BLM
Mount Lewis Field Office, Nevada

ENVIRONMENTAL ASSESSMENT

DOI-BLM-NV-B010-2015-0015-EA

Mount Hope Project Amendment

April 2015

U.S. Bureau of Land Management
Mount Lewis Field Office
Battle Mountain District
50 Bastian Road
Battle Mountain, Nevada 89820-2332

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DOI-BLM-NV-B010-2015-0015-EA

EUREKA MOLY LLC
MOUNT HOPE PROJECT AMENDMENT
EUREKA COUNTY, NEVADA

Environmental Assessment

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LIST OF ACRONYMS AND ABBREVIATIONS

ACPs	Applicant-Committed Practices
amsl	above mean sea level
APE	area of potential effect
approved 2012 Plan	Mount Hope Project Plan of Operations and Reclamation Permit Application
AUM	animal unit month
BLM	Bureau of Land Management
BMP	best management practice
BMRR	Bureau of Mining Regulation and Reclamation
CESA	cumulative effects study area
CFR	Code of Federal Regulations
CWP	construction water pond
dBA	A-weighted decibels
EA	Environmental Assessment
EML	Eureka Moly, LLC
EO	Executive Order
ESA	Endangered Species Act of 1973, as amended
Final EIS	Mount Hope Project Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act of 1976
HFRA	Healthy Forests Restoration Act of 2003
HMA	Herd Management Area
IM	Instruction Memorandum
IMC	Independent Mining Consultants, Inc.
kV	kilovolt
LCT	Lahontan cutthroat trout
LGO	Low Grade Ore
LR2000	Land and Mineral Legacy Rehost 2000 System
MLFO	Mount Lewis Field Office
MMPA	Mining and Mineral Policy Act of 1970
Mo	molybdenum
MSHA	Mine Safety and Health Administration
NAC	Nevada Administrative Code
NDEP	Nevada Division of Environmental Protection
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act of 1969
NNHP	Nevada Natural Heritage Program
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
PAG	potentially acid generating
PGH	preliminary general habitat
Plan Amendment	Mount Hope Project Plan of Operations Amendment and Application for Reclamation Permit Modification
PPH	preliminary priority habitat
Project	Mount Hope Project
RFFAs	reasonably foreseeable future actions
RMP	Resource Management Plan

ROW	right-of-way
SR	State Route
TSF	Tailings Storage Facility
U.S.	United States
USFWS	United States Fish and Wildlife Service
WRDF	Waste Rock Disposal Facility

1 INTRODUCTION / PURPOSE OF AND NEED FOR ACTION

