-related alterations. The assessment for visual contrast was performed by comparing visual elements (form, line, color, and texture) of the existing landscape with the alterations associated with the implementation of the proposed SGP. The visual contrast assessment informs change in landscape character and scenic quality. Visual contrast would primarily result from changes to landform from excavation and fill associated with mining activity; introduction of new or upgraded infrastructure; and removal of vegetation and grading activities for SGP components.

Viewshed Analysis. A viewshed analysis was completed using a geographic information system tool to identify locations where SGP components can theoretically be seen and areas where components would be obstructed by topography (**Figure 5-1**). This analysis was completed to help determine component visibility based on the relationship between the viewer and SGP components. The resulting viewshed represents the geographic area where one or more SGP components would theoretically be seen; however, it does not represent any measure of detectability of the components, nor does it account for vegetation that could screen SGP components from view. Actual visibility of SGP components also would be informed by viewer characteristics, described below.

Viewshed models were generated for the SGP, transmission line, communication site, and primary access roads. Viewshed models assumed a viewer eye-level of 5.5 feet. Models were run using a 30-meter (98 feet) digital elevation model assuming bare ground and were clipped to a 25-mile radius. The model assumed all open pits, backfills, and the TSF at full extent or build-out. The upgraded 138-kV transmission line assumed the location of the current right-of-way (ROW) and the structures would be spanned at an average of 600 feet at a height of 80 feet. The new transmission line structures from Johnson Creek substation to the SGP would be 80 feet tall within a 100-foot ROW. The communications tower at the SGP was modeled based on the assumption the existing site would not exceed 199 feet in height. The height of the SGLF was modeled based on Perpetua's estimated height of 260 feet needed to communicate to the SGP. Access road upgrades were modeled at 26 feet wide.

Viewer Characteristics and Position. Viewer characteristics and position can affect the perception of visual contrast and a viewer's ability to discern objects in the landscape (BLM 2013). Viewer characteristics pertain generally to one's visual acuity, engagement in the visual landscape, and viewer motion (moving or stationary). Viewer position includes consideration of viewer geometry and distance. Viewer geometry refers to the relative elevation of the viewing location as compared to landscape being viewed. A viewer's elevation to components of the SGP could range from superior, where the viewer is looking down at SGP component(s); to level views and inferior views, where the viewer is looking up. Distance affects the perception of visual contrast because elements of form, line, color, and texture appear less detailed, as distance from a viewpoint increases. Distance zones were established to reflect visibility thresholds.

Key Observation Points. Key Observation Points (KOPs) were established at locations representing sensitive-use areas, such as travel routes, waterbodies, recreation areas (developed and dispersed), and residences. Data sources used to identify KOPs included viewshed analysis results, existing land use plans, recreation data, aerial photography, and Forest Plan VQO data. These data were reviewed in conjunction with the alternatives to represent a comprehensive evaluation of the varied SGP components and their potential impacts to sensitive viewer locations in the analysis area, by alternative. Based on collected data sources, 17 viewpoints were identified (**Figure 5-1**). KOPs were then adjusted in the field per conditions and views.

Visualizations. Simulations (i.e., visualizations) were developed to characterize the anticipated level of visual change for the SGP. Simulations portray images of existing and proposed visual change to aid in visualizing the potential SGP effects for areas of high viewer sensitivity or concern. To generate the simulations, photographs were taken using a digital camera mounted on a tripod with a fixed 50-millimeter (equivalent) lens. At each KOP location, overlapping photographs were taken to allow for electronic conversion to a panoramic image representing the full human field of view. Global positioning system equipment was used to record the date, time, and location of each photographic series. Simulations were created using a scaled computer-generated model of proposed facilities that was developed in Autodesk Civil 3D. Geographic information system information from ESRI ArcMap software was imported into the 3D model. The model was then imported into Autodesk 3ds Max software where color and texture were added to resemble planned materials. The 3D model, the camera, and the lighting information was used to render a two-dimensional image of the proposed facility representing the view from the KOP for which simulations were developed. Simulations are used to evaluate the accuracy of predicted visual effects and are included in **Appendix A**.

VQO Classification Conformance. The results of the impact analysis were used to help determine SGP conformance with relevant VQO classifications for each action alternative. As described in **Section 3.4 Other Guidance**, VQOs establish minimum acceptable thresholds for landscape alterations from an otherwise natural-appearing forest landscape. The threshold of effects is exceeded when alterations do not meet the visual intensity and dominance criteria of the VQO.

6.0 Affected Environment

6.1 Existing Conditions

6.1.1 Characteristic Landscape

The analysis area is in the Northern Rocky Mountain Province of the Rocky Mountain System in central Idaho (Fenneman 1931). This province bears large tracts of mountains that have no trend and no dominating crest, only a multitude of minor crests in all directions between the streams of a mature drainage system. Neighboring divides are often at the same height, and when viewed from a superior (viewed from above) open viewpoint, the skyline may appear almost horizontal. Generally, the landscape is characterized as a continuous mountain terrain broken occasionally by wide valleys with flat or hilly floors 2,000 to 5,000 feet below the mountain crests. Valley widths may range from 5 to 10 miles, and their length is often greater, similar to Long Valley where the cities of Cascade and Donnelly reside. In most instances, the valleys are narrow, rugged gorges.

In the southwest portion of the analysis area, just southeast of Cascade, Long Valley is about 5,000 feet above mean sea level. Land uses in the valley include agriculture, rural, and some urban development. Vegetation in the valley primarily consists of those types typically associated with agricultural practices, including a variety of grass species (HDR 2015). In the PNF and BNF, including the SGP and vicinity, numerous boulder and rock outcroppings are evident along ridgelines. Vegetation is characterized by upland forest plant communities, which typically include evergreen overstory species and wetland/riparian plant communities, which are located throughout the analysis area along pastures, adjacent to streams and hillside seeps.

The dark green color of the tall, dense evergreens tends to be the most visually dominant color throughout the analysis area. Where soils are visible, colors typically range from tan to brown in color. Several light

grey rock outcroppings and boulder fields are scattered throughout the landscape at higher elevations. Rock outcroppings occasionally break up the monochromatic greenery and add texture to the setting. Understory vegetation and grasses in the valley change seasonally, ranging from tan to brown in the fall/winter to green in the spring and summer. Snow often covers most of the landscape from late fall to early spring, contrasting with the dark evergreen trees.

Large portions of the analysis area have been affected by past wildfires leaving blackened, dead, and burned trees with sparse understory vegetation. In areas affected by fire, the rugged and rocky terrain becomes the dominant feature, and tall grayish-black trees are scattered across the burned landscape. Understory vegetation is not very diverse and often occupied by grasses and shrubs, primarily fireweed, which blankets the landscape in bright pink when in bloom. Old road cuts stand out in burned areas as the absence of live vegetation makes them contrast with surrounding areas.

Human development is noticeable throughout the analysis area including roads, trails, fences, utility lines, and airstrips. Other structures within the analysis area include cabins, residences, barns, and outbuildings. Historic mining disturbances, such as access roads, historic mining pits, waste rock disposal areas, heap leach pads, and a spent ore disposal area, are present at the SGP. At the SGP, existing modifications to the landscape have introduced monolithic landforms of an industrial scale that exhibit bold form, strong lines, contrasting color, and vegetation patterns and textures that do not blend into the natural landscape.

The East Fork South Fork Salmon River (East Fork SFSR) flows through the SGP and forms a human-made lake at the bottom of the existing Yellow Pine pit with riparian vegetation along some areas of the pit wall. Existing access roads and pit benches in this area exhibit strong lines and geometric forms with varying degrees of texture and color contrasts.

6.1.2 Sensitive Use Areas

Visual sensitivity pertains to the degree of concern for changes to the characteristic landscape. Sensitive use areas were identified based on the following criteria: use duration, use volume, Forest Plan sensitivity level, and scenic or special designation. Existing conditions of sensitive use areas are summarized in the text below. All areas identified as sensitive use areas in this analysis have an overall sensitivity of high or moderate. Data sources used to select representative 17 KOPs (**Figure 5-1**) included: viewshed analysis results, existing land use plans, recreation data, aerial photography, and Forest Plan VQO data. These data were reviewed in conjunction with the proposed SGP components to provide a comprehensive evaluation of the varied components and their potential impacts to sensitive viewer locations within the analysis area. The KOPs represent different types of sensitive use areas (roads, trails, recreation use areas, and residential areas) and areas where different SGP components could be visible. Existing conditions are assessed at each KOP and used to evaluate potential impacts from the SGP. Photographs taken from select KOPs are included in **Appendix A**.

6.1.2.1 Travel Routes

There are 27 roads, including highways, forest roads, and local roads, in the analysis area identified as sensitive use areas. These roads provide access for forest visitors to the two national forests, the FCRNRW, the SGP, recreation sites that include Warm Lake and the Stolle Cabin, and numerous campgrounds and trailheads, as well as serve as travel routes for the residents of the village of Yellow Pine. Most roads are seasonal and closed during winter months due to snow. However, Stibnite Road (CR 50-412), Warm Lake Road (CR 10-579), South Fork Salmon River Road (National Forest System Road 474/50674), and the northern portion of Johnson Creek Road (CR 10-413) are accessible to vehicles year-round. Views experienced from travel routes are transient in nature and include “superior” (views from

above), "inferior" (views from below), and enclosed views; although, expanded views exist in areas where adjacent vegetation is sparse and/or low growing. Six KOPs (4, 10, 13, 14, 15, and 16) are identified along travel routes (**Figure 5-1**).

6.1.2.2 Waterbodies

There are six rivers and creeks and two lakes (Warm Lake and Lake Cascade) in the analysis area identified as sensitive use areas that are used by residents and forest visitors for motorized boating, rafting, swimming, wildlife viewing, and fishing. Near the SGP, the East Fork SFSR is accessible for dispersed recreation. Johnson Creek is accessible for water-based recreation at numerous campgrounds and dispersed campsites throughout the analysis area. Summit Lake, Caton Lake, Rainbow Lake, Curtis Lake, Black Lake, and Riordan Lake are other major bodies of water that are accessible for dispersed recreation. Johnson Creek and Burntlog Creek are eligible for designation as Wild and Scenic Rivers (recreational and wild, respectively), and the South Fork of the Salmon River is suitable for designation as a recreational Wild and Scenic River. Warm Lake, Horsethief Reservoir, Lake Cascade, and the North Fork of the Payette River are also located in the analysis area and offer several recreation amenities, including campgrounds and boat launching sites. Views experienced from waterbodies include transient (from watercraft) or stationary (from the shore) and are typically inferior and enclosed to partially enclosed, meaning expansive views of adjacent scenery are not present. No KOPs were identified on or along waterbodies. For more additional details on recreation resources and Wild and Scenic Rivers, refer to the SGP Recreation Specialist Report (Forest Service 2022b) and the Wild and Scenic Rivers sections of the SGP Special Designations Specialist Report (Forest Service 2022c), respectively.

6.1.2.3 Campgrounds and Lodging

There are 16 campgrounds in the analysis area: 11 are National Forest System campgrounds and the remaining five campgrounds and lodging facilities are non-Forest Service facilities. Campgrounds near the SGP are located along Johnson Creek Road (CR-10-413) close to the village of Yellow Pine. Many of the campgrounds provide access to hiking trails and rivers or streams for fishing and recreational activities. There also are three dispersed campsites in the analysis area. Views experienced from campgrounds and other lodging areas are stationary and typically inferior and enclosed or partially enclosed. One KOP is identified at a campground (KOP 8) and two at dispersed camp sites (KOPs 6 and 12).

6.1.2.4 Trails and Trailheads

There are numerous trails and trailheads throughout the analysis area, although notably fewer in the northern portion. The Idaho Centennial Trail is a 900-mile state-designated trail that includes motorized and non-motorized trails on the Payette National Forest and Boise National Forest. Lookout Mountain Trailhead is a supply drop location for Idaho Centennial Trail and wilderness users. Trails traverse through the forests and cross through the analysis area providing access to the FCRNRW, lakes, rivers, lookouts, campgrounds, and other various features and provide opportunities for viewing wildlife and scenery, including the FCRNRW. Views experienced from trails are transient or stationary and include superior, inferior, enclosed, and panoramic views. Four KOPs are identified along Forest Service trails (KOPs 2, 3, 7, and 9) and two at trailheads (KOPs 5 and 11).

6.1.2.5 Other Recreational Uses

Other recreational use sites in the analysis area include interpretive sites, viewpoints, lookouts, swimming sites, picnic areas, and wildlife viewpoints. The Stibnite Interpretive site is located at the old Stibnite home foundations near the SGP and includes informational signage describing the past history of the

town of Stibnite and mining in the area. There also is an interpretive site at Landmark that describes the historic ranger station established in 1924. Monumental Summit is a viewpoint offering 360-degree views of the forest and neighboring FCRNRW area. There are two lookouts: Meadow Creek Lookout and Thunderbolt Mountain Lookout. Warm Lake hosts the Billy Rice Swimming Site, and the Warm Lake Picnic Point is on a small peninsula, which offers expansive views of Warm Lake and hosts a small organization's camp. South of Warm Lake, along South Fork Salmon River Road (National Forest System Road 50474), there is a point of interest for visitors to view wild salmon. Views experienced from other recreational areas are transient or stationary and include superior, inferior, enclosed, and panoramic views. One KOP is identified at Meadow Creek Lookout (KOP 1).

6.1.3 Residences

Residences in the analysis area were inventoried as high sensitivity, due to duration of views and concern for changes in the landscape. The village of Yellow Pine is located approximately 14 miles west of the proposed SGP at the junction of Stibnite Road (CR 50-412) and Johnson Creek Road (CR 10-413). This small community, which had a year-round population of 32 in 2018, is the nearest residential area to the SGP (USCB 2018). Dispersed rural residences are generally located along Johnson Creek Road (CR 10-413) on private lands adjacent to the creek. These include Wapiti Meadows, Cox Ranch, and Bryant Ranch. The largest concentration of residential viewers on National Forest System lands within the analysis area is Warm Lake. The Warm Lake area has several seasonal residences in the Paradise Valley Summer Homes and Warm Lake Summer Homes areas. There are a few dispersed rural residences on private land off Warm Lake Highway near Scott Valley. The cities of Cascade and Donnelly are located in Long Valley near Lake Cascade and the North Fork Payette River. Several rural residences and ranches are in Long Valley, and Cascade serves as the primary logging and ranching center for residents. Several residences are located along Lake Cascade on private lands. Donnelly is at the upper end of Lake Cascade and provides access and support services to the lake and residents in the surrounding area. One KOP has been identified near the residences at Cascade (KOP 17).

6.1.4 Visual Quality Objectives

Of the VQOs assigned to the analysis area in the Payette National Forest Land and Resource Management Plan and Boise National Forest Land and Resource Management Plan, approximately 42,725 acres are identified as *Preservation*, 84,073 acres are identified as *Retention*, 178,118 acres are identified as *Partial Retention*, 19,709 acres are identified as *Modification,* and 1,272 acres are identified as *Maximum Modification*. The remaining 218,945 acres within the analysis area are either private, state, or other (non-Forest Service) federal land that do not have assigned VQOs. **Figure 5-2** illustrates these locations in the SGP vicinity.

6.1.5 Key Observation Points

6.1.5.1 KOP 1: Meadow Creek Lookout

KOP 1 represents views experienced from Meadow Creek Lookout, directed northeast towards the TSF Buttress and the TSF. Meadow Creek Lookout is not frequently visited by the general public due to its remoteness; however, it is one of the few recreational use areas with unobstructed superior (viewed from above) views of the SGP, as shown in the viewshed analysis (**Appendix C**). This location represents a moderate-sensitivity viewpoint that Forest Service staff and recreational users would see when accessing this lookout through Meadow Creek Lookout Road (FR 51290) and/or nearby Meadow Creek/Summit Trailhead and National Forest System Trail (NFST) 073. These areas are identified in the Boise National

Forest Land and Resource Management Plan (Forest Service 2010) as level 2 sensitive use areas, which are associated with a moderate level of visual sensitivity.

6.1.5.2 KOP 2: Frank Church-River of No Return Wilderness – Summit Trail (NFST 088)

Summit Trail offers panoramic views of the Salmon River Mountains and wilderness area for the entire length of the trail between Snowshoe Summit up to Meadow Ridge. This KOP represents what moderate sensitivity recreation users (hikers, horseback riders) would see from a non- motorized trail at the edge of the wilderness. Similar to Meadow Creek Lookout, this area is not frequented by many visitors because of its remoteness; and is associated with a moderate level of sensitivity which is consistent for similar trails in this area. This trail crosses areas designated as roadless and existing views of the characteristic landscape are typically limited to dispersed recreation such as hiking or horseback riding.

6.1.5.3 KOP 3: Frank Church-River of No Return Wilderness – Mule Hill Trail (NFST 219)

KOP 3 at Mule Hill Trail is accessible from Meadow Creek Lookout Road (FR 51290) and provides access to the Indian Creek Trail. This viewpoint represents what high sensitivity recreation users (hikers, horseback riders) might see from a trail within the wilderness.

6.1.5.4 KOP 4: Stibnite Road (CR 50-412)

KOP 4 represents views experienced from the Stibnite Road portion of McCall-Stibnite Road (CR 50-412) directed east-southeast toward the Yellow Pine pit. Stibnite Road (CR 50-412) is a sensitivity level 1 travel route that provides access to the SGP through the village of Yellow Pine. This road also provides access to Thunder Mountain Road (FR 50375) through the proposed SGP, and this viewpoint represents typical views that travelers would see from Stibnite Road (CR 50-412). This road would be closed to the public between the North Gate (approximately located at the confluence of Sugar Creek and CR 50-412) and South Gate during portions of construction and operations when activities like blasting occur. Previous disturbance from historical mining activities is evident in the foreground, including light soil color contrasts from landform modifications. At this location, the road would be upgraded to accommodate SGP traffic during construction, including a turnaround area at the North Gate.

6.1.5.5 KOP 5: Hennessey Meadow Trailhead

KOP 5 represents views from Hennessey Meadow Trailhead looking east toward the proposed transmission line corridor. Hennessey Meadow Trailhead is at the end of Horse Heaven Road (FR 416W), which is a high-clearance vehicle travel route that follows Riordan Creek. This trailhead provides access to NFST 097 which leads to Riordan Lake, a popular fishing location in the area; and NFST 233, along the historical transmission route to the SGP. At this location, NFST 233 traverses extremely steep terrain that is primarily accessible by experienced OHV users and may receive limited use due to this factor. This trailhead is associated with moderate sensitivity and is a typical viewpoint for motorized vehicle recreational users in the area. The past transmission line ROW corridor is evident, although structures are not present.

6.1.5.6 KOP 6: Twin Bridges Dispersed Camping Area

KOP 6 represents views from Twin Bridges dispersed camping area looking south toward the proposed upgraded transmission line. Twin Bridges dispersed camping area is between Johnson Creek and the existing transmission line corridor, with Johnson Creek Road (CR 10-413) immediately west of the

transmission line. This dispersed camping area is associated with moderate visual sensitivity. This viewing location is representative of dispersed recreational viewers in the area, with views of the existing transmission line. Screening is limited, and the modifications associated with the existing ROW are co-dominant in the landscape due to the enclosed landscape setting. Human development is limited to existing roads and the transmission line ROW.

6.1.5.7 KOP 7: Idaho Centennial Trail at Johnson Creek Road (CR 10-413) and Burntlog Creek Trail (NFST 075)

KOP 7 represents views from the Idaho Centennial Trail (ICT) directed west toward Burnt Log Road (FR 447). The ICT follows the Burntlog Creek Trail (NFST 075) heading north to the junction of Johnson Creek Road (CR 10-413). This trail is identified as a sensitive level 1 use area and is associated with high visual sensitivity. This KOP represents a typical ICT trail user in the analysis area with views of the transmission line. Recreational viewers associated with this viewpoint currently have unobstructed views of the transmission line, primarily due to ROW vegetation clearing. Modifications near the trail are limited to existing roads and the transmission line ROW.

6.1.5.8 KOP 8: Trout Creek Campground

KOP 8 represents the view from Trout Creek Campground looking west toward the transmission line. Trout Creek Campground is off Johnson Creek Road (CR 10-413) just southeast of the existing transmission line corridor. This campground is a sensitive level 1 use area, with developed amenities including fire pits, picnic benches, and restrooms. This viewing location is representative of campers in the analysis area that would have views of the existing transmission line corridor. The transmission line corridor is immediately adjacent to the campsite, and screening is limited to a few rows of trees at this site. Although the transmission line structures and conductors are visually subordinate from the campground due to vegetation screening, the ROW clearing is visible from many locations where understory vegetation has been thinned.

6.1.5.9 KOP 9: Boundary of the Frank Church-River of No Return Wilderness Near Pistol Lake

KOP 9 is located approximately 3 miles east of the Burntlog Route at its closest point (**Figure 5-1**). This KOP is located approximately 0.5 miles west of Pistol Lake on a ridgeline that forms the boundary of the FCRNRW in this area. This KOP represents what dispersed recreation users (hikers, horseback riders) might see from a location at the edge of the wilderness east of the new roadway segment for the Burntlog Route. It affords superior views across drainages and ridgelines, including a burned area of the Boise National Forest. SGP features would not be visible from Pistol Lake.

6.1.5.10 KOP 10: Burnt Log Road (FR 447)

KOP 10 represents foreground views from Burnt Log Road (FR 447) directed southwest (**Figure 5-1**). Burnt Log Road (FR 447) is currently a high-clearance vehicle route that provides access to Snowshoe Summit Trailhead at the edge of the FCRNRW and Burntlog Creek and ends near Chilcoot Pass. This road is a sensitivity level 2 travel route and has overall moderate visual sensitivity.

6.1.5.11 KOP 11: FCRNRW Boundary

KOP 11 is located at the Snowshoe/Summit trailhead on the western edge of the FCRNRW boundary. Due to topography and vegetation screening, it was determined that no SGP components would be visible from this location (**Appendix A**); therefore, it is not carried forward in the analysis.

6.1.5.12 KOP 12: Mud Lake Dispersed Camping Area

KOP 12 represents views from the Mud Lake dispersed camping area looking north-northwest (KOP 12a) and south-southeast (KOP 12b) (**Figure 5-1**). Burnt Log Road (FR 447) is currently a high-clearance vehicle travel route with moderate visual sensitivity that provides access to Mud Lake dispersed camping area, just 2 miles east of Landmark.

6.1.5.13 KOP 13: Warm Lake Road (CR 10-579) at Landmark Maintenance Facility

KOP 13 represents views looking north from the Warm Lake Road (CR 10-579) at the proposed Landmark Maintenance Facility location (**Figure 5-1**). Warm Lake Road (CR 10-579) is a paved, passenger vehicle accessible, travel route that provides access to Landmark and Warm Lake. This is a sensitivity level 1 travel route used by summer and winter recreational visitors.

6.1.5.14 KOP 14: Cabin Creek Road (FR 467)

KOP 14 represents views from Cabin Creek Road (FR 467) looking north-northeast (KOP 14a) and south-southwest (KOP 14b) toward the transmission line. Cabin Creek Road (FR 467) is north of the Warm Lake area, and cuts across the Thunderbolt Mountains, terminating at Johnson Creek Road (CR 10-413) near Trout Creek Campground. This travel route is a sensitive level 2 use area and is used frequently for OHV recreation. Recreational users have views of existing transmission line corridor vegetation clearing and pole structures.

6.1.5.15 KOP 15: South Fork Salmon River Road (FR 474) and Warm Lake Road

KOP 15 represents views from South Fork Salmon River Road (FR 474) looking southwest (KOP 15a) and northeast (KOP 15b) toward the transmission line. South Fork Salmon River Road (FR 474) is a sensitive level 1 travel route near the Warm Lake recreation area. This viewpoint represents views that travelers would see from the South Fork Salmon River Road (FR 474) from Rice Creek coming into Warm Lake. The existing transmission line corridor is currently visible from this KOP; views of the existing switchgear are in the foreground, unobstructed. The existing conditions around the switchgear site appear to be previously disturbed, graded, and vegetation removed or thinned. This area has been historically altered by fires, and several dead and burned trees occupy the landscape, with isolated areas of mature trees and understory vegetation.

6.1.5.16 KOP 16: Stibnite Gold Logistics Facility

KOP 16 represents views from Warm Lake Road (CR 10-579) looking northeast (KOP 16a) and southwest (KOP 16b) toward the SGLF. Warm Lake Road (CR 10-579) is a paved, passenger vehicle–accessible travel route that provides access to Warm Lake. This is a high-sensitivity travel route that provides access to Warm Lake from Cascade. This area in Scott Valley is primarily undisturbed with few structures on the landscape.

6.1.5.17 KOP 17: Lake Cascade Residence

KOP 17 represents views of residents along State Highway 55 near Lake Cascade looking north toward the transmission line. Residential viewers near the transmission line in Cascade are limited to a few locations near Lake Cascade and along State Highway 55. Views are primarily unobstructed, because the transmission line corridor is immediately adjacent to these residences or visible in the foreground.

Existing modifications in this rural setting are associated with neighboring residences, agricultural or ranching facilities, distribution lines, and local roads.

7.0 Environmental Consequences

7.1 Impact Definitions

The impacts definitions for intensity, duration, and context (Forest Service 2012a) are provided in **Table 7-1.**

Table 7-1 Impact Definitions

Attribute	Term	Description
Intensity	Negligible	Impacts would result in a change in current conditions that would be too small to be physically measured using normal methods or would not be perceptible. There is no noticeable effect on the natural or baseline setting. There are no required changes in management or utilization of the resource.
Intensity	Minor	Impacts would result in a change in current conditions that would be just measurable with normal methods or barely perceptible. The change may affect individuals of a population or a small portion of a resource, but it would not result in a modification in the overall population, or the value or productivity of the resource. There are no required changes in management or utilization of the resource.
Intensity	Moderate	Impacts would result in an easily measurable change in current conditions that is readily noticeable. The change affects a large percentage of a population, or portion of a resource which may lead to modification or loss in viability, value, or productivity in the overall population or resource. There are some required changes in management or utilization of the resource.
Intensity	Major	Impacts are considered significant. Impacts would result in a large, measurable change in current conditions that is easily recognized. The change affects a majority of a resource or individuals of a population, which leads to significant modification in the overall population, or the value or productivity of the resource. This impact may not be in compliance with applicable regulatory standards or impact thresholds, requiring large changes in management or utilization of the resource.
Duration	Temporary	Impacts that are anticipated to last no longer than 1 year.
Duration	Short-Term	Impacts that are anticipated to begin and end within the first 3 years during the construction phase.
Duration	Long-Term	Impacts lasting beyond 3 years to the end of mine operations and through reclamation, approximately 20 years.
Duration	Permanent	Impacts that would remain after reclamation is completed.
Context	Localized	Impacts would occur within the analysis area or the general vicinity of the Operations Area Boundary.
Context	Regional	Impacts would extend beyond the Operations Area Boundary and local area boundaries.

Intensity is the severity or levels of magnitude of an impact.
Duration is the length of time an effect would occur.
Context is the effect(s) of an action that must be analyzed within a framework, or within physical or conceptual limits)

7.2 Direct and Indirect Effects

Visual impacts from construction activities would be temporary to short-term and typically arise from the presence, movement, and lighting associated with construction vehicles and equipment, dust plumes generated by grading, earthworks, or the movement of construction equipment and vehicles on unpaved surfaces. These types of visual impacts cease when the construction activities are finished.

Operational impacts would be long-term in duration and last at least through the operational phase of the SGP. These impacts would arise from the presence of new or larger buildings and built facilities, new or larger cleared ROWs for roads and utilities, lighting associated with facilities, equipment, and vehicles, dust plumes generated by earthworks or vehicle traffic on unpaved roads, and increased movement associated with mobile equipment or vehicle traffic.

Permanent effects to scenic resources would result from closure and reclamation, which would exist indefinitely.

7.2.1 No Action Alternative

Under the No Action Alternative, the mining and associated activities for the SGP would not be implemented, and no development of the SGP or supporting facilities would occur or be introduced. The landscape environment described in **Section 6.1.1** would remain as it currently exists in the analysis area. Existing disturbances associated with historic mining activities at the SGP would still be visible to sensitive use areas, but there would be no changes to the PNF and BNF characteristic landscape. Unlike the 2021 MMP and the Johnson Creek Route Alternative, reclamation activities would not be performed and permanent changes to the landscape in the area of the historic mine activities would dominate the landscape. However, reclamation associated with authorized exploration under the Meadow Creek Exploration Project would be conducted. Existing VQO classifications would remain the same under this alternative; therefore, there would be no direct or indirect effects to scenic resources as a result of the No Action Alternative. The existing disturbances associated with historic mining activities do not meet the Partial Retention VQO. This would continue under the No Action Alternative.

7.2.2 2021 MMP

Elements of the 2021 MMP may be inconsistent with current VQOs as designated by the PNF and BNF. More specific detail on acreages associated with these potential inconsistencies are provided in **Appendix B**.

7.2.2.1 Mine Site

Under the 2021 MMP, infrastructure and operations at the SGP would include three open pits, the TSF, TSF Buttress, ore processing, a water treatment plant, a transmission line, and limestone processing. Lime and crushed limestone would be produced on site from mining in the West End pit under the 2021 MMP and would include a haul road from the West End pit to the limestone processing facilities. This would result in minor differences to the characteristic landscape as viewed from KOP 4. Based on the viewshed analysis, the SGP could be visible from two KOPs, where a detailed analysis was performed: KOP 1 and KOP 4. Although the viewshed analysis indicates the SGP also may be visible from KOP 2, a more in-depth review of site-specific photos indicate views of the SGP would be obstructed by intervening topography (**Appendix C**).

Effects to the Characteristic Landscape

Throughout construction of facilities and early mining, excavating pits and reprocessing the historical tailings would expose lighter-colored rock and some unweathered rock that would introduce strong visual contrast with existing rock, soils, and vegetation. Landform modifications associated with initial development during pre-production would result in a low level of visual contrast to the existing landscape, primarily due to historical mining disturbance and scale of construction activities during this timeframe. New disturbances in the footprint of existing modifications would introduce similar form, line, color, and textures.

As production moves into undisturbed areas, slope cuts and terraces associated with the open pits would remove vegetation, expose unweathered lighter-colored rock, and create unnatural horizontal lines in the landscape. At night, lighting from the mine facilities, including the communications tower to the east of the SGP, the pits, haul trucks, and traffic on access routes would change the character of the night sky by increasing sky glow or light pollution. Long-term visual contrast would be associated with the expansion of mining activities to full build-out and continued nighttime lighting. However, these impacts would be reduced by implementing lighting design features, including directing lights downward, and shielding where appropriate. Overall, long-term visual contrast introduced to the characteristic landscape would be moderate and localized, primarily due to the expansion of mining activities and introduction of nighttime lighting.

During operations, major landscape alterations associated with the SGP under the 2021 MMP would expand on the existing mining landscape modifications through the operation of the Yellow Pine pit, West End pit, Hangar Flats pit, the TSF, and the TSF Buttress. Modifications that currently exist due to past mining activity include the introduction of monolithic landforms of an industrial scale that exhibit bold form, strong lines, contrasting color, and vegetation patterns and textures that do not blend into the natural landscape. The 2021 MMP would introduce additional modifications to the landscape similar to those present, which would further reduce the scenic integrity of the area by introducing additional strong visual contrast and discordant elements. Other SGP support facilities, including ore-processing, lime-processing, storage areas, worker housing facility, and other administrative offices, also would modify the characteristic setting, but at a smaller scale.

Additionally, air quality modeling predicts visual impacts from the potential emissions plume. Actual visibility would depend on meteorological conditions. Visibility and associated impacts would lessen the greater the distance from the SGP and visual contrast would appear strongest during times of low sun angle. Refer to the SGP Air Quality Specialist Report for additional information (Forest Service 2022d).

The TSF Buttress would be located in a steep valley between mountain ridges. The material would be placed on an active working base and expanded upward as the facilities are built out. As a result of storing development rock in a valley surrounded by mountainous terrain, this would appear as wider valley basins, with terracing or sloping evident at the valley edges. As landform modifications proceed for all three open pits, the TSF, and the TSF Buttress, the visual contrast would be strong, and result in a high level of change to the existing characteristic landscape.

Under the 2021 MMP, the SGP would be within areas managed as a VQO of Retention or Partial Retention. Where visible from viewing platforms, the SGP would not meet either of these VQOs as the SGP components would introduce form, line, color, and texture found infrequently or not at all in the characteristic landscape, and to a degree that would dominate the characteristic landscape. These effects could be visible from the Stibnite Road (CR 50-412) and the Meadow Creek Lookout viewing platforms. Overall, the disturbances associated with the SGP would introduce strong contrast as a whole; visual

impacts of the SGP during construction and operations would be long term, moderate to major, and localized.

After closure and reclamation, permanent visual contrast associated with structures (i.e., buildings, communication facilities, transmission line) would be minimal, because mine support facilities would be dismantled, removed from the site, and the landform would be regraded, and reclaimed with native vegetation. Closure of the SGP facilities also would eliminate the primary source of nighttime lighting. Once reclamation is completed and mine-related vehicle travel to the SGP has ceased, nighttime lighting would be similar to existing conditions. At closure, major landform modifications at the SGP, including the Yellow Pine pit backfill, the TSF, TSF Buttress, the Hangar Flat pit backfill, and haul roads, would be contoured and graded to blend into the surrounding topography and terrain. Strong visual contrast would be permanent for a portion of the pits where lighter-colored exposed rock and horizontal benches would remain in unnatural, geometric landforms. These lighter-colored landforms would contrast sharply with adjacent scenery that has been unmodified. The geometric form of the horizontal benches above the backfilled portions of the Yellow Pine and West End pits would still appear unnatural in this setting. The TSF and TSF Buttress would have rounded crests and variably shaped angles to more closely resemble natural landforms, which would help to reduce visual contrast. As mature vegetation establishes on reclaimed TSF and TSF Buttress landforms over time, visual contrast associated with lighter-colored soils would diminish for a large portion of these disturbed areas. Although reclamation and revegetation efforts may reduce color contrast over time, the TSF would require a substantial buttress to ensure long-term stability, which would introduce strong geometric lines and unnatural form into the landscape permanently.

The reconfiguration of the East Fork SFSR through the reclaimed SGP would introduce curvilinear (i.e., winding) and more natural-appearing forms to the landscape; however, the modified landforms associated with the SGP would dominate the setting. The reconfiguration of the East Fork SFSR over time would soften the sharp contrasts in that area as vegetation matures. The Hangar Flats pit would be completely backfilled, resulting in a line and form that would blend with the surrounding natural topography. With successful revegetation of the backfill, it would have a more uniform color with the surrounding undisturbed landscape, with varied colors and textures. The Yellow Pine pit would be backfilled to accommodate reconfiguration of the East Fork SFSR. The West End pit would not be backfilled and would have a pit lake that would introduce dark tones and reflectiveness from the water. Stibnite Road (CR 50-412) would not be reclaimed and a new connector to Thunder Mountain Road (FR 50375) would be constructed over the backfilled Yellow Pine pit. The level of visual contrast associated with the road would be low, similar to existing conditions; and would not contribute substantially to permanent effects. Meandering stream channels would be designed across the TSF and TSF Buttress. Reclamation and revegetation of SGP features would contribute collectively to reduce permanent visual contrast to the characteristic landscape. Permanent visual impacts would be moderate and localized.

Effects by Key Observation Point

KOP 1: Meadow Creek Lookout

A portion of the SGP would be visible from this viewpoint in the middle-ground distance zone, approximately 2.5 miles to the northeast. Short-term impacts visible from KOP 1 would be similar (moderate, localized) to those described above and would be seen from a superior vantage point. Visual impacts from construction would alter the experience for individuals at the lookout by transforming it to a more industrial setting.

Operational conditions at the end of mine operations were simulated from KOP 1, provided in **Appendix C**. Under the 2021 MMP, during operational conditions, the tailings from the SGP would appear as large, flat, smooth, and uniform at the bottom of the valley, which would result in strong visual contrast against the sloping, uneven texture of the surrounding mountains and valley. The flat top and monolithic form of the TSF would introduce strong contrast against the more complex, rough, rugged surrounding topography. Complete backfill of the Hangar Flats pit would restore a more uniform line with topography. However, until successful revegetation, it would appear as a lighter color than the surrounding undisturbed landscape. From this viewpoint, the TSF full build-out would consume most of the Meadow Creek valley, creating a wider basin between the mountain ranges, which is not typical for this landscape. The TSF would appear to be an artificially smooth, regular, and continuous form, contributing to a strong level of long-term visual contrast. Intervening terrain would obstruct views of the Yellow Pine pit and West End pit. Only the TSF, TSF Buttress, and the recently backfilled Hangar Flats pit would be visually dominant in the middle-ground distance zone. Due to their distance, mine support facilities may be visible but individual components would not be perceptible from KOP 1. A plume would be visible from KOP 1.

Nighttime lighting would be perceptible during construction and operation, although implementation of Forest Service mitigation measures specific to lighting would reduce the magnitude of impacts from sky glow. Permanent contrast would be slightly reduced over time because color contrasts of the TSF and the backfilled Hangar Flats pit would gradually diminish through reclamation and revegetation. For areas where revegetation is not possible, in geologic time (i.e., millions of years), weathering would reduce the contrast but, in any human-type context, the change would be permanent because of the coloration and angular nature of the granitic rock against more surficial sedimentary type rocks. Visual impacts from mine operation would alter the experience for individuals at the KOP by transforming it to a more industrial setting. Impacts at KOP 1 would be negligible to moderate, localized, and long term.

At closure and reclamation, the strong visual contrast created by lines and colors of the SGP would be softened slightly over time as vegetation establishes and becomes more diverse. Overall, with the implementation of reclamation, the permanent level of visual contrast would be reduced to moderate-strong for viewers at this KOP indefinitely. Nighttime lighting would return to existing conditions.

KOP 4: Stibnite Road (CR 50-412)

A portion of the SGP would be visible from this viewpoint in the middleground distance zone. Short-term impacts visible from KOP 4 would be similar to those described above and would be seen from a superior vantage point. Visual impacts from construction would alter the experience for individuals at the KOP by transforming the area to a more industrial setting.

During operations, the SGP is completely obstructed by topography for most of the travel route between the village of Yellow Pine and the SGP, and views of the SGP would be limited to a small portion of the road in the immediate vicinity of the SGP. Views experienced from KOP 4 under existing conditions are included in **Appendix A**.

During operations under the 2021 MMP, the Stibnite Road (CR 50-412) would no longer serve as the primary access road for the mine. Traffic past the North Gate would be limited to administrative access as needed. Near the North Gate, the SGP would be visually dominant to receptors due to the scale of landform modifications visible in the foreground. A portion of the Yellow Pine pit would be visible once it is fully built out, but adjacent terrain and vegetation would screen most of the associated disturbances. Where visible, the geometric formation and sharp color contrasts as a result of the Yellow Pine pit would strongly contrast with surrounding natural topography; however, during and after operations, the pit would be filled with development rock, and reclaimed. Color contrast associated with untreated

development rock is anticipated to be strong, and would appear light tan in color, which is more uniform in appearance than the surrounding undisturbed landscape, which is primarily dark green.

Because the SGP would not be visible along most of the Stibnite Road (CR 50-412), overall long-term visual contrast associated with road improvements would be low to moderate and remain subordinate to viewers along this travel route. Although minimized through design features, nighttime lighting would be perceptible to travelers from both the SGP and mine-related traffic on the road. The impacts visible from KOP 4 would alter the experience of individuals traveling on the road by transforming the surrounding setting to a more industrial-like landscape. A plume would be visible from KOP 4.

The limestone crushing plant could be visible from KOP 4 in the middleground once vegetation present in the foreground is cleared. Mine activity associated with the Yellow Pine pit would be present in the foreground between KOP 4 and the limestone crushing plant; therefore, activities associated with the Yellow Pine pit would dominate the views from KOP 4 so that activity and long-term effects associated with the limestone crushing plant would be subordinate. Impacts at KOP 4 during construction and operations would be long term, moderate, and localized.

At closure, Stibnite Road (CR 50-412) would be fully re-opened to the public and reclaimed close to existing conditions except for the new segment through the reclaimed Yellow Pine pit and SGP. Permanent contrast would be reduced to moderate-strong over time, as color contrasts of the backfilled Yellow Pine pit would gradually diminish through reclamation and revegetation. For areas where revegetation is not possible, in geologic time (i.e., millions of years), weathering would reduce the contrast but, in any human-type context, the change would be permanent because of the coloration and angular nature of the granitic rock against more surficial sedimentary type rocks. Night skies would appear as they did prior to mine development.

7.2.2.2 Access Roads

The primary features relevant to scenic resources for access road infrastructure related to the 2021 MMP include:

- **Burntlog Route, Riordan Creek Segment –** An approximately 5.3-mile segment of the Burntlog Route would be located in the Riordan Creek drainage, where it would cross Riordan Creek north of Black Lake.
- **Public** Access **via Stibnite Road to Thunder Mountain Road Link –** Public access through the SGP from Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) during mining operations would be provided by constructing a 12-foot-wide gravel road to connect Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375). The route would be open to all vehicles year-round.
- **Soil Nail Walls** – There would be approximately 1.5 miles of soil nail walls constructed.

The viewshed analysis (**Appendix C**) indicates that the Burntlog Route would be visible from seven KOPs, where detailed analyses were performed: KOP 1, 2, 4, 9, 10, 12, and 13. The 2021 MMP components described in the bulleted list above would result in very similar visual changes to the characteristic landscape as viewed from KOP 4 as described under **Section 7.2.2.1**. These components would not be visible from KOPs 1, 2, 9, 10, 12, and 13; and effects would appear as described below. Visibility would generally extend up to 2 to 3 miles to the east of the Burntlog Route and less than 1 mile to the west. The route also could be visible from a ridgeline about 5 to 7 miles west, although due to distance, visual contrast would be weak. Upon further detailed review, the Burntlog Route would not be

visible from KOP 2 because of topographic and vegetation screening as evidenced by photographs, and visual simulations; therefore, KOP 2 is not discussed further in this section.

Effects to the Characteristic Landscape

Construction activity associated with the primary access road (Burntlog Route) would introduce short term visual contrast. Mine traffic would use existing roads (Warm Lake Road [CR 10-579], Johnson Creek Road [CR 10-413], and Stibnite Road [CR 50-412]) to access the mine year-round until construction of the Burntlog Route and the linkage between Stibnite Road (FR 50412) and Thunder Mountain Road (FR 50375) are complete. Warm Lake Road (CR 10-579) does not require improvements to accommodate mine traffic during construction and would continue to be used throughout operations; therefore, short-term visual impacts associated with those roads would be limited to increased construction traffic and associated dust. It would be plowed year-round rather than seasonally groomed for snow machines. Traffic counts would increase.

Johnson Creek Road (CR 10-413) and Stibnite Road (CR 50-412) would require improvements, including ditching, culvert repair, graveling, and winter snow removal, to support the increased road use during construction. No widening or changes to the Johnson Creek Road alignment would occur under the 2021 MMP; although a groomed winter route would be added which would add movement to the winter landscape and additional winter viewer platform in this area. Additional tree clearing may be needed to support temporary winter maintenance activities along these roads until Burntlog Route is open to use. Construction activity on the Riordan Creek segment of the Burntlog Route and the Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 502375) link would have the same type of impacts to the landscape. Increased construction traffic, dust, grading, ditching, and vegetation removal would occur. Short-term visual contrast associated with maintenance activities, vegetation removal, and winter plowing would be low because the level of visual change would be similar to existing conditions. Impacts would be short term, localized, and moderate.

During operations, long-term visual effects associated with improvements to Burnt Log Road (FR 447) would occur from Landmark to Trapper Flat, which would require grading and removal of vegetation to accommodate a travel width of 20 feet and total width of up to 26 feet (but less in some locations), including shoulders. Road modifications such as side-ditching, culverts, guardrails, and bridges may be upgraded and added to accommodate the expanded road width and stream crossing considerations. Grading improvements and vegetation removal would result in similar form, line, color, and texture of the existing road and disturbed areas associated with dispersed recreation activities. Similar to the existing portion of Burnt Log Road (FR 447), upgrades required along the portion of Thunder Mountain Road (FR 50375) between the worker housing facility and the mine entrance gate would require upgrades to existing access, including grading, vegetation removal, and upgrade of road structures.

During operation of the mine, the Burntlog Route would be routinely maintained, including grading (as needed), spot graveling, dust control, and snow removal in the winter. Mine operation would create traffic to the SGP from buses, vans, trucks, and personal vehicles throughout mining operations The presence of mine traffic on this route would introduce movement into the characteristic landscape, which—for the new portion of the Burntlog Route—is primarily roadless. In addition, the presence of vehicles on the road at night would introduce new lighting into the landscape.

The Riordan Creek segment of Burntlog Route and the Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link would result in changes to the characteristic landscape similar to the other upgraded section of Burnt Log Road, and appear as flat to sloping, smooth, light-brown linear forms through the landscape; and appear consistent with other existing roads in the area. The presence of

vehicles on these routes would introduce movement to the landscape, and also provide access in an area with no current road access.

The Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link would provide access to and through the SGP and provide a viewer platform from which the SGP can be viewed. Viewers traveling along the public access road through the SGP would experience close-up, transient, head-on, and peripheral views of large machinery, movement, exposed soil and rock, and other mine-related equipment and infrastructure that would appear as an industrial landscape within the greater forested setting of the PNF and BNF. Soil nail walls would result in strong visual contrast. A 140-foot-tall road cut near the SGP would introduce a large, smooth light-colored surface above the road that would sharply contrast with the natural, variable lines and forms of the surrounding landscape.

New segments of the Burntlog Route would introduce approximately 15 miles of new road that would be a viewing platform for areas of the forest, providing views to portions of the forest that are not currently afforded any viewing opportunity by a road or trail. Approximately 2 miles of new road would be situated within the viewshed of the SGP in the middleground distance zone.

New construction associated with the Burntlog Route would cross areas managed as Retention, Partial Retention, and Modification VQOs. With the exception of the soil nail walls, access roads would generally conform to the Partial Retention and Modification VQO. Although new and upgraded portions of the access roads could introduce strong visual contrast in some areas, it typically would be limited to the immediate foreground as viewed from the road introducing the contrast and would appear subordinate from other viewing platforms. New access roads would not be consistent with the Retention VQO as they would introduce new lines, colors, and textures that would be evident. Impacts would be long term, localized, and moderate to major.

Upon closure and reclamation of the SGP, upgraded portions of Burnt Log Road (FR 447) would be reclaimed to existing conditions, and new portions of the Burntlog Route would be removed from use and reclaimed. Soil nail walls and the 140-foot-tall road cut near the SGP are proposed to remain in place after decommissioning and their appearance would continue to introduce strong visual contrast with the surrounding landscape as described above. Post-mine closure, traffic would likely return to a pre-mining level of use. Permanent visual contrast to the characteristic landscape generally would be minimal to moderate because the road would be returned to its previous width although the flatter grades and smoother curves would be retained. Changes to the landscape from removal of mature vegetation would remain evident for several years after reclamation activities. The remaining soil nail walls would be an exception; these areas would introduce strong visual contrast; however, the geographic extent of these changes would be localized. The Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link would be reclaimed, and those areas would appear similar to the reclaimed areas of Burnt Log Road (FR 447). Impacts would be permanent, localized, and minor to moderate.

Effects by Key Observation Point

KOP 1: Meadow Creek Lookout

Short-term, construction-related impacts visible from KOP 1 would be associated with mine traffic construction activities along Burnt Log Road (FR 447), which would include increased movement from construction traffic and associated dust. These impacts would appear subordinate to viewers compared with the SGP.

Portions of Burntlog Route would be visible from KOP 1 when looking south. The light-tan color and straight horizontal line introduced by the new roadway portion of the Burntlog Route would introduce a visual contrast against the darker surrounding colors, undulating ridgelines, and variable textures of the vegetation covered terrain. **Appendix A** provides a visual simulation looking south from KOP 1 (KOP 1b) of the proposed Burntlog Route. Construction and operations impacts would be long term, localized, and negligible to minor.

After closure and reclamation, permanent visual contrast would be non-visible to weakly visible as viewed from KOP 1, because the portion of Burntlog Route visible from the KOP would be reclaimed to existing conditions.

KOP 4: Stibnite Road (CR 50-412)

Under the 2021 MMP, the Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link would begin at KOP 4. From KOP 4, construction activity associated with road construction would be visible in the foreground, including construction traffic, equipment, dust, and movement of equipment and construction workers.

From KOP 4, the Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link would travel north through the SGP and appear as a flat to sloping, smooth, light brown linear form traversing the landscape. Although the linear form and light color would contrast with the natural surroundings, it would appear consistent with other existing roads in the area that are visible from KOP 4. Impacts would be long term, localized, and minor.

KOP 9: Boundary of the Frank Church-River of No Return Wilderness Near Pistol Lake

Visibility is primarily screened by existing vegetation and intervening topography. During construction activities, weak short-term visual contrast could be experienced from KOP 9. Construction equipment would be difficult to discern at this distance; however, dust and construction activities along the route may be visible. The impacts experienced from KOP 9 would have little to no impact on the overall user experience of the wilderness.

The increased width of the existing road would increase visual contrast, primarily associated with the expanded width of light-colored ground exposed as a result of the road widening. Visual contrast would appear weak from KOP 9 as the landscape already appears lighter in color than other surrounding areas due to the effects of historical fires in the area. The improvements to Burnt Log Road (FR 447) would appear subordinate to the large-scale surrounding landscape that would absorb the visibility of these changes to the landscape. The new roadway would not be visible from KOP 9. Impacts would be long term, localized, and negligible.

After closure and reclamation, permanent visual contrast would be non-visible to weakly visible as viewed from KOP 9 because the portion of improved Burnt Log Road (FR 447) visible from the KOP would be reclaimed to existing conditions. Due to screening from vegetation and intervening topography and location within a previously burned area, changes to the landscape from removal of mature vegetation would likely not be evident.

KOP 10: Burnt Log Road (FR 447)

Burnt Log Road would be widened and graded to accommodate SGP traffic under the 2021 MMP. Short-term visual contrast from KOP 10 would result from construction activities associated with improvements along Burnt Log Road (FR 447). Construction traffic, equipment, and staff would be evident from this

travel route during pre-production. The resulting level of short-term visual contrast would be moderate for receptors due to unobstructed views of construction activities in the foreground. The impacts visible from KOP 10 would alter the experience of individuals traveling on the road by transforming the surrounding setting to a more industrial-like landscape.

Access road improvements along the existing portion of Burnt Log Road (FR 447) from Landmark to Trapper Flat would require grading and removal of vegetation to accommodate a total travel width of 20 feet and total width of up to 26 feet (but less in some locations), including shoulders. In some locations, vegetation is densely wooded with thick understory vegetation. Removal would result in moderate color and line contrasts at the road edges. These contrasts would be less strong for portions of Burnt Log Road (FR 447) that are affected by historical fires. Dead or felled trees would be removed, along with low-lying vegetation, resulting in a low to low-moderate level of visual contrast. Landform changes and color contrast associated with new disturbance where widening or cut/fill is necessary would contribute to a moderate level of visual change.

Visual impacts, although likely minor, would occur from the introduction of structural components such as culverts, guardrails, and bridges that may be upgraded or added to accommodate the expanded road width. Improved access would introduce a moderate level of visual change to existing form, line, and color; however, Burnt Log Road improvements would remain visually co-dominant to sensitive viewers on the road. During operation of the mine, Burntlog Route would be routinely maintained, including grading (as needed), spot graveling, dust control, and snow removal in the winter. Mine operations would generate traffic to the mine site from buses, vans, trucks, and personal vehicles throughout mining operations. When traveling on the road at night, these vehicles would introduce new lighting into the landscape. The impacts visible from KOP 10 would alter the experience of individuals traveling on the forest road by transforming the surrounding setting to a more industrial-like landscape. A simulation from KOP 10 showing what the improved road would look like is included in **Appendix A**. Construction and operations impacts at KOP 10 would be long term, localized, and moderate.

Upon closure and reclamation of the mine site, upgraded portions (except segments abandoned at the beginning of construction, which would have been currently reclaimed with construction activities) of Burnt Log Road (FR 447) would be reclaimed to existing conditions. At mine closure, traffic would likely return to a pre-mining level of use. Permanent visual contrast at KOP 10 would be minimal to low-moderate, because the road would be returned to existing conditions with an assumed low-traffic volume. Changes to the landscape from removal of mature vegetation would remain evident for several years after reclamation activities.

KOP 12: Mud Lake Dispersed Camping Area

Short-term visual contrast from this viewpoint would result from construction activities associated with improvements along Burnt Log Road (FR 447) within 100 feet of this site. Construction traffic, equipment, and staff would be evident from this area. The resulting level of short-term visual contrast would be moderate and localized for receptors due to views of construction activities in the foreground. The presence of heavy machinery and construction workers, and associated movement, would change the mostly natural setting viewed from KOP 12 to a more industrial-type setting, which would change the experience for viewers using the Mud Lake Dispersed Camping Area at KOP 12; campers would likely not use the site during construction due to visual and noise disruptions.

Access road improvements along Burnt Log Road (FR 447) near Mud Lake would require grading and removal of vegetation to accommodate a total road width of up to 26 feet, including shoulders. Grading improvements and vegetation removal would result in similar form, line, color, and texture as the existing

road. Landform changes and color contrast associated with new disturbance where widening or cut/fill is necessary would contribute to a minor to moderate level of visual change, because the site is relatively flat. Noticeable contrast would result from vegetation removal along the road. At this location, vegetation is densely wooded with thick understory vegetation. Removal would result in moderate color and line contrasts at the road edges.

Structural components such as culverts or guardrails may be upgraded or added to accommodate the expanded road width. Improved access would introduce a moderate level of visual contrast to existing form, line, and color; however, Burnt Log Road (FR 447) improvements would remain visually co-dominant to sensitive viewers at this dispersed camping area. During operation of the mine, Burntlog Route would be routinely maintained, including grading (as needed), spot graveling, dust control, and snow removal in the winter. Mine operation would create traffic to the mine site from buses, vans, trucks, and personal vehicles throughout mining operations. The presence of vehicles on this road at night would introduce new lighting into an area that has no permanent lighting sources. These impacts could result in some campers choosing to camp in other dispersed camping areas that have not been visually impacted, particularly night sky impacts.

Upon closure and reclamation of the mine site, upgraded portions of Burnt Log Road (FR 447) would be reclaimed to existing conditions (except segments abandoned at the beginning of construction, which would have been currently reclaimed with construction activities). At mine closure, traffic would likely return to a pre-mining level of use. Permanent visual contrast to the characteristic landscape would be minor to moderate because the road would be returned to existing conditions with an assumed low-traffic volume. Upon closure and reclamation of the mine site, upgraded portions of Burnt Log Road (FR 447) would eventually be reclaimed similar to existing conditions; although removal of mature vegetation would remain visually noticeable for many years after closure and reclamation activities are complete.

KOP 13: Warm Lake Road (CR 10-579)

Short-term visual contrast perceptible to travelers on Warm Lake Road (CR 10-579) would result from construction of the Burntlog Route. Construction traffic, equipment, and staff would be evident from this travel route during construction. The resulting level of short-term visual contrast would be moderate and localized for receptors due to views of construction activities in the foreground. The impacts visible from KOP 13 would alter the experience of individuals traveling on the road by transforming the surrounding setting to a more industrial-like landscape.

Access road maintenance and use along the existing Burnt Log Road (FR 447) near KOP 13 would be similar to those described above for KOP 12; therefore, visual impacts also would be similar. However; visual contrast introduced by improvements to Burnt Log Road (FR 447) would be weak as viewed from KOP 13 and associated visual changes would appear subordinate in the landscape. The impacts visible from KOP 13 would alter the experience of individuals traveling on the road by transforming the surrounding setting to a more industrial-like landscape.

After closure and reclamation, due to limited visibility of Burnt Log Road (FR 447) from Warm Lake Road (CR 10-579), visual changes from access road improvements would not be evident from KOP 13 after mine closure and reclamation.

7.2.2.3 Utilities

The viewshed analysis (**Appendix C**) indicates that utilities would be visible from 12 KOPs, where detailed analyses were performed: KOP 1, 2, 3, 5, 6, 7, 8, 9, 14, 15, 16, and 17 (**Figure 5-1**). Visibility is generally limited to a couple of miles on either side of the transmission line but does extend to some

ridgelines 5 miles or more to the west. Potential visibility of the transmission line in the valley extends to about 5 miles on either side, although visual contrast would be weak due to distance and less vegetation removal required in these areas. Communications towers are not expected to be visible from the KOPs.

Effects to the Characteristic Landscape

Visual impacts associated with short-term activities include increased contrast during construction of the transmission line. Construction vehicles, equipment, and staff would be present along this corridor, which would be visible to viewers in the foreground. Short-term visual contrast during construction would be minor to moderate because these activities would occur intermittently along the ROW over a short duration of time. Construction-related changes to the landscape would not be visible from the Thunder Mountain Estates subdivision.

The transmission line upgrade would traverse steep, rugged terrain and dense stands of tall pine trees in an existing corridor. Upgrading the transmission line to a 138-kV facility would require widening the existing ROW from 70 feet to a total width of 100 feet. The new upgraded structures would be approximately 30 feet taller, with an estimated maximum height of 80 feet and spans ranging between approximately 300 to 600 feet, depending on the type of structure. Long-term visual contrast would primarily result from line and color where the expanded ROW would require additional vegetation removal. Visual changes associated with widening the ROW would reinforce the existing linear form of the ROW edge, resulting in a bolder, geometric, man-made element in this rugged natural landscape. Residents of the Thunder Mountain Estates subdivision would not have foreground views of the upgraded transmission line. The level of visual change would be moderate to high where tree clearing would occur in densely wooded areas with steep terrain due to grading or exposing lighter-colored rock. The taller replacement structures would result in minor to moderate structural contrast for the existing transmission line, and moderate when introducing new structures into an existing ROW. Access for construction and maintenance of the transmission line would occur in the existing ROW, including conductor-stringing vehicles, construction trucks, and equipment. Long-term visual contrast would range from minor to moderate when replacing existing structures in less steep terrain with minimal vegetation removal, to moderate to major where a new transmission line would be introduced in steep terrain with dense vegetation.

The new 8.5-mile-long 138-kV transmission line segment, beginning at the Johnson Creek substation to the west, crosses steep, rugged terrain including Antimony Ridge. The new transmission line and associated 100-foot-wide ROW would introduce a light-colored line clear of vegetation across the landscape. This linear feature would contrast with the surrounding rugged landscape composed of irregular lines and vegetated, mounded, and triangular landforms carpeted with dark colored mature evergreens and lighter understory. The consistent form, line, and color of the ROW would introduce strong long-term contrast with the variable natural surrounding landscape. Impacts associated with the new segment would be long term, localized, and moderate to major.

Substation facilities that would be upgraded or introduced into the characteristic landscape would result in long-term, localized visual contrast. For most substations, upgrades would require grading or improvement of land, and clearing vegetation to accommodate switchers, transformers, circuit breakers, and maintenance vehicles in the site. A new switching station in Cascade would be required on flat terrain occupied by low-lying vegetation, including grasses and shrubs. The level of visual change at this site would primarily be associated with the structural features of the facility, as well as a small area of grading and vegetation removal. Grading activities and vegetation removal would create minimal color and form contrasts with the existing landscape. The visual contrast introduced by the switching station would not

be visible from the Thunder Mountain Estates subdivision. Long-term visual contrast to the characteristic landscape in Cascade would be localized and minor to moderate, primarily due to structural contrast.

A new substation, the Scott Valley substation, would be required to support the SGLF in Scott Valley, which is characterized by flat to slightly rolling terrain and low-lying vegetation. The Warm Lake substation would require an upgrade of switchgear facilities, but no additional ground disturbance or vegetation clearing would occur at this site. The existing location has already been modified by local access roads, vegetation clearing, or thinning near the facility; therefore, long-term visual contrast would be negligible due to additional structural contrasts associated with the upgrade. A new Thunderbolt Drop along Cabin Creek Road (FR 447) also would be necessary and would be built under the transmission line and stay within the line ROW FR 447 currently serves as the access road for the existing transmission line corridor and has been modified by vegetation removal and grading at pole locations. Additional grading and vegetation clearing would likely occur, resulting in minor to moderate, localized, long term visual contrast where lighter colored rocks and soil may be exposed, and dense vegetation removed. A new substation (Johnson Creek) would be required along Johnson Creek Road (CR 10-413) near the new transmission line corridor that heads east to the SGP. Similar to FR 447, the terrain is rough, and occupied by dense vegetation. Grading and vegetation clearing would result in moderate visual contrast. The introduction of structures in this landscape setting would result in localized, moderate, and long-term visual contrast due to existing modifications associated with the transmission line corridor.

A new transmission line would cross areas managed as Retention and Partial Retention and upgraded transmission lines would cross areas managed as Preservation, Retention, and Partial Retention. Generally, new transmission lines would not meet the Preservation, Retention, or Partial Retention VQO but would meet the Modification VQO. The line, color, form, and texture of the ROW would visually dominate the landscape but would not be out of scale with the natural surroundings. These effects would be visible from the following viewer platforms in the foreground and middleground distance zones: Johnson Creek Road (CR 10-413), Burntlog Route (new segment), and the Meadow Creek Lookout.

The upgraded transmission line would remain in service after mine closure along with several of the new and/or upgraded substations Therefore, long-term effects described above would remain until Idaho Power Company (IPCo) completely decommissions the line and associated substations. The new transmission line segment would eventually be decommissioned, removed, and the ROW reclaimed. However, it would take years for the ROW to revegetate with trees. Impacts would lessen over time and eventually become negligible.

Effects by Key Observation Point

KOP 1: Meadow Creek Lookout

The new transmission line would be built approximately 2 miles north of KOP 1. Short-term effects to the landscape associated with the new transmission line, such as vehicle movement and dust, would not be evident to viewers from KOP 1.

The cleared ROW for the new transmission line would appear as a light-colored, thin band following the ridgeline. The light-colored line would create a strong level of contrast against the rugged, vegetation-covered hillside. Although visually evident, it would appear subordinate to the TSF that would dominate the landscape in the valley floor, as discussed in **Section 7.2.2.1**. The proposed communication tower located at the mine site also would be visible from this location.

KOP 2: Frank Church-River of No Return Wilderness – Summit Trail (NFST 088)

The new transmission line would be built approximately 5 miles north of KOP 2. Visibility would be limited due to distance and intervening topography. Distinct shapes and features are difficult to distinguish at distances of 5 miles and the scale of the landscape also would absorb modifications introduced by the construction of the transmission line. Short-term effects to the landscape associated with the new transmission line, such as vehicle movement and dust, would not be evident to viewers from KOP 2.

Long-term visual effects from the linear, light-colored cleared ROW and transmission structures associated with the new transmission line would not be evident from KOP 2 and would not affect user experience of Summit Trail (NFST 088) in the FCRNRW. The viewshed indicates that the upgraded communication tower located at the mine site would be visible from this location; however, due to distance it would likely not be visually evident.

KOP 3: Frank Church-River of No Return Wilderness – Mule Hill Trail (NFST 219)

The new transmission line would be built approximately 5 miles northwest of KOP 3. Visibility would be limited due to distance and intervening topography. Distinct shapes and features would be difficult to distinguish at distances of 5 miles and the scale of the landscape also would absorb landscape modifications introduced by the construction and operation of the transmission line and associated ROW. Short-term effects to the landscape associated with the new transmission line, such as vehicle movement and dust, would not be evident to viewers from KOP 3.

Long-term visual effects from the linear, light-colored ROW and transmission towers associated with the new transmission line would not be evident from KOP 3 and would not affect user experience of Mule Hill Trail (NFST 219) in the FCRNRW. The viewshed indicates that the upgraded communication tower located at the mine site would be visible from this location; however, due to distance it would likely not be visually evident.

KOP 5: Hennessey Meadow Trailhead

A new transmission line corridor would parallel FR 416W (Horse Heaven Road) and NFST 233 to the SGP. Construction vehicles, equipment, and staff associated with construction of the new transmission line would be visible to trailhead viewers in the foreground. Short-term visual contrast during construction would be minor to moderate because these activities would occur intermittently along the ROW over a short duration. However, while they are occurring, these activities would disrupt the natural setting of the landscape, making it appear and feel more industrial due to construction equipment and activity in the foreground.

The results of the viewshed analysis show that due to surrounding terrain, visibility of the new transmission line route would be limited locally. The characteristic landscape is highly constrained by steep mountainous terrain that creates an enclosed setting in which long-term visual contrast would be visible. Long-term contrast would primarily result from line and color changes where expansion of the ROW required vegetation removal. Vegetation in the existing ROW would be removed, as well as additional vegetation as required would be cleared to a total width of 100 feet. Grading would be necessary at structure locations, as well as the ROW access road. Moderate to major structure contrast would result from strong vertical lines, dark brown colors, and smooth texture of new transmission line structures. New structural contrast, landform grading, and vegetation removal would result in moderate to major visual contrast due to steep terrain and dense vegetation. Visual changes associated with widening the ROW would reinforce the existing linear form of the ROW edge, resulting in a bolder, geometric,

man-made element in this rugged natural landscape. Resulting localized, long-term visual contrast would be moderate to major, which would be minimally screened, and viewed in the immediate foreground. The transmission line and associated ROW would affect the naturalness of the landscape at the trailhead; however, because it would primarily only be visible locally at the trailhead, it is not expected to have a major effect to users' experience of the trail.

KOP 6: Twin Bridges Dispersed Camping Area

Short-term visual contrast from this viewpoint would result from construction activities for the transmission line upgrade. Construction traffic, equipment, and staff would be evident from this site during construction, resulting in short-term minor to moderate visual contrast due to unobstructed views of construction activities in the foreground as viewed from KOP 6. It is likely that construction activities would discourage use of the camping area at least in the short term.

Long-term visual contrast would result from ROW grading, vegetation removal, and introduction of new transmission line structures. The results of the viewshed analysis show that due to surrounding terrain, visibility of the new transmission line route would be limited locally.

Expansion of the transmission line ROW at this location would be highly constrained due to the proximity of the dispersed camping area to Johnson Creek and Johnson Creek Road (CR 10-413). The widened ROW would appear co-dominant for viewers at this moderate-sensitivity dispersed camping area due to scale dominance. Similar form and line would be replicated along the existing transmission line corridor, resulting in a moderate level of visual change that would be evident to viewers in the foreground. Terrain in this area is relatively flat; therefore, landform changes associated with grading and creating improved access at the campsite would result in a moderate, localized level of visual contrast. Visual contrast would primarily result from removal of tall vegetation; and for viewers at the camping area, may completely eliminate existing trees that partially screen the existing transmission line. Overall, the long-term level of visual change would be moderate as a result of the wider corridor and would affect user experience at the dispersed camping area.

KOP 7: Idaho Centennial Trail at Johnson Creek Road (CR 10-413) and Burntlog Creek Trail (NFST 075)

Visual contrast at KOP 7 associated with short-term activities includes construction of the transmission line. Construction vehicles, equipment, and staff would be present along this corridor, which would be visible to viewers in the foreground. Short-term visual contrast during construction would be minor to - moderate because these activities would occur intermittently over a short duration. The presence of heavy machinery and construction workers, and associated movement, would change the rural setting viewed from KOP 7 to a more industrial-type setting, which would change the experience for viewers using the ICT at KOP 7.

Long-term visual contrast would result from ROW grading, vegetation removal, and introduction of new transmission line structures. Expansion of the transmission line ROW at this location would cross very steep terrain above Johnson Creek Road (CR 10-413) at the junction of NFST 075 (ICT). The widened ROW would appear co-dominant for viewers due to scale dominance. Similar form and line would be replicated along the existing transmission line corridor, resulting in a moderate level of visual change that would be evident to viewers in the foreground. Visual contrast would primarily result from landform grading at the structure pad sites, additional removal of tall vegetation, and introduction of larger structures. The widened corridor ROW would enhance the existing linear form of the ROW edge, resulting in a bolder, geometric, man-made element in this rugged natural landscape. Long-term contrast

would be moderate for recreational users due to unobstructed inferior (viewed from below) views in the foreground. Despite these visual changes, user experience would be similar to existing conditions, because a transmission line is currently visible from KOP 7. A simulation from this KOP is provided in **Appendix A**.

KOP 8: Trout Creek Campground

Short-term visual contrast from this viewpoint would result from construction activities for the transmission line upgrade. Construction traffic, equipment, and staff would be evident from this site, resulting in short-term minor to -moderate visual contrast due to unobstructed views of construction activities in the foreground, as viewed from KOP 8. While construction activities are occurring, they would disrupt the natural setting of the landscape at the campground, appearing industrial due to construction equipment and activity in the foreground. It is likely that construction activities would discourage use of the campground at least in the short term.

Long-term visual contrast would result from ROW grading, vegetation removal, and introduction of new transmission line structures. The widened ROW would appear co-dominant for viewers at this high-sensitivity campground due to scale dominance. Similar form and line would be replicated along the existing transmission line corridor, resulting in a moderate, localized level of visual change that would be evident to viewers in the foreground. Terrain in this area is moderate to steep, and upgrades along the ROW may include changes to landform due to grading and exposure of lighter-colored rock. The potential expansion of the ROW at this location could partially or completely eliminate existing trees that screen the current transmission line for sensitive viewers. The widened ROW would enhance the existing linear form of the ROW edge, resulting in a bolder, geometric, man-made element in this rugged natural landscape. Overall, the level of visual change would be moderate due to form and line created by the wider corridor. ROW clearing would remove vegetation screening, resulting in moderate long-term visual contrast to campground viewers in the immediate foreground. These long-term changes would affect user experience at the campground and may deter some recreationists from using it.

KOP 9: Boundary of the Frank Church-River of No Return Wilderness Near Pistol Lake

Viewshed modeling indicates that short-term visual contrast from this viewpoint could result from construction activities for the transmission line upgrade. However, due to distance and intervening terrain, visual contrast would be weak to none. Existing vegetation also would limit visibility as long as it is present.

Long-term visual contrast would result from ROW grading, vegetation removal, and introduction of new transmission line structures. The widened ROW and new transmission structures would appear subordinate in the background due to distance as well as partial screening from intervening topography and vegetation. User experience would be similar to existing conditions since visual change would be low. Impacts would be localized, long term, and negligible.

KOP 14: Cabin Creek Road (FR 467)

Short-term visual contrast from this viewpoint would result from construction activities for the transmission line upgrade. Construction traffic, equipment, and staff would be evident from this site during construction, resulting in short-term minor to moderate visual contrast due to unobstructed views of construction activities in the foreground, as viewed from KOP 14. Based on the results of the viewshed analysis, visibility of the transmission line corridor along FR 467 would be localized due to steep terrain. While construction activities are occurring, they would disrupt the natural setting of the landscape by adding movement, dust, and construction equipment to the views.

Long-term visual contrast would result from ROW grading, vegetation removal, and introduction of new transmission line structures. The widened ROW would appear co-dominant for viewers along this travel route due to scale dominance. Similar form and line would be replicated along the existing transmission line corridor, although color contrast may be more evident where rocky outcrops are disturbed, introducing lighter colors. Recreational users would have immediate foreground views of the upgraded transmission line with minimal screening. Removal of existing vegetation and additional clearing along the ROW edge would introduce a moderate level of contrast with existing vegetation. In addition, grading would be necessary at new structure locations and where access improvements are needed for construction and operation equipment. The widened ROW would enhance the existing linear form of the ROW edge, resulting in a bolder, geometric, man-made element in this rugged natural landscape. Structural contrast would be reduced by adjacent terrain, which would backdrop the structures for viewers traveling along this road while parallel to the transmission line. These conditions would result in an overall long-term moderate level of visual contrast that would be visible to travel route viewers in the foreground. Despite these visual changes, user experience would be similar to existing conditions, because transmission lines already exist and are visible from KOP 14.

KOP 15: South Fork Salmon River Road (FR 474) and Warm Lake Road (CR 10-579)

Short-term visual contrast would include construction activities at the Warm Lake substation and upgrades to the transmission line, including construction vehicles, equipment, and staff. These activities would result in short-term, localized, minor to moderate visual contrast due to unobstructed views of construction activities in the foreground, as viewed from KOP 15. While construction activities are occurring, they would add movement, dust, and additional equipment to the views from South Fork Salmon River Road (FR 474), which would make the setting appear more industrial compared to the existing rural setting.

Long-term visual contrast would result from landform modifications such as grading and vegetation clearing. The substation upgrade at this site would require no landform modifications or vegetation removal to accommodate additional equipment. Once constructed, views of the substation would be unobstructed in the foreground. The substation would introduce new structures similar in form, line, and color to the existing transmission line and switchgear but would be larger in size. Facilities would be primarily geometric in form and complex and introduce colors that are more industrial in appearance. These facilities would contrast with the surrounding landscape, which is primarily rural; however, industrial modifications are evident, resulting in a minor to moderate level of structural contrast. Contrast would be minimized by implementing design features that mimic characteristics of the existing landscape, such as the color palette. The site would be large enough to accommodate maintenance vehicles, and these may be visible to sensitive viewers during operation. The perimeter of the substation would be fenced, and nighttime lighting would be required for maintenance activities, introducing sky glow that would impact the integrity of the night sky. Impacts to night sky would be reduced by implementation of design features such as using minimal lighting, directing lights downward, and shielding lights where appropriate.

KOP 16: Stibnite Gold Logistics Facility

Short-term visual contrast would include construction of the transmission line upgrade (and logistics facility described below), including construction vehicles, equipment, and staff. These activities would result in short-term, localized, minor to moderate visual contrast due to unobstructed views of construction activities in the foreground, as viewed from KOP 16.

Long-term visual contrast would result from ROW grading, vegetation removal, and introduction of new transmission line structures and a substation. The widened ROW would appear co-dominant for viewers along Warm Lake Road due to scale dominance. Removal of existing vegetation and additional clearing along the transmission line ROW edge would introduce a moderate level of contrast with existing vegetation. Visual contrast from the building would be minimized by implementing mitigation measures requiring design features that mimic characteristics of the existing landscape, as the color palette. The new SGLF (discussed in more detail in **Section 7.2.2.4**) would result in greater changes to the characteristic landscape; therefore, the changes introduced by the upgraded transmission line and new substation would appear less noticeable to viewers.

KOP 17: Lake Cascade Residence

Short-term visual contrast from KOP 17 would result from construction activities for the transmission line upgrade. Construction traffic, equipment, and staff would be evident from this site , resulting in short-term, localized, minor to moderate visual contrast due to unobstructed views of construction activities in the foreground, as viewed from KOP 17. Residents would experience these changes to the landscape as they come and go from their homes.

Long-term visual contrast would result from ROW grading, vegetation removal, and introduction of new transmission line structures. Expansion of the transmission line ROW at this location would be highly constrained due to the proximity of the residences to the existing structures. Terrain in this area is very flat; therefore, landform changes associated with grading and creating improved access along the ROW would result in a low level of visual contrast. Visual contrast would result from removal of some vegetation; and for residential viewers, may completely eliminate existing trees that currently screen transmission line structures. Vegetation is less dense at the bottom of flat valleys, which is characteristic of the Cascade area. Vegetation clearing along the expanded ROW would not result in strong line or form contrasts, as seen in densely wooded areas. The introduction of taller structures would increase structural contrast; however, the footprint location may change to accommodate a wider span. Visibility of the facility to residences would depend on the locations of the new transmission line structures. However; residents would likely see the transmission line as they come and go from their homes. A simulation was performed from KOP 17, provided in **Appendix A**. Impacts would be long term, localized, and negligible to minor.

7.2.2.4 Off-Site Facilities

Under the 2021 MMP, off-site facilities would include the Burntlog Maintenance Facility and the SGLF. The maintenance facility would be located along Burnt Log Road (FR 447), 4.4 miles east of the junction of the Johnson Creek Road (CR 10-413) and Warm Lake Road (CR 10-579) along the proposed Burntlog Route. Although the viewshed indicates the proposed maintenance facility would be visible from KOP 12, a closer look at site photographs from KOP 12A indicates that existing vegetation would entirely screen the proposed Burntlog Maintenance Facility from view. **Appendix C** shows the viewshed of the off-site facilities under the 2021 MMP and **Appendix A** includes site specific photographs from KOP 12.

Effects to the Characteristic Landscape

Short-term visual contrast perceptible to travelers on Burnt Log Road (FR 447) would result from construction of the Burntlog Maintenance Facility, including grading, new buildings, and other facilities. As the Burntlog Maintenance Facility would be constructed within an existing borrow source area, new ground disturbance would be limited. Construction traffic, equipment, and staff would be evident from this travel route, resulting in localized, moderate, short-term visual contrast perceived by receptors due to views of construction activities associated with the maintenance facility.

The Burntlog Maintenance Facility would result in minor to moderate visual contrast where grading, vegetation removal, and construction of facilities would occur. Contrast would be minor to moderate, because the facility would be at a borrow source location, so disturbances from road construction would already be present. Grading and vegetation removal would be minimal, and consistent with the changes to the landscape that occurred as a result of Burntlog Route construction. The night sky would be impacted by lighting associated with the maintenance facility, which would contribute to sky glow.

The Burntlog Maintenance Facility would be located in an area managed as Partial Retention. It would meet the Partial Retention VQO as buildings would be constructed using materials and colors that appear in the characteristic landscape. Additionally, due to surrounding vegetation, these facilities would typically not be visible past the foreground distance zone.

The SGLF is not within the PNF or BNF, and, therefore, there is no VQO associated with the facility.

After reclamation activities have concluded at the SGP, the maintenance facility would be decommissioned and reclaimed to existing conditions. Buildings would be removed, and parking areas would be ripped, recontoured, and reclaimed. Over time, color contrast would be reduced to a low level of visual contrast once native vegetation becomes established. Permanent visual contrast would be low, and nighttime lighting would return to existing conditions, resulting in negligible permanent visual contrast.

Effects by Key Observation Point

KOP 16: Stibnite Gold Logistics Facility

The SGLF in Scott Valley would be constructed on an area of private land that is primarily undisturbed in a landscape with minimal structures. The 25-acre site footprint would extend along Warm Lake Road (CR 10-579) in flat to slightly rolling terrain with low-lying vegetation. Short-term visual contrast perceptible to travelers on Warm Lake Road (CR 10-579) would result from construction of the facility, including grading and introduction of buildings and other facilities. Construction traffic, equipment, and staff would be evident from this travel route. The resulting level of short-term, localized visual contrast would be moderate for receptors due to views of construction activities in the foreground.

Long-term visual contrast would primarily result from size and scale of the structural facilities at this site. Slight modifications to landform may be evident, and vegetation would be cleared in the majority of the site footprint. A 199-foot communications tower would be constructed at or near the facility to provide telephone, internet, and radio communications. It would introduce strong visual contrast due to its tall, vertical, linear form and smooth texture. However, impacts would be limited to within approximately 1 mile as surrounding topography would block it from view any distance further than 1 mile.

Collectively, these structural contrasts would introduce a localized, long-term, moderate to major level of visual change that would appear dominant to viewers on Warm Lake Road. Trucks, buses, and cars related to operations at this facility also would be evident to Warm Lake Road viewers, which would contribute to the dominance of this facility. Views of the facility would not be screened by vegetation and would be viewed in the immediate foreground for high-sensitivity travel route viewers on Warm Lake Road. Additional nighttime lighting would be introduced at this facility, which would contribute to sky glow in an area where existing nighttime lighting is minimal; limited to the few residences in Scott Valley.

The SGLF is not within the PNF or BNF and therefore there is no VQO associated with the facility.

After closure of the mine, the SGLF would not be reclaimed (a permanent commitment of land) and it would be made available for other light industrial uses. Permanent visual contrast would be high, and nighttime lighting would likely remain, resulting in permanent visual impacts.

7.2.3 Johnson Creek Route Alternative

7.2.3.1 SGP

Effects to the Characteristic Landscape

Under the Johnson Creek Route Alternative, there are no differences in the SGP that would result in perceivable differences to the characteristic landscape or views from identified KOPs. Therefore, under this alternative, impacts to scenic resources would be the same as described for the 2021 MMP (**Section 7.2.2.1**) for construction, operations, and closure and reclamation. **Appendix D** shows the viewshed of the SGP under this alternative.

Effects by Key Observation Point

Effects by KOP would be the same as those described under the 2021 MMP (**Section 7.2.2.1**).

7.2.3.2 Access Roads

Under the Johnson Creek Route Alternative, the Burntlog Route would not be used for mine access; therefore, no road upgrades or new road segments would be constructed for that route. Therefore, the visual impacts associated with Burntlog Route would not occur under the Johnson Creek Route Alternative. However, visual impacts would occur as a result of the upgrades to, and year-round mine use of, the Johnson Creek Route.

A new road linking Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375), providing public access through the SGP, would occur under the Johnson Creek Route Alternative. The visual impacts would be the same as those described for the 2021 MMP (**Section 7.2.2.2**).

Effects to the Characteristic Landscape

Short-term visual effects associated with construction activities under the Johnson Creek Route Alternative would occur as a result of upgrades to the Johnson Creek Route. Major road widening and/or straightening of curves, with associated cut and fill, would be required for the Johnson Creek Road (CR 10-413) portion of the Johnson Creek Route. Construction of retaining walls and culverts would require vegetation removal and would expose large areas of native soil and rock that would visually contrast with surrounding vegetation and the rugged, varied topography. Further, traffic along the road from construction vehicles and equipment for widening the Stibnite Road portion of the route would introduce additional movement and dust from vehicle traffic along Johnson Creek Road compared to existing conditions. Because reconstruction of both roads would need to be completed prior to facilities construction at the SGP, construction activities and related traffic would extend to five years. Visual impacts from construction activities and related traffic would be long term, localized, and moderate to major.

Short-term impacts associated with the road linking Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) would be similar to those described for the 2021 MMP (**Section 7.2.2.1**). The Stibnite Road portion of the route would be improved by widening curves to accommodate 55-foot semi-truck trailers. Construction of retaining walls and culverts would require vegetation removal and would expose large areas of native soil and rock that would contrast with surrounding vegetation and rugged, varied

topography. During road construction and improvement activities, there would be an increase in construction traffic, equipment, and associated movement, and generation of dust.

During operations, there would be minor to moderate long-term visual impacts to the characteristic landscape associated with the Johnson Creek Route Alternative, because the widened and straightened roads would visually contrast with the topography. Modifications to landform would be evident, and vegetation would be cleared along the roadway. New access road construction through the SGP would be limited to the road connecting Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375). This new road would appear as flat to sloping, smooth, light-brown linear forms through the landscape, and appear consistent with other existing roads in the area and would be visible from KOP 4. The presence of vehicles on these routes would introduce movement to the landscape, and also provide access in a previously primarily roadless area.

The Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link would provide a new viewer platform from which the SGP can be viewed (**Section 7.2.2.1**). The Johnson Creek Route would consist of all existing roads; therefore, the level of visual change introduced to the landscape would be lower than that experienced as a result of the Burntlog Route under the 2021 MMP. Upgrades to both Johnson Creek and Stibnite roads would increase the level of visual contrast from the road due to road widening and straightening, as well as retaining walls that would transform the existing line and form along the road from a natural, vegetated slope to smooth, lighter-colored man-made walls.

The new road would cross an area managed as Partial Retention and road upgrades would cross areas managed as Retention and Partial Retention. With the exception of the retaining walls, access roads would generally conform to the Partial Retention VQO. Although new and upgraded portions of the access roads could introduce strong visual contrast in some areas, it typically would be limited to the immediate foreground as viewed from the road and would appear subordinate from other viewing platforms.

The types of permanent visual effects associated with the Johnson Creek Route Alternative would appear similar to those described under the 2021 MMP, although these effects would be in different locations. However, the Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link would not be reclaimed, and those areas would have permanent increased visual contrast on the landscape due to the presence of the new road segment. This also would provide a permanent viewing platform along the route.

Johnson Creek and Stibnite roads would not be returned to the pre-mine width, and the retaining walls, and culverts would remain after mine closure and reclamation activities have ceased. Therefore, the visual impacts associated with the Johnson Creek Route would remain as permanent impacts.

Effects by Key Observation Point

KOP 1: Meadow Creek Lookout

Construction activity and traffic associated with the Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link would be visible from KOP 1 but would largely be absorbed by the larger, more visually evident activity associated with the SGP that would appear dominant.

During operations, the Stibnite Road (CR 50-412) to Thunder Mountain Road (FR 50375) link would be visible from KOP 1 but would largely be absorbed by the larger, more visually evident SGP operations.

KOP 4: Stibnite Road (CR 50-412)

Under the Johnson Creek Route Alternative, visual impacts at KOP 4 would be the same as described under the 2021 MMP.

KOP 6: Twin Bridges Dispersed Camping Area

Short-term visual contrast from this viewpoint would result from road construction activities. Construction traffic, equipment, and staff would be evident from this viewpoint during construction, resulting in short-term minor to moderate visual contrast due to unobstructed views of construction activities in the foreground as viewed from KOP 6. It is likely that construction activities would preclude use at times and discourage use of the camping area at least in the short term.

Expansion of the roadway at this location would be highly constrained due to the proximity of the dispersed camping area to Johnson Creek. The widened roadway would appear co-dominant for viewers at this moderate-sensitivity dispersed camping area due to scale dominance. Similar form and line would be replicated along the roadway, resulting in a moderate level of visual change that would be evident to viewers in the foreground. Terrain in this area is relatively flat; therefore, landform changes associated road upgrades would result in a moderate, localized level of visual contrast. Overall, the long-term level of visual change would be moderate as a result of the wider road and would affect user experience at the dispersed camping area. Long-term, localized, moderate visual contrast would result from landscape modifications due to widening and straightening of the road.

KOP 7: Idaho Centennial Trail at Johnson Creek Road (CR 10-413) and NFST 075

KOP 7 represents views from the ICT directed west. This trail is identified as a sensitive level 1 use area and is associated with high visual sensitivity. Short term construction activity would include road grading and vegetation clearing on Johnson Creek Route near the trailhead to accommodate heavy vehicle mine traffic. Grading and construction equipment used for these activities would generate dust during dry weather that would be visible during the daytime. Impacts during construction would be similar to those described under KOP 6.

Johnson Creek Road (CR 10-413) would be plowed for year-round use under the Johnson Creek Route Alternative, and vegetation clearance along the road would increase in order to accommodate heavy vehicle mine traffic. These activities would increase the visual contrast of the road compared to existing conditions. Increased road use would generate dust during dry weather that would be visible during the daytime and headlights from mine traffic would be visible at night. Plowing the road during the winter would introduce a smooth, linear feature to the winter landscape that, under existing winter conditions appears similar to the surrounding natural, winter forest landscape. Additionally, large vehicles traveling the road during winter months would introduce movement and audible disruptions to the winter forest environment.

KOP 8: Trout Creek Campground

This campground is a sensitive level 1 use area, with developed amenities including fire pits, picnic benches, and restrooms. It is located immediately west of Johnson Creek Road (CR 10-413). Construction activity associated with road improvements for the Johnson Creek Route would be visible, particularly when entering and exiting the campground. Construction traffic, equipment, dust, and movement of equipment and construction workers would contrast against the natural, and rustic environment of the campground. Impacts during construction would be similar to those described under KOP 6.

During operation of the mine, Johnson Creek Road (CR 10-413) would be routinely maintained, including grading (as needed), spot graveling, dust control, and snow removal in the winter. Due to road widening and frequent maintenance, the road would introduce a higher level of visual contrast to its surroundings due to its wider, smoother, and straighter appearance. Mine operation would create traffic to the SGP from buses, vans, trucks, and personal vehicles throughout mining operations. Nighttime traffic on this road would introduce new lighting into an area that has no permanent lighting sources. These long-term, localized, moderate impacts would primarily be experienced as individuals enter and exit the campground, although nighttime lighting could be visible from inside the interior of the campground.

7.2.3.3 Utilities

Effects to the Characteristic Landscape

Under the Johnson Creek Route Alternative, the proposed new and upgraded transmission lines would be the same as those described under the 2021 MMP. However, helicopters would be used during construction of communication repeater sites and would periodically enter into view from the majority of the KOPs during construction and maintenance activities. Because the activity would be periodic and only for a short duration, visual changes would be negligible to minor during construction, operations, and closure and reclamation. **Appendix D** shows the viewshed of utilities under the Johnson Creek Route Alternative.

Effects by Key Observation Point

Effects by KOP would be the same as those described under the 2021 MMP (**Section 7.2.2.3**).

7.2.3.4 Off-Site Facilities

Effects to the Characteristic Landscape

Under the Johnson Creek Route Alternative, proposed off-site facilities would be similar to those described for the 2021 MMP, except the maintenance facility would be located on the southern side of Warm Lake Road (CR 10-579) at Landmark. **Appendix D** shows the viewshed of the off-site facilities under the Johnson Creek Route Alternative.

Effects by Key Observation Point

<u>KOP 13: Landmark Maintenance Facility</u>

Short-term visual contrast perceptible to travelers on Warm Lake Road (CR 10-579) would result from construction of the maintenance facility, including grading, new buildings, and other facilities. Construction traffic, equipment, and staff would be evident from this travel route during pre-production, resulting in localized, moderate, short-term visual contrast perceived by receptors due to views of construction activities in the foreground.

The Landmark maintenance facility would result in moderate visual contrast where grading, vegetation removal, and construction of facilities would occur. The site is immediately adjacent to the historic Landmark Ranger Station, where there are existing cabins, picnic areas, and other structures currently managed by the PNF. Terrain at Landmark is primarily flat, with patchy clusters of trees and other low-lying vegetation. Existing disturbances are evident in the proposed maintenance facility footprint, and storage facilities would be co-located in these areas, which would help minimize visual contrast. Vegetation removal and some grading would be necessary to accommodate parking, outdoor storage areas, and covered structures for storage. The maintenance facility would be visually co-dominant to

receptors when viewed in the context of adjacent facilities at Landmark. The proposed layout of the maintenance facility would preserve existing tall vegetation along Warm Lake Road (CR 10-579), which would help screen the maintenance facility from sensitive viewers. Long-term visual contrast is anticipated to be moderate, and the facility would be viewed in the foreground with vegetation partially screening the site. Additional nighttime lighting would be introduced at this facility, which would contribute to sky glow in an area where existing night lighting is minimal.

The Landmark Maintenance Facility would be located in an area managed as Partial Retention. It would meet the Partial Retention VQO as buildings would be constructed using materials and colors that appear in the characteristic landscape. Additionally, due to surrounding vegetation, these facilities would typically not be visible past the foreground distance zone.

After reclamation activities have concluded at the mine site, the maintenance facility would be decommissioned and reclaimed to existing conditions. Buildings would be removed, and parking areas would be ripped, recontoured, and reclaimed. Over time, color contrast would be reduced to a low level of visual contrast once native vegetation becomes established. Permanent visual contrast would be low, and nighttime lighting would return to existing conditions, resulting in minimal permanent visual contrast.

KOP 16: Stibnite Gold Logistics Facility

Impacts at KOP 16 would be the same as described under the 2021 MMP.

7.3 Mitigation and Monitoring

Mitigation measures required by the Forest Service would represent reasonable and effective means to reduce the impacts identified in the previous section or to reduce uncertainty regarding the forecasting of impacts into the future. These mitigation measures are in addition to the regulatory and Forest Plan requirements and project design features (**Section 2.4**) accounted for in the preceding impact analysis.

Mitigation measures may be added, revised, or refined based on public comment, agency comment or continued discussions with Perpetua regarding this specialist report or subsequent analysis under NEPA. The adopted mitigation measures will be finalized in the Final EIS.

7.4 Cumulative Effects

7.4.1 Past, Present, and Reasonably Foreseeable Activities Relevant to Cumulative Effects Analysis

Past, present, and reasonably foreseeable future actions include activities, developments, or events that have the potential to change the physical, social, economic, and/or biological nature of a specified area. Existing and projected activities directly associated with an alternative, and other reasonably foreseeable future actions, provide the basis for defining and analyzing cumulative impacts. A cumulative effect must overlap in space and time with the direct and indirect effects of the action. For scenic resources, the analysis area for cumulative effects is broader than the analysis area for direct and indirect effects; and in this case, includes areas on National Forest System lands in Valley and Adams counties, including several projects in the PNF and BNF.

Past actions include activities that may have been initiated in the past but also could involve present operations such as mineral exploration, infrastructure development, and non-mining related actions. They may have lingering effects in degrading the environment or may influence trends in the physical, biological, or social environment.

Present actions include mining projects and their related activities (i.e., exploration, reclamation) that may have just commenced or are currently underway and are causing impacts. They also may include other non-mining related projects currently in progress, such as timber sales or vegetation treatment; recreation; other utility lines (e.g., powerlines) and roads; maintenance and use of the existing transportation network; urban development in Valley County; private land development and uses; and sand and gravel extraction.

Past and present actions that have an interactive, synergistic, and/or additive effect (per 40 CFR 1508.7) with a specific resource (such as lingering effects or influencing trends) in the SGP area are described below:

Mineral Exploration and Mining Activities – Past and present mineral exploration and mining have occurred in the vicinity of the mine site, including prospecting, exploration, underground mining, and open pit mining. To support past mining, other related activities occurred in the vicinity, including ore milling and processing, tailings disposal, smelting, heap leaching of ore, spent heap leach ore disposal, development rock disposal, hydropower generation, water retention dam construction, saw mill operations, electric power transmission line construction, and occupancy by thousands of people in housing camps and later in the town of Stibnite.

Two major periods of mineral exploration, development, and operations have occurred in the past century, and have left behind substantial environmental impacts. Between the mid-1920s and the 1950s, the area was mined for gold, silver, antimony, and tungsten mineralized materials by both underground and, later, open pit mining methods. The second period of major activity started with exploration activities in 1974 and was followed by open pit mining and seasonal on-off heap leaching and one-time heap leaching from 1982 to 1997, with ore provided by multiple operators from several locations, and processed in adjacent heap leaching facilities (Forest Service 2015).

The mining, milling, and processing activities created numerous legacy impacts including underground mine workings, multiple open pits, development rock dumps, tailings deposits, heap leach pads, spent heap leach ore piles, a mill and smelter site, three town sites, camp sites, a ruptured water dam (with its associated erosion and downstream sedimentation), haul roads, an abandoned water diversion tunnel, and an airstrip.

Other past and/or present mining projects considered in the cumulative effects analysis include:

- **Fourth of July Mine** – Located in Government Creek on NFS land, Fourth of July Mine has been inactive (Forest Service 2012b).
- **Camp Bird Mine** – Located in Logan Creek on private land, Camp Bird Mine has been inactive for more than 30 years (Forest Service 2012b).
- **Valley County Quarry Development** – Development and operation of an aggregate source to support the road maintenance activities on McCall-Stibnite Road (CR 50-412), Johnson Creek Road (CR 10-413), and other backcountry roads as determined by Valley County (Forest Service 2017).
- **Walker Millsite** – Located in Logan Creek on private land, the plan of operations approved in 1990 included a 50 ton per day ball mill and gravity milling process with the following components: a 50-foot by 100-foot by 8-foot-deep tailings impoundment, 1,000 feet of access road, a water transmission line, and explosives magazine. The millsite on NFS land has been reclaimed (Forest Service 2012b).

- **Golden Hand No. 1 and No. 2 Lode Mining Claims** – Located in the Big Creek drainage on 1,309 acres of NFS land, approximately 19 miles north of Yellow Pine, the plan of operations included drilling operations, trenching, and sampling, and reopening the caved Ella Mine adit. The project also would include the collection of subsurface geological information to prepare for a new mineral examination. The claims encompass approximately 20 acres each and are adjacent to Coin Creek (Forest Service 2012b).

- **Cinnabar Mine** – Located 15 miles east of Yellow Pine and approximately 50 acres in extent, most of the mining occurred during the 1950s. No reclamation has been performed at the site and contaminants of concern include mercury, methylmercury, and arsenic (EPA 2020).

Exploration activities for potential future mining development have been occurring for the last decade and are ongoing at or within the vicinity of the SGP. Affiliates of Midas Gold initiated mineral exploration activities in 2009 as part of the Golden Meadows Exploration Project to better define the mineral deposit potential for the area. Activities associated with the Golden Meadows Exploration Project included the use of the existing road network, and construction of several temporary roads to access drill sites, drill pad construction, drilling on both NFS and private lands, and reclamation (Forest Service 2015). The following is a brief summary of the activities:

- **Midas Gold Exploratory Drilling (2009-2012)** –Exploratory drilling consisting of approximately 6 to 122 drill pads mostly occurred on private land. Crews were housed on private property in Yellow Pine. All equipment was staged on private property and drilling activities generally occurred 24 hours per day. Water withdrawal sites included existing sediment retention ponds and streams. Private and Forest Service temporary roads were used and/or authorized to access drill pads located on NFS lands. Road maintenance was needed to open the existing roads. For winter activities, chained rubber-tired vehicle, helicopter, snowcat, or snowmobile provided access. Where drill pads were located next to roads, some snow plowing occurred at select locations. During snow-free periods, access occurred by helicopter, and where there was authorized access on NFS land or on private land, rubber-tired vehicles also were used for access. Midas Gold also drilled 16 new groundwater alluvial and bedrock monitoring wells on 8 pads in 2012 (Forest Service 2015).

- **Monitoring Wells for the Golden Meadows Project (2013)** – Midas Gold drilled four new groundwater alluvial and bedrock monitoring wells on two pads in 2013. Exploration drilling was conducted in 26 drill areas within NFS land. Twenty-four of the drill areas were accessed by helicopter (i.e., for transport of equipment and crew) and contained temporary helicopter-supported drill pads. No temporary roads were needed for these 24 drill areas (Forest Service 2015).

- **Midas Gold Baseline Studies (2013-2017)** – Baseline data collection studies including water quality, fishery surveys, wildlife surveys, and vegetation mapping were conducted (Forest Service 2015).

- **Winter Geotechnical Study (2017)** – Exploration drilling was conducted in 26 drill areas within NFS land. Twenty-four of the drill areas were accessed by helicopter (i.e., for transport of equipment and crew) and contain temporary helicopter-supported drill pads. No temporary roads were needed for these 24 drill areas (Forest Service 2015).

- **Geotechnical Studies along Meadow Creek (2017)** – Geotechnical study field work program was conducted in support of feasibility level engineering work on the proposed tailings

impoundment and impoundment dam foundation conditions. Midas Gold utilized a track mounted Cone-Penetrometer Test rig to access eight locations along Meadow Creek in September/October 2017 (Forest Service 2015).

- **Operations Exploratory Drilling (2016-2019)** – In addition to exploratory drilling for the winter geotechnical study in 2017, expansion of an existing borrow source on NFS land just east of the camp and shop area also occurred. The borrow material supplied approximately 7,000 cubic yards of crushed rock to support the exploration program, including road maintenance and site reclamation activities and also was used by previous operators and the Forest Service. Approximately 141,000 gallons of fuel (diesel, gasoline, and jet fuel) per calendar year was transported on existing Valley County roads to the fuel storage facility (located on private land) (Forest Service 2015).

- **Exploration and Geotechnical Drilling (2018)** – Midas Gold drilled 62 exploration and geotechnical drilling pads within the project area. Fifty-six of the pads are track-supported and the remaining six are helicopter-supported. None of the pads are steep slope drill pads. The 62 proposed pads are located in the vicinities of the following water bodies: Upper East Fork South Fork Salmon River, Meadow Creek, Middle East Fork South Fork Salmon River, Lower East Fork South Fork Salmon River, Upper Meadow Creek, and West End Creek (HDR 2017).

- **On-going Monitoring for Golden Meadows Project** – Monitoring for weeds, water quality, minerals and geology, access, and haul route water quality monitoring, monitoring of water quality best management practices and project standard operating procedures associated with haul and access road use, wildlife and rare plants continue to be conducted (Forest Service 2015).

- **Burntlog Route Geophysical Investigation Field Work (2020-2021)** – Midas Gold collected geophysical data at proposed rock quarries, bridge abutments, cut slopes, and soil nail/mechanically stabilized earth wall locations using four methods including a Dynamic Cone Penetrometer Test, a track mounted excavator, a truck/track mounted hollow stem auger/core rig, and a helicopter assisted casing advancer/core drill rig. Midas Gold is investigating 24 locations by drilling or excavating 40 borings/test pits along the proposed Burntlog Route. The geophysical investigation field work will last approximately 40 days. Nearly half of the locations are situated along the existing Burntlog Road and the remaining sites are located along the proposed new alignment of the Burntlog Route between Trapper Creek and Stibnite (Midas Gold 2019).

Transportation Projects – Road maintenance, improvement projects, airstrip operations and maintenance, and culvert and bridge replacements have occurred in the past and are expected to continue in the future. Installation or improvement of culverts and bridges may impact aquatic habitat due to construction-related effects and erosion. Maintenance of existing roadways, culverts, and bridges will likely be short-term, while new roadways, culverts, and bridges would have a larger effect. More information regarding current and future road maintenance and airstrip operations are provided below:

- **Road Maintenance of NFS Roads** – Thunder Mountain Road (National Forest System Road 50375) and Meadow Creek Lookout Road (National Forest System Road 51290) are both NFS maintenance level 2 roads that received maintenance in 2014 and are on a regular maintenance schedule. Road maintenance activities include blading, slough removal, and culvert cleaning. It is assumed that private landowners on private lands keep roads open and maintained to meet their needs.

- **Road Maintenance of County Roads** –Warren Profile Gap Road (CR 50-340) and the road to the Big Creek Trailhead are currently maintained by Valley County under a cooperative agreement; both roads are on an annual or biannual maintenance schedule. Road maintenance activities include blading, slough removal, and culvert cleaning. Smith Creek and Pueblo Summit Roads have not received any maintenance for years (Forest Service 2016).

    - McCall-Stibnite Road (CR 50-412) is currently maintained by Valley County under a cooperative agreement, on a regular maintenance schedule. There is an agreement between Valley County and Midas Gold to allow Perpetua to provide maintenance along the road from Yellow Pine to Perpetua 's property, "the road will be continuously maintained during the open period. Maintenance will, in all respect, be subject to review and approval by the Valley County Road Superintendent. The Owner/Contractor will abide by the Schedule 8: Payette National Forest; Road Maintenance Best Management Practices. During winter operations the Owner/Contractor will maintain a vehicle and trailer parking and turn around area at Profile Creek and Stibnite. The Owner/Contractor will place a temporary Valley County owned and signed gate above the Profile Creek Road during the Spring Breakup to prohibit any full-size vehicles from entering the Yellow Pine-Stibnite Road, unless otherwise authorized. All-terrain vehicles, utility-terrain vehicles, and snow mobile access on the Yellow Pine-Stibnite Road will still be permitted for the public at large during this temporary travel restriction."

- **Road Maintenance of State Roads** – SH 55 is maintained by Idaho Transportation Department (ITD). Recent upgrades and improvements included the Banks Beach parking study and the ongoing Smiths Ferry safety improvements. SH 55 was recently repaved between Donnelly and McCall (ITD 2021). The project addressed wear and tear to increase the service life of the roadway.

- The ITD, Division of Aeronautics maintains and operates the Johnson Creek, Warm Springs, and Bruce Meadows airstrips which are located on NFS land.

Mine Closure and Reclamation – Closure and reclamation of Hecla and SMI mining and processing facilities located in the headwaters of East Fork SFSR and Sugar Creek occurred between 1993 and 2000. Several Comprehensive Environmental Response, Compensation, and Liability Act Removal Actions also were conducted in the same area by the Forest Service, Environmental Protection Agency, and Exxon-Mobil Corporation to minimize risks to human health and the environment from legacy mining and processing activities during the 1930s, 40s, and 50s.

Recreation and Tourism – Past and present recreation and tourism activities include sport hunting, fishing, trapping, boating and river recreation, camping, hiking, backpacking, outfitter/guide operations, tourist services – Big Creek Lodge, Elk Springs Outfitters, and Juniper Mountain Outfitters. These activities take place primarily from late spring to late fall, and there may be small plane, helicopter, and vehicle traffic associated with access.

Infrastructure Development – Past and present community infrastructure projects include the transmission line upgrades in the West Central Mountain Electric Plan 2014, which follows the general location of the SGP upgraded transmission line route (IPCo 2014). In 2020, IPCo rerouted approximately 2.5 miles of the existing Warm Lake Feeder overhead 7.2kV distribution line with approximately 2.75 miles of single-phase underground line in the Yellow Pine area (Forest Service 2020c).

Water Diversions and Hydro Power Projects – There are eight water diversions on federal and private lands in vicinity of the SGP area. There also are three residential, small-scale hydroelectric operations (0.4 to 0.9 cubic feet per second permitted), and one hydroelectric operation at Big Creek Lodge.

Wildland Fire, Noxious Weed Control, and Firewood Harvest – There have been numerous wildland fires in vicinity of the SGP area and it is likely more will occur in the future. Past fires within the headwaters of the East Fork SFSR and Sugar Creek include Indian Creek Point (12,204 acres); Tamarack (2,348 acres); Bishop Creek (2,610 acres); Cascade Complex (299,930 acres); Thunder City (13,263 acres), and Buck Fire (19,474 acres). In fall of 2021, the Krassel Ranger District conducted prescribed burns to areas east of Yellow Pine (Bald Hill project area) and along the SFSR (Four Mile project areas). Removal of firewood for non-commercial use has occurred in the past and is expected to continue in the future on NFS land, in compliance with general permit requirements for the Payette National Forest. Several noxious weed species have been identified in the vicinity of the SGP including spotted knapweed, Canada thistle, yellow toadflax, and rush skeletonweed. Treatment of noxious weeds occurs regularly throughout the area. Treatments include chemical spraying and pulling. Main areas of treatment for noxious weeds include Chamberlain area, Beaver Creek, and Big Creek trails, and along road access areas. The Lost Horse vegetation management project was completed within the Clear Creek drainage along FRs 405, 406, 407, 409, and 433; the objective of this project was to restore species composition and stand structure while reducing undesirable tree densities and favoring retention of larger diameter, more fire-resistant trees (Forest Service 2020b).

Authorized in May 2021, the Big Creek Hazardous Fuel Reduction was a community protection project for Edwardsburg/Big Creek area using commercial and noncommercial treatments and prescription fire to reduce hazardous fuels. Treatments were on Forest Service lands along public roads and adjacent to private property, outside of wilderness. The project implementation reduced wildfire risk and fire severity/intensity on NFS lands around Big Creek and Edwardsburg and private property using commercial timber harvest, understory treatment, and prescribed burning. Approximately 10,290 acres were treated including, approximately 631 acres of mastication and/or hand thin, no removal; 847 acres of commercial and pre-commercial thinning; 1,047 acres of hand-thinning, no removal; 7,765 acres of natural fuel prescribed fire burn blocks; and less than 1 mile of temporary road constructed to facilitate equipment access and product removal reclaimed after vegetation management treatments were completed.

Forest Management - These activities include easements and other management actions. There are several easements in the SGP area and vicinity that are granted and maintained by the Forest Service including: Road Right-of-Way, Forest Road and Trail Act (FRTA) on McCall-Stibnite Road (CR 50-412), Road Right-of-Way and Linear Utility easement to the IPCo. The Yellow Pine Blowdown Project near Yellow Pine was conducted to remove down material from camping and recreating areas, reduce the risk of insect outbreak, and to reduce the fuel loading to help to ensure the safety of the Yellow Pine community. In 2020, the BNF decommissioned approximately 18 miles of non-system routes in the Six-bit Creek and Curtis Creek subwatersheds, part of the SFSR subbasin (Forest Service 2020b).

The South Fork Restoration and Access Management Plan (RAMP) is in the implementation phase with the decision dated July 13, 2021. The project's objective is to determine the minimum road system, improve watershed condition, provide all-terrain vehicle and motorcycle trail opportunities, and provide dispersed camping and parking opportunities. The project includes numerous actions relating to watershed restoration, motorized and non-motorized access, and improvements of recreation facilities within the SFSR watershed within a 329,000-acre project area

(http://www.fs.usda.gov/project/?project=51257). Target dates for implementation are 2022-2027 (Forest Service 2021a).

Commercial and Subsistence Harvest of Fish and Wildlife – Past and present harvest of fish and wildlife for recreational and subsistence purposes puts some degree of pressure on those resources. Legal hunting, fishing, and trapping has occurred and is currently occurring in the SGP area and vicinity. Fish and wildlife resources are managed by the Idaho Department of Fish and Game and federal agencies to maintain sustainable populations. Managers use management tools such as harvest limits and areas open and closed to sport and commercial harvest of fish and wildlife to maintain sustainable resources and allocate harvest.

Reasonably foreseeable future projects and activities are presented in **Table 7-2**.

Table 7-2 Reasonably Foreseeable Future Actions in the Vicinity of the SGP Area

Project or Activity Name	Forest Service Document/ District	Brief Description	Approximate Implementation/ Construction/ Operation Dates
Stibnite Mine Site ASAOC	ASAOC / EPA and Forest Service	Address legacy mining impacts, including time critical removal actions consisting of stream diversion ditches and removal of about 325,000 tons of development rock and tailings.	2022 - 2024
East Fork Salmon River RAMP	PNF	Scoping for the East Fork Salmon River (EFSR) RAMP is estimated to start late 2021. The spatial extent of the EFSR RAMP could include Yellow Pine, Big Creek, and Thunder Mountain within the PNF. The purpose of the EFSR RAMP is travel management. The Forest Service would conduct travel planning to identify a Minimum Road System (MRS) (36 CFR 212 Subpart A) and the routes open for public use (36 CFR 212 Subpart B), including motorized trail opportunities, dispersed camping, and parking opportunities and update the Forest Motor Vehicle Use Map. http://www.fs.usda.gov/project/?project=60889	Expected Decision: 10/2022 Expected Implementation: 11/2022
Burntlog Route Geophysical Investigation	CE / BNF SOPA	- Minerals and geology The purpose of the investigation is to collect crucial geophysical data along the existing Burnt Log Road and proposed new alignment between Trapper Creek and Stibnite.	In Progress: Scoping Start: 02/10/2020 Expected Decision: 03/2022 Expected Implementation: 09/2022
Wildlife Conservation Strategy	EIS (Forest Plan Amendment) 101 / PNF SOPA	- Land management planning - Wildlife, Fish, Rare plants Short- and long-term management strategies and priorities for maintaining and restoring habitats associated with terrestrial wildlife species. http://www.fs.usda.gov/project/?project=28633	On hold

Project or Activity Name	Forest Service Document/ District	Brief Description	Approximate Implementation/ Construction/ Operation Dates
Nez Perce Tribe Research Equipment	CE / PNF SOPA	Replacement of an existing propane tank servicing a fish detection system (PIT array) with a 1,000-gallon tank in an existing hardened area to ensure fuel supply through winter months.	Scoping initiation: 11/2021 Expected Decision: 04/2022 Expected Implementation: 07/2022
Stallion Gold – Horse Heaven Project		Surface exploration of gold and antimony deposits. The project consists of 695 unpatented federal mining claims and mineral rights on 13,950 acres. This project would share its eastern boundary with the SGP.	

Source: FHWA 2020; Forest Service 2018, 2020a, 2020b, 2020c, 2021a, and 2021b; ITD 2020, 2021
CE = Categorical Exclusion; EA = Environmental Assessment; EIS = Environmental Impact Statement
FHWA-WFLHD = Federal Highway Administration, Western Federal Lands Highway Division
NOA = Notice of Availability; SOPA = Schedule of Proposed Actions

Several of the present and reasonably foreseeable future actions summarized above, including mineral development, wildfire management, access road maintenance, reclamation and rehabilitation plans, recreation, and infrastructure development, contribute to cumulative effects on scenic resources.

7.4.2 No Action Alternative

Under the No Action Alternative, neither action alternatives would be implemented, and no development of the SGP or supporting facilities would occur or be introduced. Some reclamation activities would still occur, such as those associated with the Meadow Gold exploration project and the current ASAOC. These reclamation activities would contribute some visual changes to the landscape in the area of the historical mine activities, but others would persist and continue to contribute to the cumulative visual changes to the landscape in the forest.

7.4.3 2021 MMP

Historically, mining activities have impacted visual resources, including surface disturbances along roads, mining pits, and facilities; however, due to rugged terrain, visual impacts of these activities are highly localized. Activities associated with mineral exploration would locally increase the amount of vegetation removed to accommodate drill pad sites and improvement of access roads. Timber harvest activities also would contribute incrementally to landscape modification through the removal of vegetation over time. Forest management–related plans for noxious weed management, rehabilitation, and reclamation would result in a positive cumulative effect for the landscape by enhancing the natural, rugged setting that is characteristic of this area. There would be no new major utility corridors introduced through infrastructure development projects. Some mineral development projects have been put on hold in the cumulative analysis area; but overall, mining activity has not significantly modified these backcountry landscapes. However, reasonably foreseeable future actions, such as the Stallion Gold Horse Heaven project, could change that. The characteristic backcountry landscape setting would continue to be modified locally by these activities, but collectively, they would not trend toward a more highly developed or industrial-type setting. Disturbance associated with the SGP components would be reclaimed. Most disturbance areas would be reclaimed concurrently or at mine closure, and the visual effects of the disturbance would gradually decrease as vegetation matures reducing color contrasts. For

areas where revegetation is not possible, color contrasts would be permanent because of the coloration and angular nature of the granitic rock against more surficial sedimentary type rocks. Permanent visual contrast would range from minor to major, and would contribute to the cumulative effects from past, present, and reasonably foreseeable actions.

7.4.4 Johnson Creek Route Alternative

The contribution to cumulative effects under the Johnson Creek Route Alternative would be similar to but slightly less than the 2021 MMP as the new road for Burntlog Route would not be constructed, and the associated long-term and permanent effects to the scenic character and integrity of the forest would not occur.

7.5 Short-term Uses and Long-term Productivity

7.5.1 No Action Alternative

Under the No Action Alternative, the proposed mine activities and construction and operation of associated infrastructure would not occur, and there would be no additional short-term uses of the SGP area.

7.5.2 2021 MMP and Johnson Creek Route Alternative

Short-term refers to uses with a duration of a few years or less. There would be no short-term uses that would affect long-term productivity of scenic resources.

7.6 Irreversible and Irretrievable Commitments of Resources

7.6.1 No Action Alternative

Under the No Action Alternative, the proposed mine activities and construction and operation of associated infrastructure would not occur. Consequently, there would be no irretrievable and irreversible commitment of scenic resources.

7.6.2 2021 MMP and Johnson Creek Route Alternative

Both the 2021 MMP and the Johnson Creek Route Alternative would result in an irreversible loss of the characteristic landscape caused by the high walls of the open pits, where cut-slope color contrasts would persist permanently. Due to the size and extent of the TSF and TSF Buttress, an irreversible loss of the characteristic landscape would persist for a long period of time, until rock weathering and slope revegetation, if applicable, reduce visual contrast for color, form, line, and texture. Viewsheds for sensitive use areas near the SGP would be irretrievably changed due to the scale of topographic changes associated with the pits, TSF, and TSF Buttress. Even with reclamation and revegetation, the viewshed would be dominated by these unnatural landforms and those color contrasts that persist.

7.7 Summary

7.7.1 Change in Landscape Character and Scenic Quality of the Analysis Area

At the SGP, the action alternatives would cause similar changes to local landscape character scenic qualities over the construction, operation, and closure and reclamation timeframes. The No Action Alternative would result in no change to landscape character and scenic quality. The 2021 MMP would result in the greatest change in landscape character and scenic quality, primarily due to construction of the Burntlog Route, and the associated year-round vehicle movement and headlight activities during construction and operation phases. The Johnson Creek Route Alternative would entail the least change to landscape character and scenic quality of the analysis, as the mine access route would not require construction of the Burntlog Route, although it would require substantial improvements to Johnson Creek Route, which would result in some changes to scenic quality, but to a lesser magnitude than a new road. After operations, new portions of the Burntlog Route would be decommissioned and visual impacts would lessen over time.

7.7.2 Change in Distance Zone

The 2021 MMP would result in the greatest change to distance zones, because it would require construction of a new roadway in the forest. Individuals traveling through the forest on the new roadway would be able to see areas of the forest either not seen from viewing platforms under existing conditions or see them from a closer distance. The 2021 MMP would add the largest amount of new access roads. Under the 2021 MMP, the SGP would be in the middleground distance zone of the new roadway for approximately 2 miles. Both alternatives would involve construction of the new Thunder Mountain Road link that would traverse through the SGP providing immediate foreground views of the SGP. The No Action Alternative would not involve construction of new access roads and so would not provide new distance zones in the SGP area.

7.7.3 Change in Nighttime Lighting

Nighttime lighting at the SGP would be the same for both action alternatives. Similarly, there would be nighttime lighting effects from vehicles traveling on roads (new or improved) under both action alternatives. The 2021 MMP would include the greatest mileage of new roadway, but some of these would occur at higher elevations, potentially increasing distant visibility. The Johnson Creek Route Alternative would not include construction of Burntlog Route, but nighttime lighting effects would increase along the Johnson Creek Route, which potentially has more viewers to experience them as there are residences in the village of Yellow Pine and ranches along Johnson Creek Road (CR 10-413). The No Action Alternative would involve no change in nighttime lighting at the SGP or due to access road traffic.

7.7.4 Context of Impacts per Forest Guideline Visual Quality Objectives

Under both action alternatives, the SGP, access routes, new and upgraded transmission lines, and off-site facilities would introduce moderate to major levels of visual contrast to areas with local and regional scenic importance as indicated by Preservation, Retention, and Partial Retention VQOs and in certain areas would be in conflict with established Forest Service VQOs. The No Action Alternative would not involve scenery impacts in accordance with or conflicting with established Forest Service VQOs.

7.7.5 Changes to Scenic Integrity

The analysis area generally has moderate scenic integrity because the landscape is slightly altered by existing roads and transmission lines. Scenic integrity is very low where existing disturbances are present from historical mining activities, such as at the SGP location, because the landscape is heavily altered. The No Action Alternative would result in no change to scenic integrity of the area. Under both action alternatives, additional alterations would occur to the already impacted SGP area during construction and operations. After closure and reclamation, the scenic integrity at the SGP would likely slowly improve. Access roads under the 2021 MMP would cause similar degradations to scenic integrity caused by the construction of and activities on the Burntlog Route. Under the Johnson Creek Route Alternative, the change to scenic integrity would be less evident, because existing roadways would be improved rather than new roadway segments built. However, as there are residences along the existing Johnson Creek Route, there may be more viewers to experience these changes.

Table 7-3 provides a summary comparison of scenic resource impacts by issue and indicators for each alternative.

Table 7-3 Comparison of Scenic Resource Impacts by Alternative

Issue	Indicator	Baseline Conditions	No Action Alternative	2021 MMP	Johnson Creek Route Alternative
The SGP may cause changes to scenic resources.	Visual contrast.	Landscape is characterized by valley floors surrounded by mountains with steep terrain broken up by narrow gorges and streams. Vegetation includes grass and evergreens. Existing modifications include the existing historical mining disturbances at the SGP, forest roads, transmission lines, and residences in the western portion of the analysis area.	Same as Baseline Condition	New disturbances within the footprint of existing modifications would appear similar to existing modifications, but at a larger scale. Visual contrast would increase due to a new road and larger road width, more vegetation removal, and new retaining walls. A new ROW for a new transmission line segment would introduce high visual contrast. SGP components would result in a high level of change to the characteristic landscape during operations; permanent changes, although less than during operations, would result.	Changes associated with the SGP would be similar to the 2021 MMP, except there would be no visual changes from the Burntlog Route because it would not be constructed. Landscape changes would result from the upgrades to the Johnson Creek Route. Visual change from utilities would be the same except for additional periodic impacts from helicopters during construction and maintenance activity for communication repeater sites.
	SGP component visibility.	Nighttime lighting in the analysis area is minimal and generally limited to residential areas in the western portion of the analysis area.	Same as Baseline Condition	Nighttime lighting would increase substantially in the SGP. Additional nighttime light sources would include the maintenance facility and vehicle headlights as they travel on mine access roads.	Similar to the 2021 MMP, except SGP vehicle lights from vehicles traveling to and from the SGP would occur along the Johnson Creek Route, north and west of the Burntlog Route.

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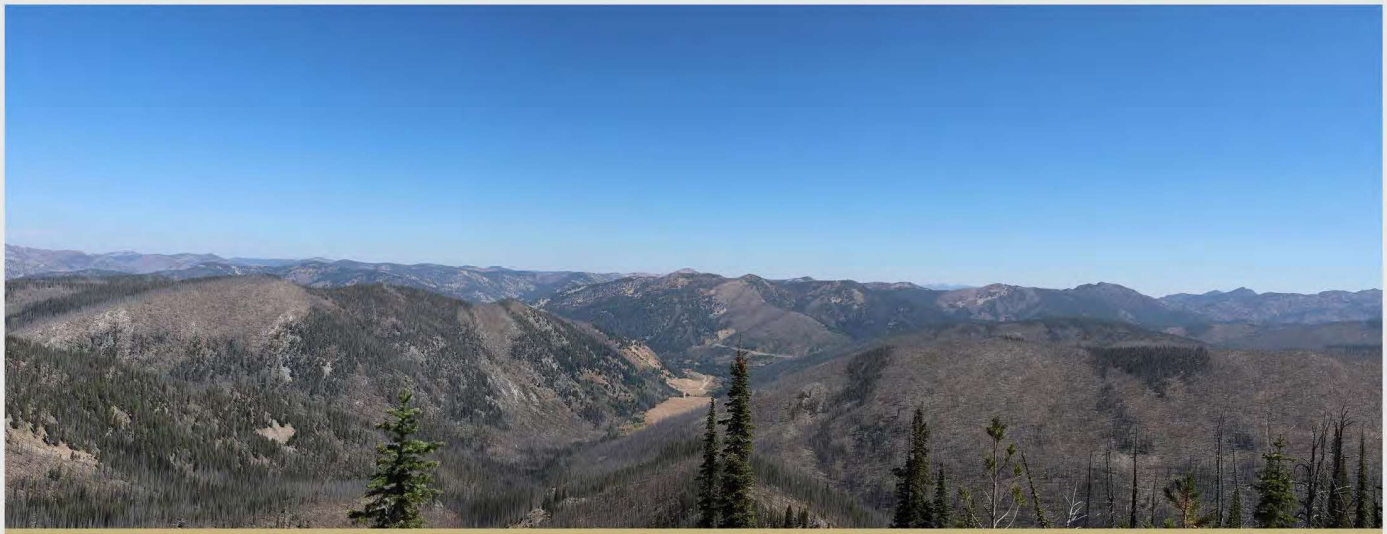
Appendix A
Key Observation Point Simulation Photos

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS



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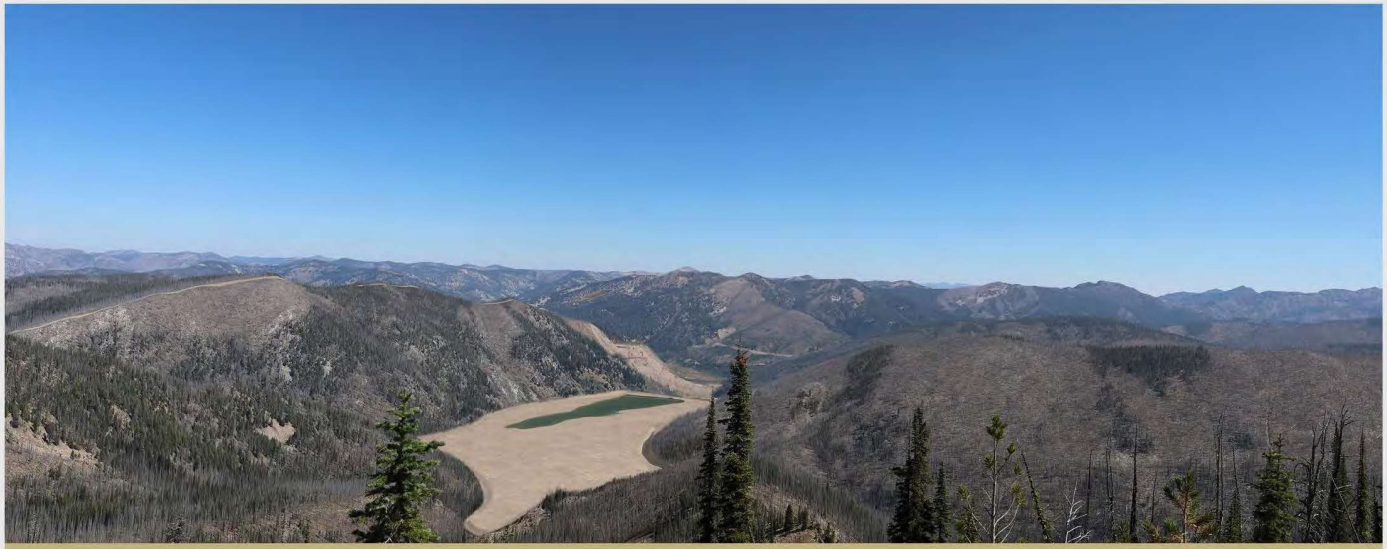


Simulated Conditions - Year 12 of Mine Operations

KOP 1A
Meadow Creek
Lookout
Simulation

VICINITY MAP

Photograph Information

Time of photograph: 12:45 PM
Date of photograph: 08-29-2018
Wealther condition: Clear
Viewing direction: NE
Latitiude: 44.8686 N
Longitude: -115.3887 W

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

Existing Conditions

Simulated Conditions - Year 12 of Mine Operations

KOP 1B
Meadow Creek
Lookout
Simulation

VICINITY MAP

Photograph Information

Time of photograph: 1:00 PM
Date of photograph: 08-29-2018
Wealther condition: Clear
Viewing direction: S
Latitiude: 44.8681 N
Longitude: -115.3893 W

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

KOP 2
Summit Trail

Existing Conditions

Note: Simulation was not advanced because the new Burntlog Road would not be visible from KOP 2. The new road would be downslope and the view of it blocked by existing terrain.

VICINITY MAP

Photograph Information

Time of photograph: 12:15 PM
Date of photograph: 08-29-2018
Wealther condition: Clear
Viewing direction: W
Latitiude: 44.8477 N
Longitude: -115.3764 W

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

Existing Conditions

Existing Conditions

KOP 3
Photograph Information

Time of photograph: 10:03 AM
Date of photograph: 08-29-2018
Weather condition: Clear
Viewing direction: NW
Latitiude: 44.8608 N
Longitude: -115.3086 W

VICINITY MAP

KOP 4
Photograph Information

Time of photograph: 12:32 PM
Date of photograph: 10-06-2018
Weather condition: Cloudy
Viewing direction: SE
Latitiude: 44.9363 N
Longitude: -115.3352 W

VICINITY MAP

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

Existing Conditions

KOP 5
Photograph Information

Time of photograph: 4:14 PM
Date of photograph: 10-06-2018
Wealther condition: Clear
Viewing direction: E
Latitiude: 44.8907 N
Longitude: -115.4611 W

VICINITY MAP

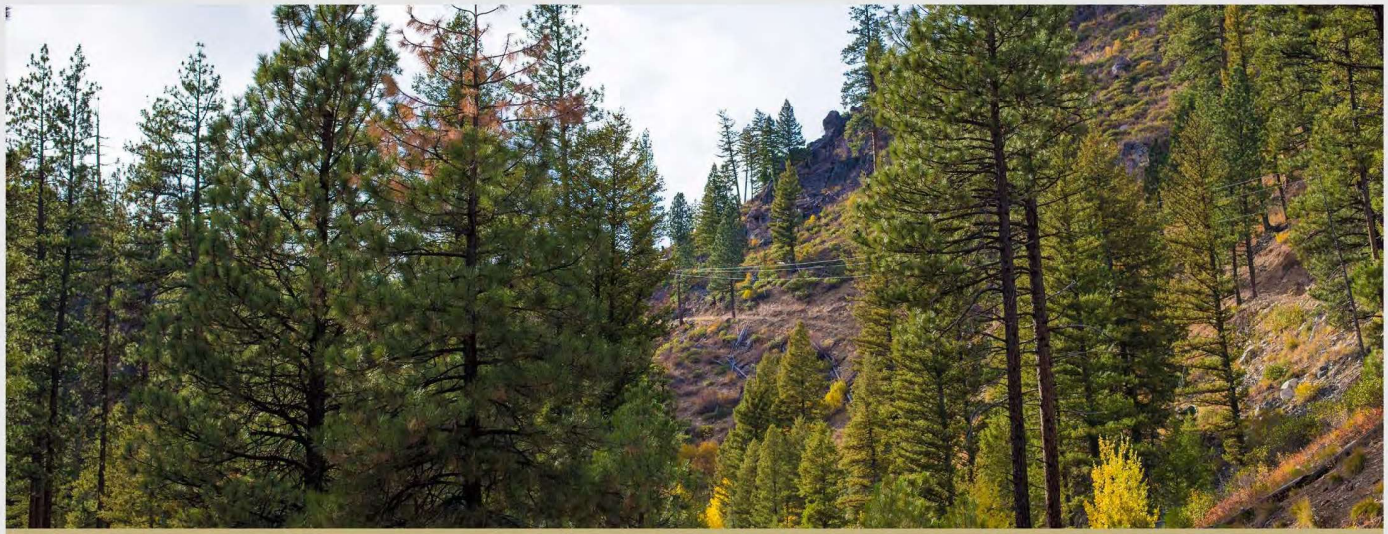
Existing Conditions

KOP 6
Photograph Information

Time of photograph: 11:20 AM
Date of photograph: 10-06-2018
Wealther condition: Cloudy
Viewing direction: S
Latitiude: 44.8073 N
Longitude: -115.5120 W

VICINITY MAP

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS



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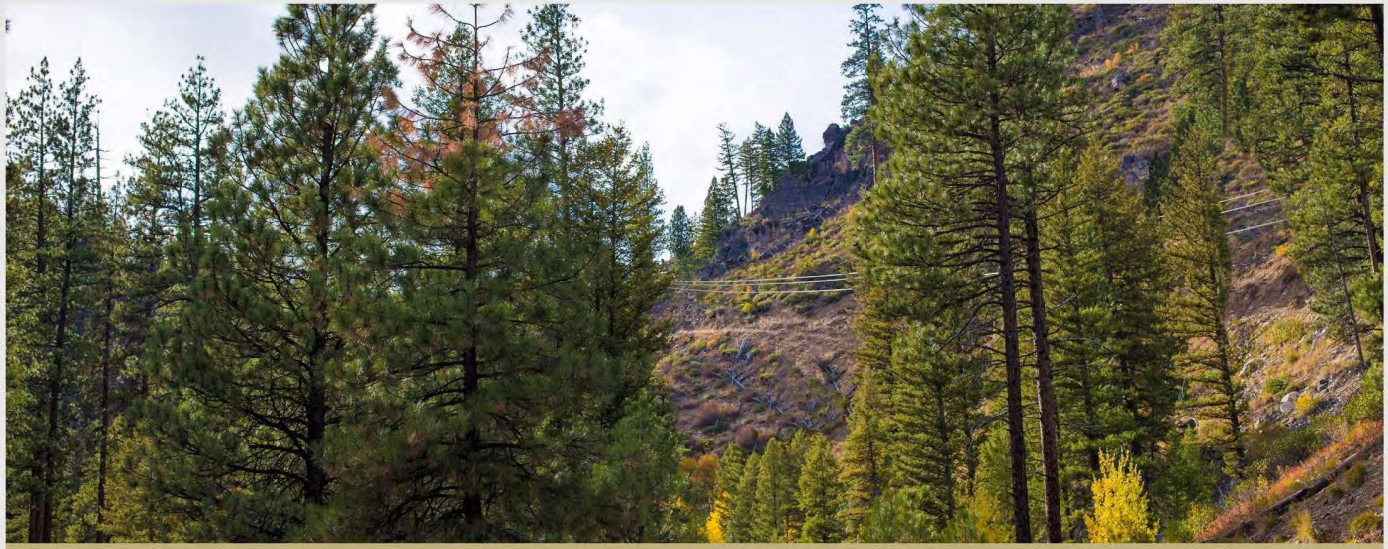


Simulated Conditions - Year 12 of Mine Operations

KOP 7
Idaho Centennial Trail
Simulation

VICINITY MAP

Photograph Information

Time of photograph: 5:38 PM
Date of photograph: 10-06-2018
Wealther condition: Clear
Viewing direction: W
Latitiude: 44.7867 N
Longitude: -115.5238 W

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

Existing Conditions

KOP 8
Photograph Information

Time of photograph: 10:49 AM
Date of photograph: 10-06-2018
Wealther condition: Cloudy
Viewing direction: W
Latitiude: 44.7472 N
Longitude: -115.5555 W

VICINITY MAP

Existing Conditions

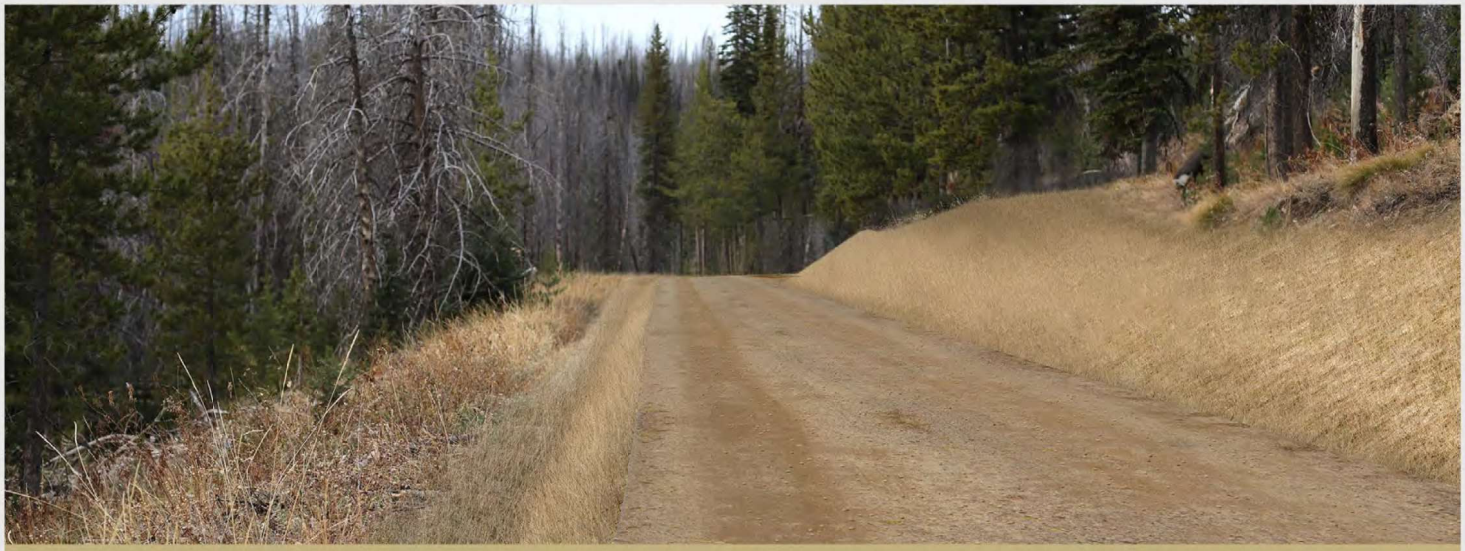
KOP 9
Photograph Information

Time of photograph: 3:02 PM
Date of photograph: 08-28-2018
Wealther condition: Clear
Viewing direction: NW
Latitiude: 44.7256 N
Longitude: -115.4165 W

VICINITY MAP

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

Existing Conditions



Simulated Conditions - Year 12 of Mine Operations

KOP 10
Burntlog Road
Simulation

VICINITY MAP

Photograph Information

Time of photograph: 12:49 PM
Date of photograph: 08-28-2018
Wealther condition: Clear
Viewing direction: SW
Latitiude: 44.6873 N
Longitude: -115.4619 W

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

KOP 11

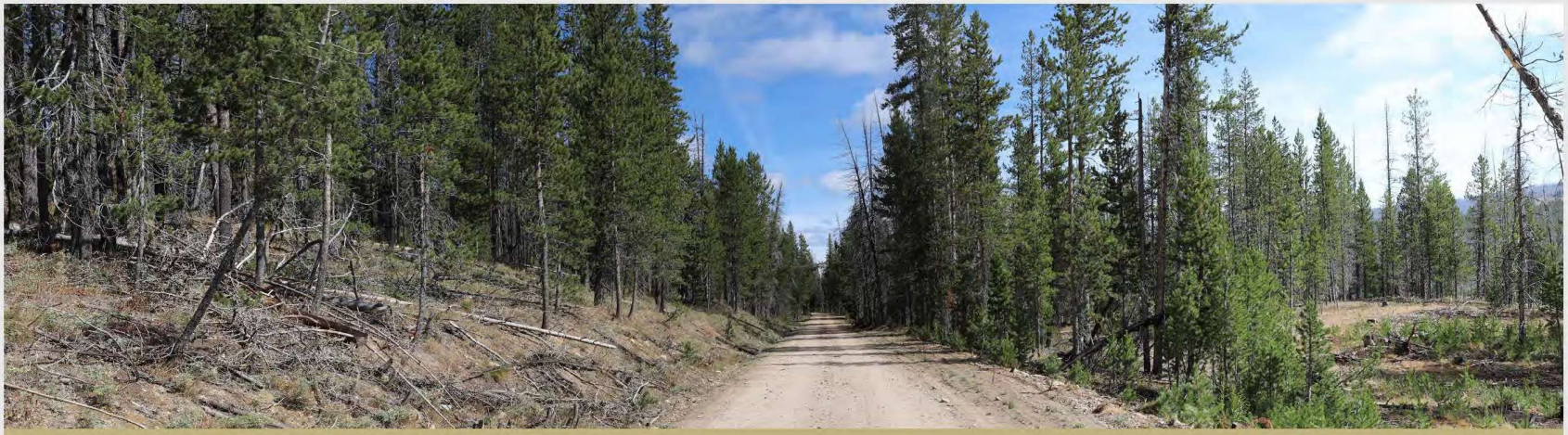
Existing Conditions

VICINITY MAP

Photograph Information

Time of photograph: 4:30 PM
Date of photograph: 08-29-2018
Wealther condition: Clear
Viewing direction: W
Latitiude: 44.6644 N
Longitude: -115.4495 W

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS



Existing Conditions

KOP 12A
Photograph Information

Time of photograph: 11:37 AM
Date of photograph: 08-28-2018
Wealther condition: Clear
Viewing direction: N
Latitiude: 44.6488 N
Longitude: -115.5001 W

VICINITY MAP

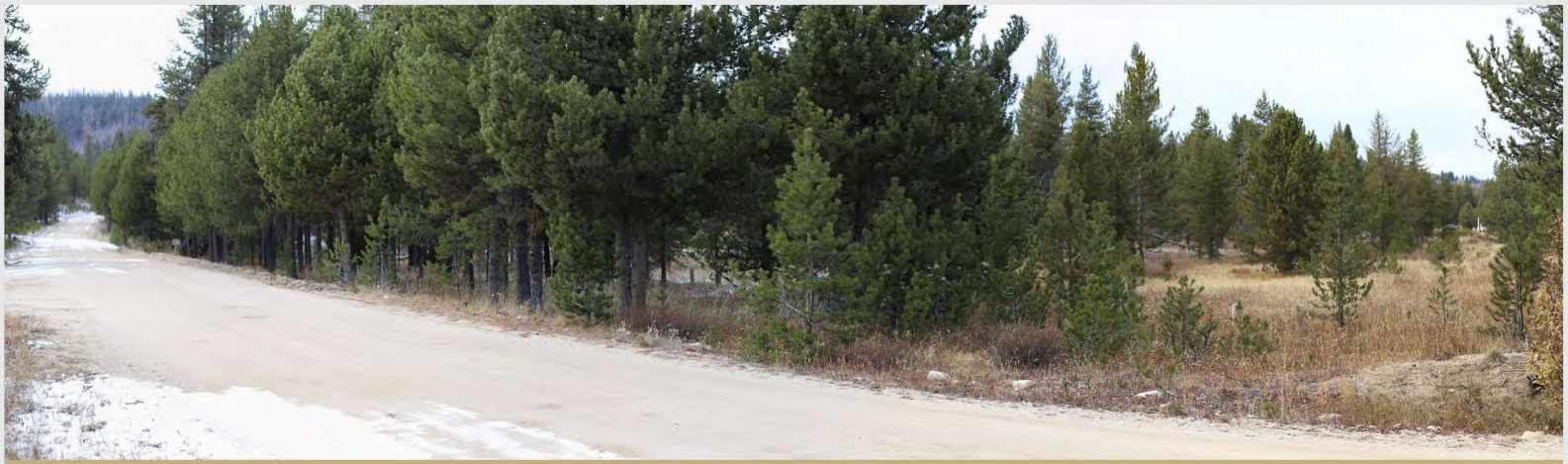
Existing Conditions

KOP 12B
Photograph Information

Time of photograph: 11:42 AM
Date of photograph: 08-28-2018
Wealther condition: Clear
Viewing direction: SW
Latitiude: 44.6488 N
Longitude: -115.5001 W

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

KOP 13



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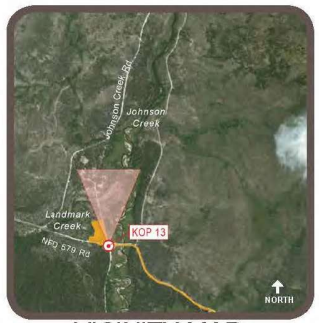


VICINITY MAP

Photograph Information

Time of photograph: 6:15 PM
Date of photograph: 10-06-2018
Wealther condition: Clear
Viewing direction: N
Latitiude: 44.6524 N
Longitude: -115.5438 W

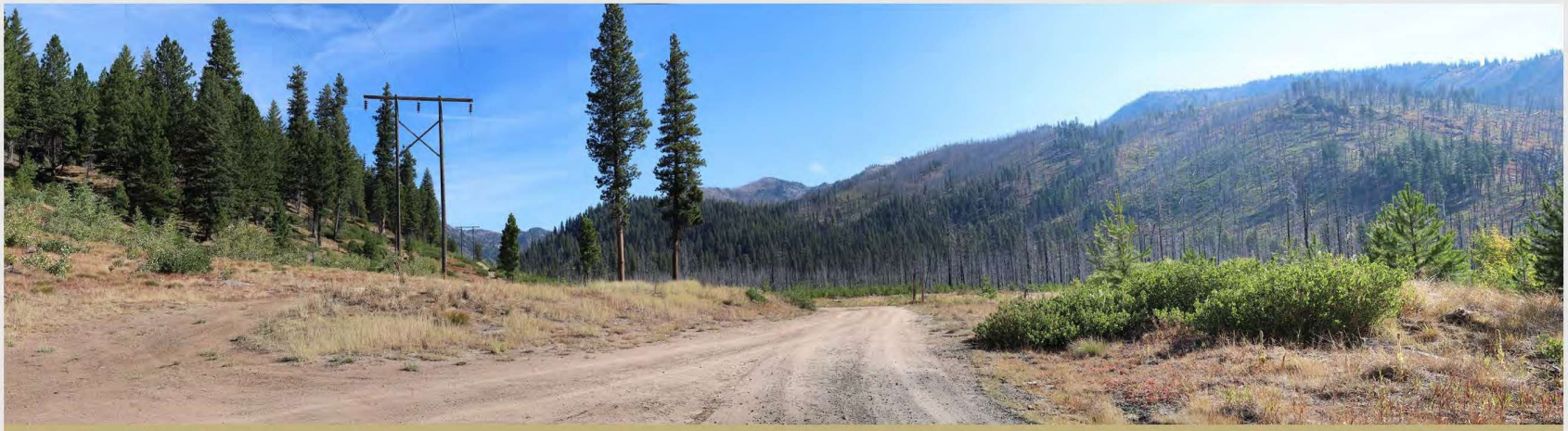
STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

Existing Conditions

KOP 14A
Photograph Information

Time of photograph: 10:36 AM
Date of photograph: 08-28-2018
Wealther condition: Clear
Viewing direction: SW
Latitiude: 44.6747 N
Longitude: -115.6664 W

VICINITY MAP



Existing Conditions

KOP 14B
Photograph Information

Time of photograph: 10:40 AM
Date of photograph: 08-28-2018
Wealther condition: Clear
Viewing direction: NE
Latitiude: 44.6747 N
Longitude: -115.6664 W

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

Existing Conditions

KOP 15A
Photograph Information

Time of photograph: 9:43 AM
Date of photograph: 08-28-2018
Wealther condition: Cloudy
Viewing direction: SW
Latitiude: 44.6654 N
Longitude: -115.6832 W

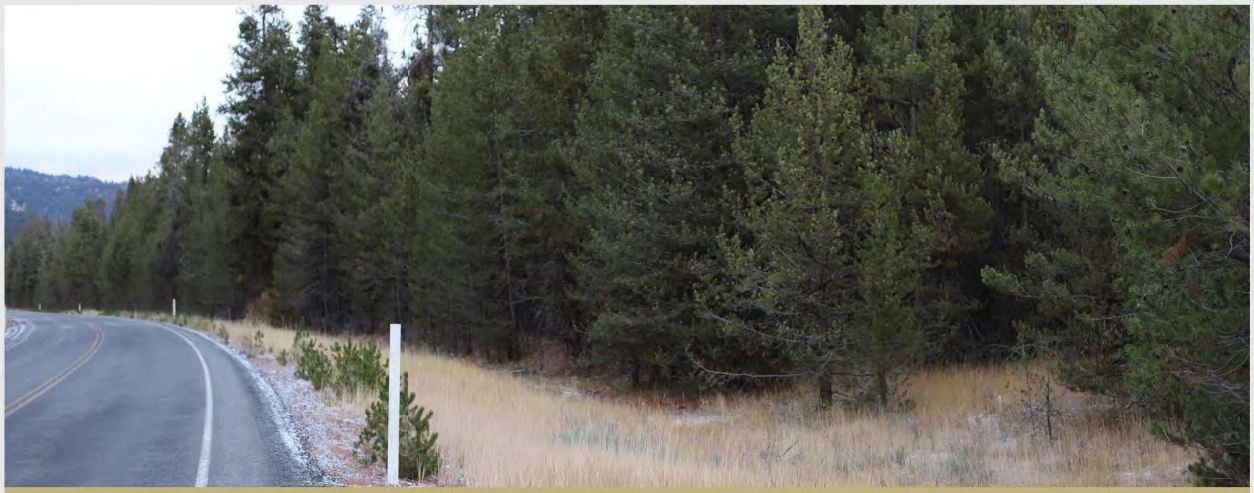
VICINITY MAP

Existing Conditions

KOP 15B
Photograph Information

Time of photograph: 10:08 AM
Date of photograph: 08-28-2018
Wealther condition: Cloudy
Viewing direction: NE
Latitiude: 44.6641 N
Longitude: -115.6859 W

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS



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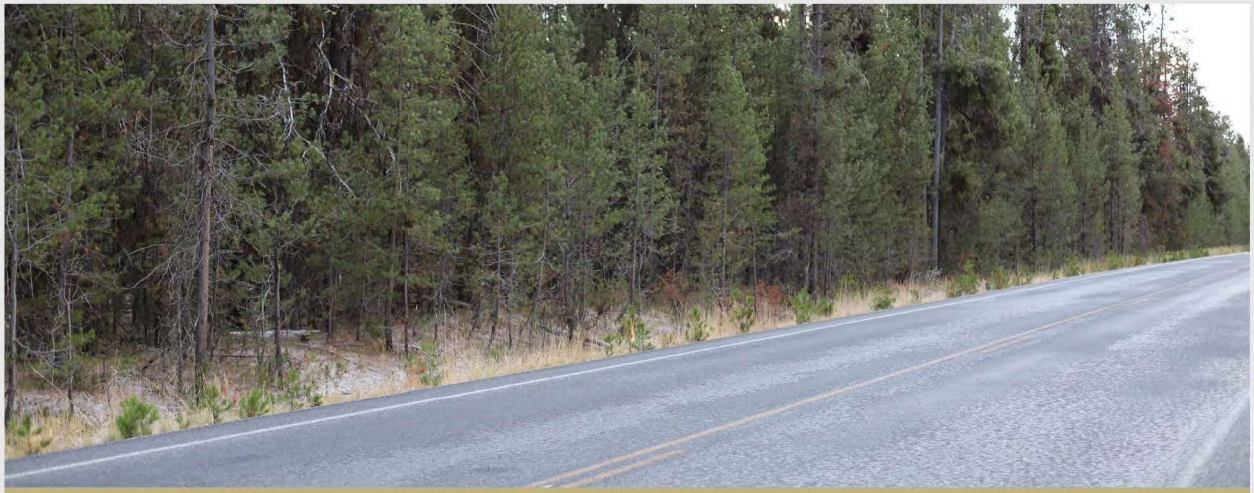

Existing Conditions

KOP 16A
Photograph Information

Time of photograph: 9:25 AM
Date of photograph: 10-06-2018
Wealther condition: Cloudy
Viewing direction: NE
Latitiude: 44.559 N
Longitude: -115.905 W

VICINITY MAP

KOP 16B
Photograph Information

Time of photograph: 9:16 AM
Date of photograph: 10-06-2018
Wealther condition: Cloudy
Viewing direction: SW
Latitiude: 44.556 N
Longitude: -115.901 W

STIBNITE GOLD PROJECT
KEY OBSERVATION POINTS

Existing Conditions

Simulated Conditions - Year 12 of Mine Operations

KOP 17
Lake Cascade
Powerline Corridor
Simulation

VICINITY MAP

Photograph Information

Time of photograph: 6:15 PM
Date of photograph: 08-29-2018
Wealther condition: Clear
Viewing direction: N
Latitiude: 44.7204 N
Longitude: -116.0681 W

Appendix B
Consistency with Visual Quality Objectives

CONSISTENCY WITH VISUAL QUALITY OBJECTIVES

The existing visual quality objectives (VQOs) within the Payette National Forest (PNF) and Boise National Forest (BNF) were reviewed where Stibnite Gold Project (SGP) components are proposed under each action alternative. The SGP component (SGP, access roads, transmission line ROW, or off-site maintenance facilities) were reviewed against the existing VQO to determine whether the SGP would conform to that VQO. This analysis was based on the following general assumptions:

The SGP would not be consistent with the Preservation, Retention, or Partial Retention VQO but would be consistent with the Modification or Maximum Modification VQO.

New or improved roads would not be consistent with the Preservation or Retention VQO but would be consistent with the Partial Retention, Modification, or Maximum Modification VQO, with the exception of where new soil nail walls would be constructed.

Soil nail walls would not be consistent with the Preservation, Retention, or Partial Retention VQO but would be consistent with the Modification or Maximum Modification VQO.

New or upgraded transmission line ROWs would not be consistent with the Preservation, Retention, or Partial Retention VQO but would be consistent with the Modification or Maximum Modification VQO.

Maintenance facilities would not be consistent with the Preservation or Retention VQO but would be consistent with the Partial Retention, Modification, or Maximum Modification VQO.

ANALYSIS OF THE SGP

Under the 2021 MMP or the Johnson Creek Route Alternative, the SGP would be located in areas managed as a VQO of Retention or Partial Retention. Where visible from viewing platforms, the SGP would not meet either of these VQOs, as the SGP components would introduce form, line, color, and texture found infrequently or not at all in the characteristic landscape, and, to a degree, that would dominate the characteristic landscape. These effects could be visible from the following viewing platforms: McCall-Stibnite Road (National Forest System Road [FR] 50412), Kootenai Road (FR 50883), and the Meadow Creek Lookout.

ANALYSIS OF NEW AND IMPROVED ACCESS ROADS

Under the 2021 MMP, new construction associated with the Burntlog Route would cross areas managed as Retention, Partial Retention, and Modification VQOs. With the exception of the soil nail walls under the 2021 MMP, access roads would generally conform to the Partial Retention and Modification VQO. Although new and upgraded portions of the access roads could introduce strong visual contrast in some areas, it typically would be limited to the immediate foreground as viewed from the road introducing the contrast and would appear subordinate from other viewing platforms. New access roads would not be consistent with the Retention VQO as it would introduce new lines, colors, and textures that would be evident.

Under the Johnson Creek Route Alternative, the existing roads cross an area managed as Partial Retention and Retention. With the exception of the retaining walls, access roads would generally conform to the

Partial Retention VQO. Although upgraded portions of the access roads could introduce strong visual contrast in some areas, it typically would be limited to the immediate foreground as viewed from the road introducing the contrast and would appear subordinate from other viewing platforms.

Analysis of New and Improved Transmission Line ROWs

Under the 2021 MMP or the Johnson Creek Route Alternative, a new transmission line would cross areas managed as Retention and Partial Retention, and an upgraded transmission line would cross areas managed as Preservation, Retention, and Partial Retention. Generally, new and upgraded transmission lines would not meet the Preservation, Retention, or Partial Retention VQO but would meet the Modification VQO. The line, color, form, and texture of the ROW would visually dominate the landscape but would not be out of scale with the natural surroundings. These effects would be visible from the following viewer platforms in the foreground and middle ground distance zones: Johnson Creek Road, Burntlog Route (new segment), and the Meadow Creek Lookout.

Analysis of Off-site Maintenance Facilities

Under the Johnson Creek Route Alternative, the Landmark Maintenance Facility would be located in an area managed as Partial Retention. Under the 2021 MMP, the Burntlog Maintenance facility also would be located in an area managed as Partial Retention. Under either action alternative, the proposed maintenance facility would meet the Partial Retention VQO, as the building would be constructed using materials and colors that appear in the characteristic landscape. Additionally, due to surrounding vegetation these facilities would typically not be visible past the foreground distance zone.

Summary

The SGP would have effects on the scenery resources within the PNF and BNF and would conflict with the current forest plan VQO designations. Portions of the SGP crossing NFS lands managed as Retention require that activities be "not visually evident." Portions of the SGP crossing NFS lands managed as Partial Retention require that activities be "visually subordinate" to the characteristic landscape. Implementation of the SGP could require changing some areas designated Retention and Partial Retention to the Modification VQO category.

Tables B-1a and **B-1b** summarize acres of each SGP component described above that could result in the need for a change in the VQO designation in order to achieve consistency with the Payette National Forest Land and Resource Management Plan (Payette Forest Plan) (Forest Service 2003).

Table B-1a SGP Components in Retention VQO in the PNF

Acres of SGP Component in the Retention VQO	2021 MMP	Johnson Creek Route Alternative
SGP	560.0	560.0
New or improved roads	95.8	26.1
New or upgraded powerline ROW	44.8	44.8

Table B-1b SGP Components in Partial Retention VQO in the PNF

Acres of SGP Component in the Partial Retention VQO	2021 MMP	Johnson Creek Route Alternative
SGP	1,115.5	1,103.4
New or improved roads	14.1	39.1
New or upgraded powerline ROW	39.0	39.0

Tables B-2a, **B-2b**, and **B-2c** summarize acres of each SGP component described above that could result in the need for a change in the VQO designation in order to achieve consistency with the Boise National Forest Land and Resource Management Plan (Boise Forest Plan) (Forest Service 2010).

Table B-1a SGP Components in Preservation VQO in the BNF

Acres of SGP Component in the Preservation VQO	2021 MMP	Johnson Creek Route Alternative
SGP	0	0
New or improved roads	18.8	6.7
New or upgraded powerline ROW	18.1	17.4

Table B-2b SGP Components in Retention VQO in the BNF

Acres of SGP Component in the Retention VQO	2021 MMP	Johnson Creek Route Alternative
SGP	0	0
New or improved roads	66.7	72.8
New or upgraded powerline ROW	323.0	322.7

Table B-2c SGP Components in Partial Retention VQO in the BNF

Acres of SGP Component in the Partial Retention VQO	2021 MMP	Johnson Creek Route Alternative
SGP	0	0
New or improved roads	253.3	55.6
New or upgraded powerline ROW	239.4	238.6
Off-site Facilities	4.5	4.9

Table B-3 summarizes the acres of the SGP that would be inconsistent with VQO designations per the Payette Forest Plan and Boise Forest Plan, as informed by the tables above. It presents the total acres for

Retention and Partial Retention that would need to be changed to Modification by alternative in order to achieve Forest Plan consistency.

Table B-2 Consistency with Scenery Management Designations by Forest and Alternative (acres)

Management Area/VQO	2021 MMP	Johnson Creek Route Alternative
PNF Acres to be changed from Retention to Partial Retention[1]	95.8	26.1
PNF Acres to be changed from Retention to Modification[2]	604.8	604.8
PNF Acres to be changed from Partial Retention to Modification[2]	1,168.5	1,181.5
BNF Acres to be changed from Preservation to Partial Retention[1]	18.8	6.7
BNF Acres to be changed from Preservation to Modification[2]	18.1	17.4
BNF Acres to be changed from Retention to Partial Retention[1]	66.7	72.8
BNF Acres to be changed from Retention to Modification[2]	323.0	322.7
BNF Acres to be changed from Partial Retention to Modification[2]	497.1	299.1

[1]Areas where new or improved roads are proposed would meet the Partial Retention VQO.

[2]Areas where soil nail walls, new or upgraded transmission lines, and the SGP as proposed would meet the Modification VQO.

Appendix C
2021 MMP Viewshed Analysis and Key Observation Points

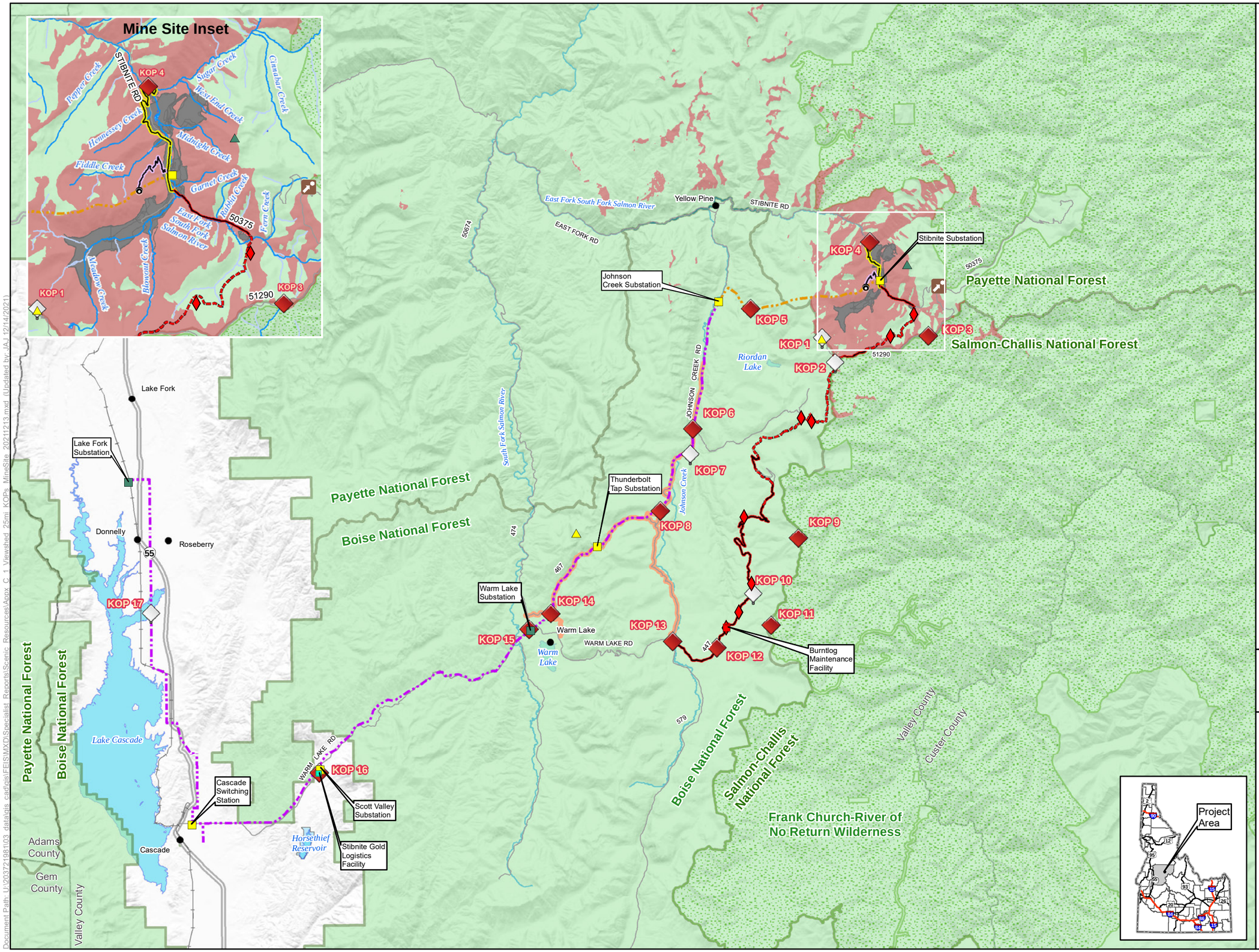

Figure C-1
Scenic Resources - Mine Site: 2021 MMP Viewshed Analysis and Key Observation Points Stibnite Gold Project Stibnite, ID

Base Layer: USGS Shaded Relief Service
Other Data Sources: Perpetua; State of Idaho Geospatial Gateway (INSIDE Idaho); Boise National Forest; Payette National Forest

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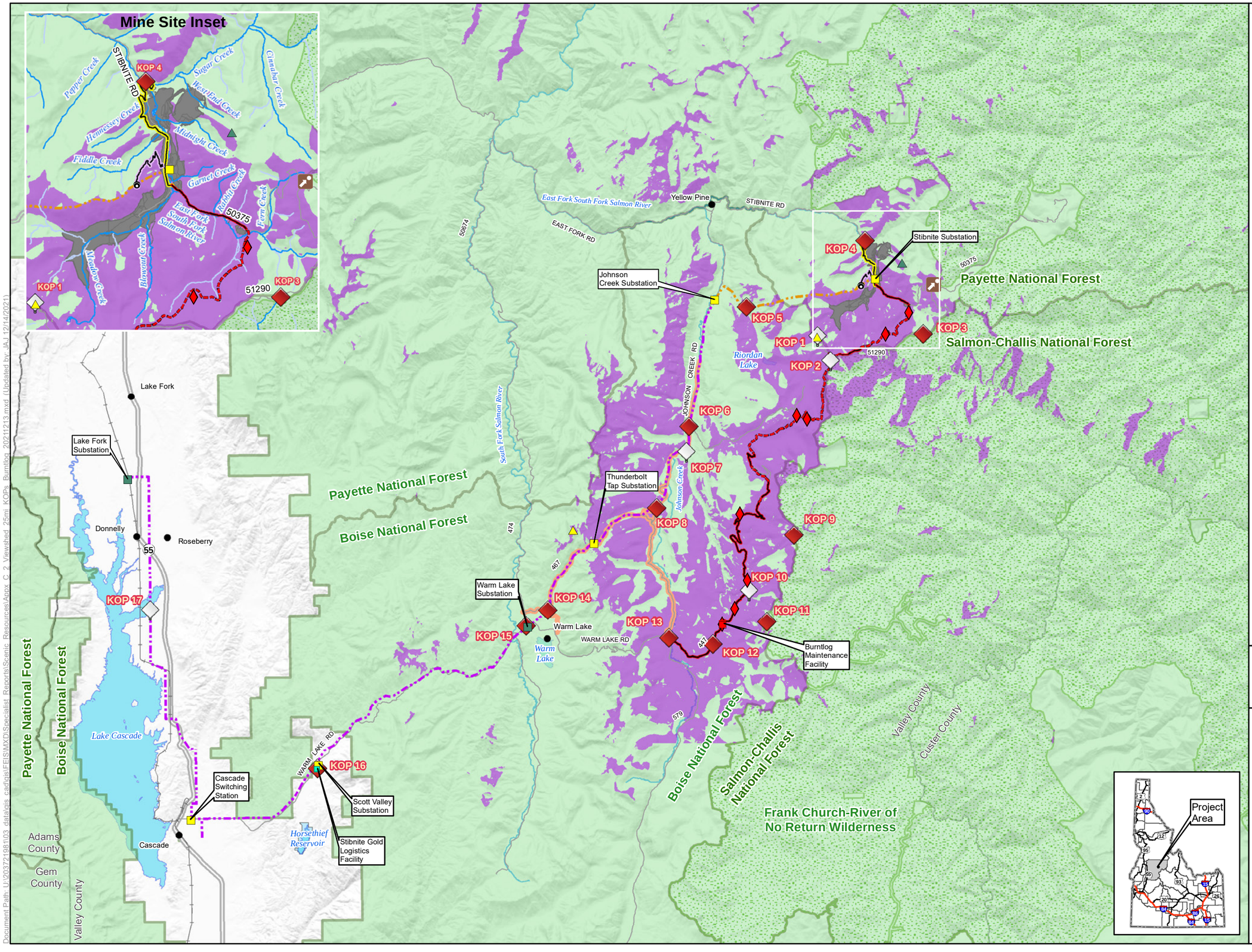

LEGEND

- KOP
- KOP & Simulation
- Burntlog Viewshed (25 mi)

Project Components

- SGP Features

Access Roads and Trail System

- Burntlog Route New
- Burntlog Route Upgrade
- Cell Tower Access
- SGP Public Access
- OSV Route
- Burntlog Route Borrow Source

Utilities

- Upgraded Transmission Line
- New Transmission Line
- Existing Substation *
- New Substation *
- Existing Communication Tower
- Repeater Site
- Cell Tower Option

Offsite Facilities

- Burntlog Maintenance Facility
- Stibnite Gold Logistics Facility

Other Features

- U.S. Forest Service
- Wilderness
- County
- City/Town
- Monumental Summit
- Railroad
- Highway
- Road
- Stream/River
- Lake/Reservoir

* Substation locations are approximate
Note: The McCall – Stibnite Road (CR 50-412) consists of Lick Creek Road, East Fork South Fork Salmon River Road (East Fork Road) and Stibnite Road.

0 2.5 5 Miles

1 inch = 4.5 miles when printed at 11x17

Figure C-2
Scenic Resources - Burntlog Road: 2021 MMP Viewshed Analysis and Key Observation Points
Stibnite Gold Project
Stibnite, ID

Base Layer: USGS Shaded Relief Service
Other Data Sources: Perpetua; State of Idaho Geospatial Gateway (INSIDE Idaho); Boise National Forest; Payette National Forest

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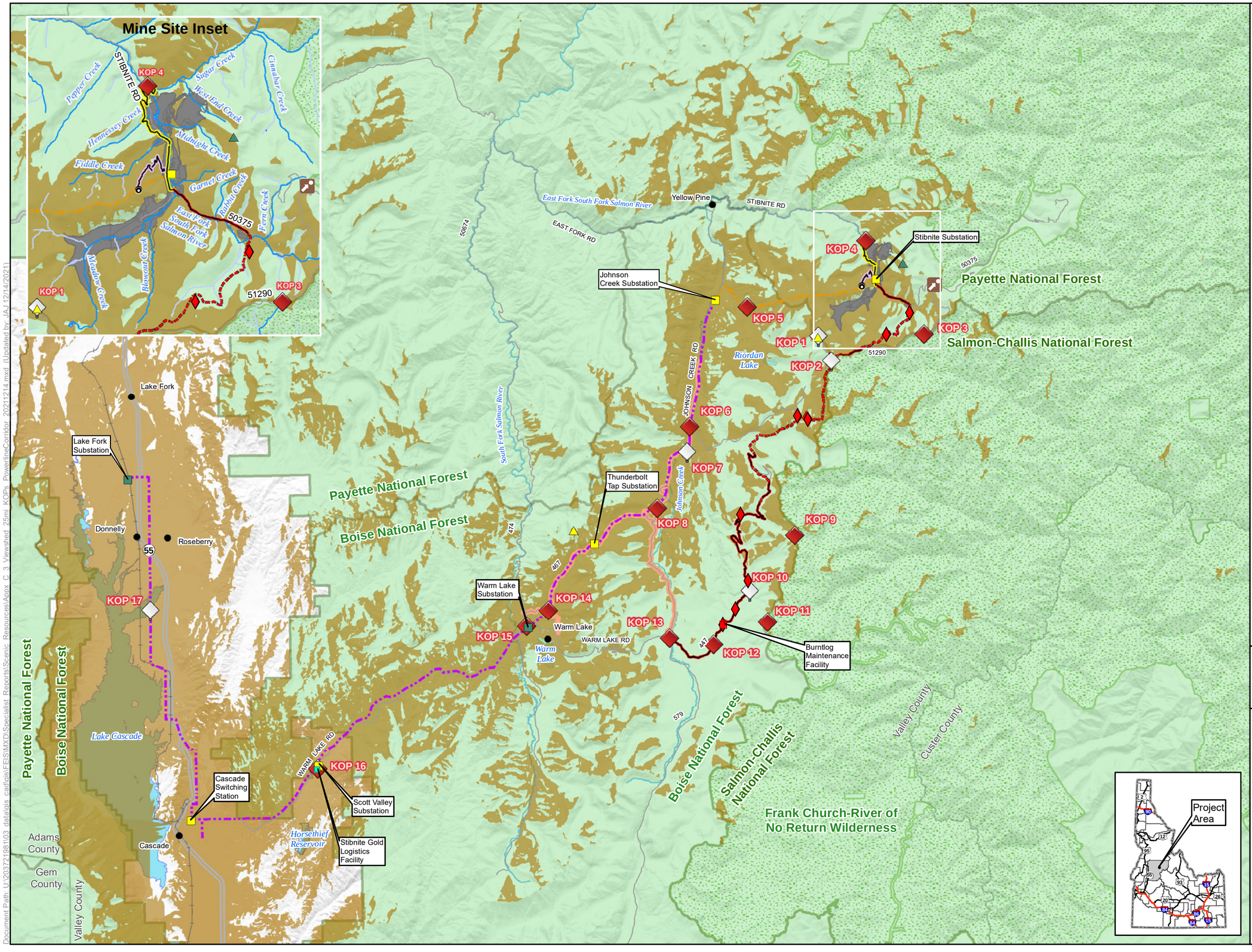

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Figure C-3
Scenic Resources - Powerline Corridor: 2021 MMP
Viewshed Analysis and Key Observation Points
Stibnite Gold Project
Stibnite, ID

Base Layer: USGS Shaded Relief Service
Other Data Sources: Perpetua; State of Idaho Geospatial Gateway (INSIDE Idaho); Boise National Forest; Payette National Forest

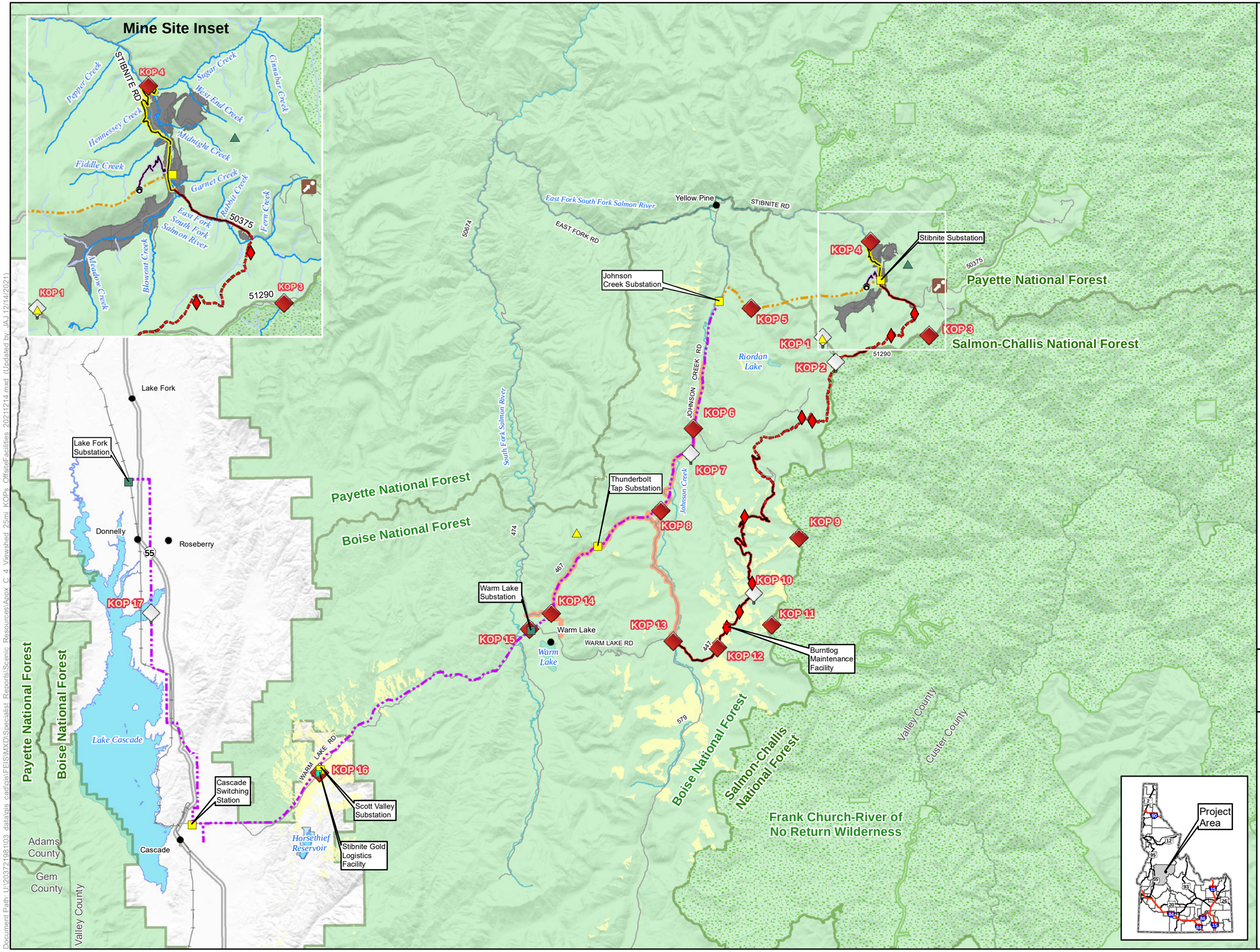

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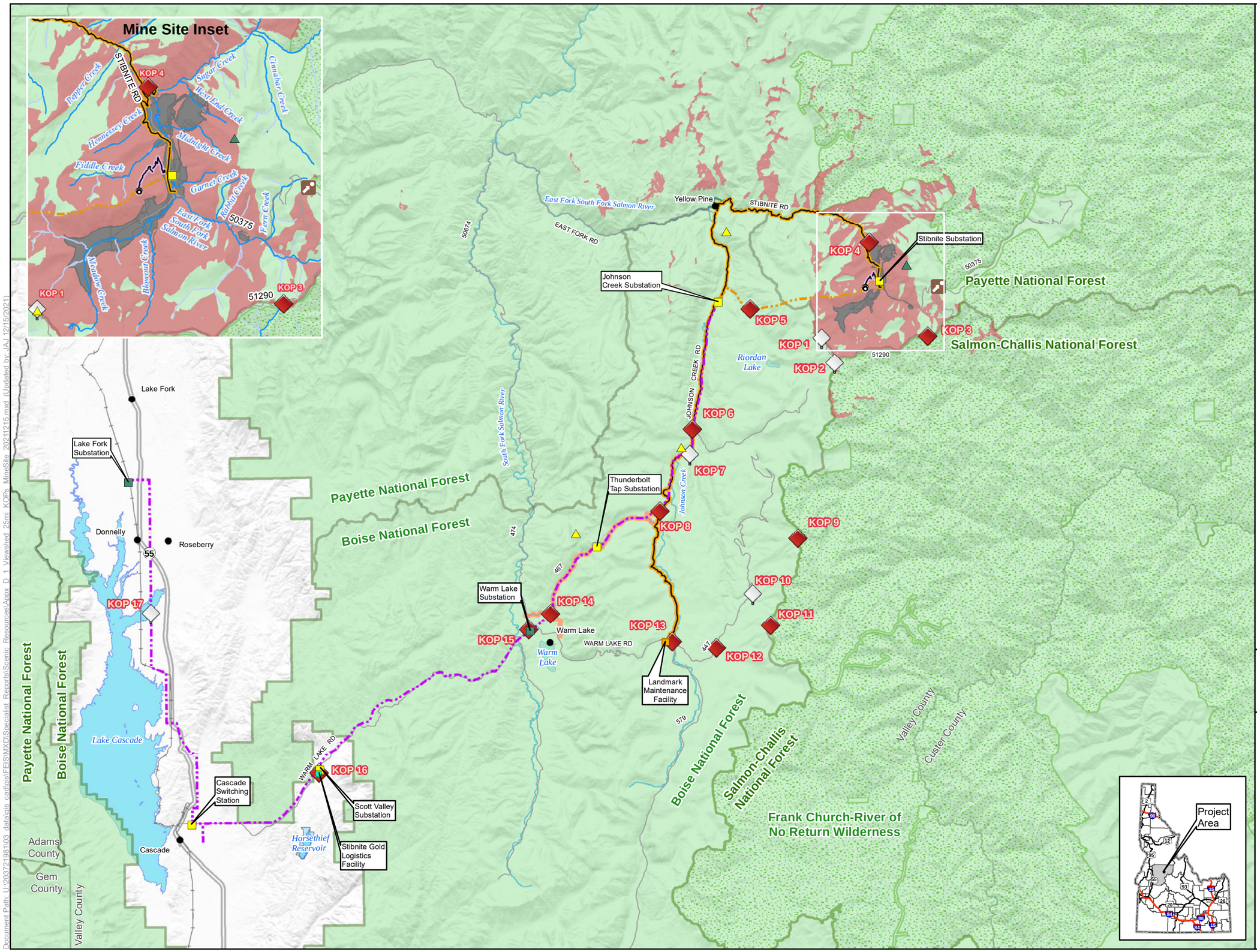
Figure C-4
Scenic Resources - Offsite Facilities: 2021 MMP
Viewshed Analysis and Key Observation Points
Stibnite Gold Project
Stibnite, ID

Base Layer: USGS Shaded Relief Service
Other Data Sources: Perpetua; State of Idaho Geospatial Gateway (INSIDE Idaho); Boise National Forest; Payette National Forest

Appendix D
Johnson Creek Route Alternative Viewshed Analysis and Key Observation Points



LEGEND

- KOP
- KOP & Simulation
- Mine Site Viewshed (25 mi)

Project Components

- SGP Features

Access Roads and Trail System

- Johnson Creek Route
- Cell Tower Access Road
- SGP Public Access Road
- OSV Route

Utilities

- Upgraded Transmission Line
- New Transmission Line
- Existing Substation *
- New Substation *
- Existing Communication Tower
- Repeater Site
- Cell Tower Option

Offsite Facilities

- Landmark Maintenance Facility
- Stibnite Gold Logistics Facility

Other Features

- U.S. Forest Service
- Wilderness
- County
- City/Town
- Monumental Summit
- Railroad
- Highway
- Road
- Stream/River
- Lake/Reservoir

* Substation locations are approximate
Note: The McCall – Stibnite Road (CR 50-412) consists of Lick Creek Road, East Fork South Fork Salmon River Road (East Fork Road) and Stibnite Road.

0 2.5 5 Miles

1 inch = 4.5 miles when printed at 11x17

Figure D-1
Scenic Resources - Mine Site: Johnson Creek Route Alternative Viewshed Analysis and Key Observation Points Stibnite Gold Project Stibnite, ID

Base Layer: USGS Shaded Relief Service
Other Data Sources: Perpetua; State of Idaho Geospatial Gateway (INSIDE Idaho); Boise National Forest; Payette National Forest

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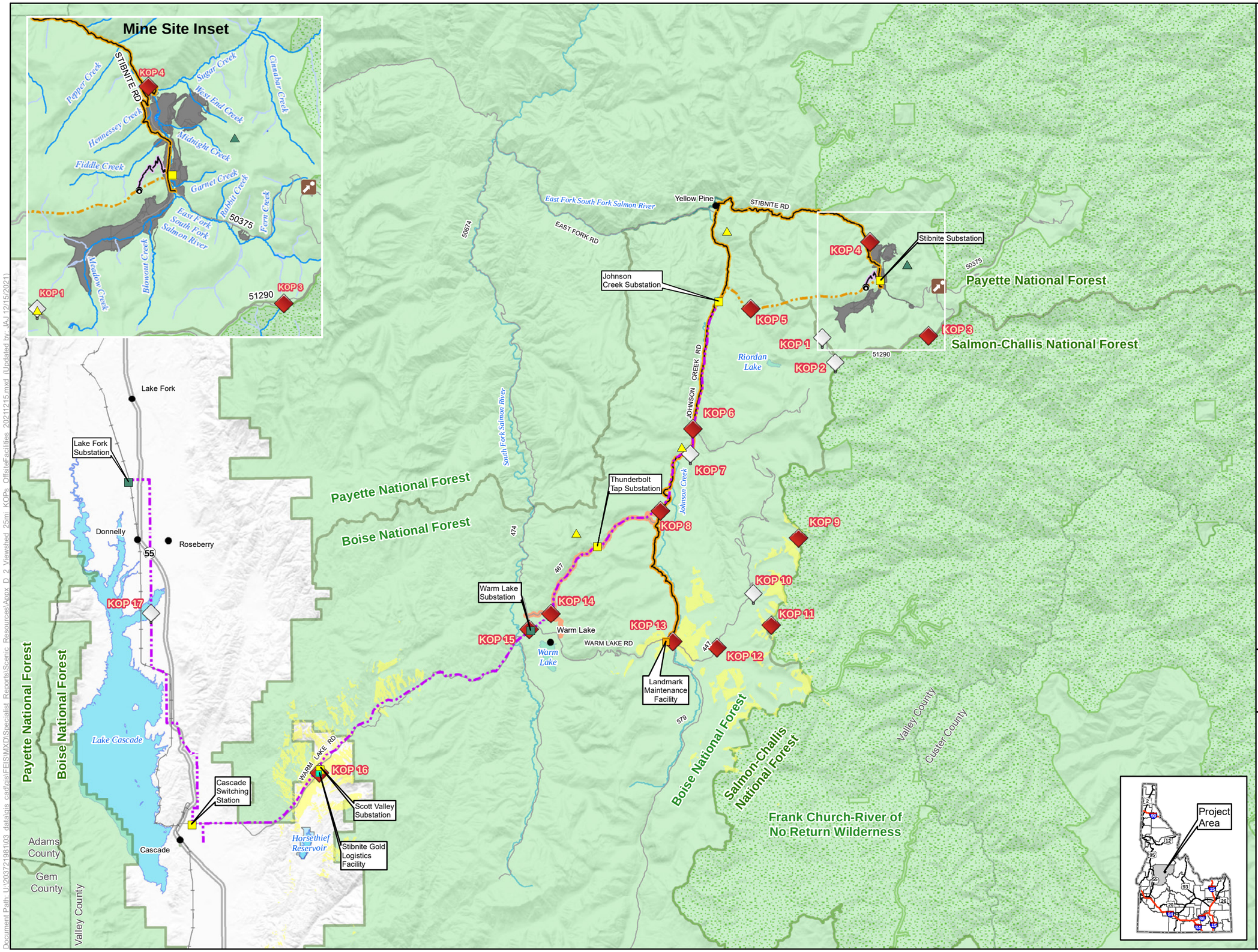

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Figure D-2
Scenic Resources - Offsite Facilities:Johnson Creek Route Alternative Viewshed Analysis and Key Observation Points
Stibnite Gold Project
Stibnite, ID

Base Layer: USGS Shaded Relief Service
Other Data Sources: Perpetua; State of Idaho Geospatial Gateway (INSIDE Idaho); Boise National Forest; Payette National Forest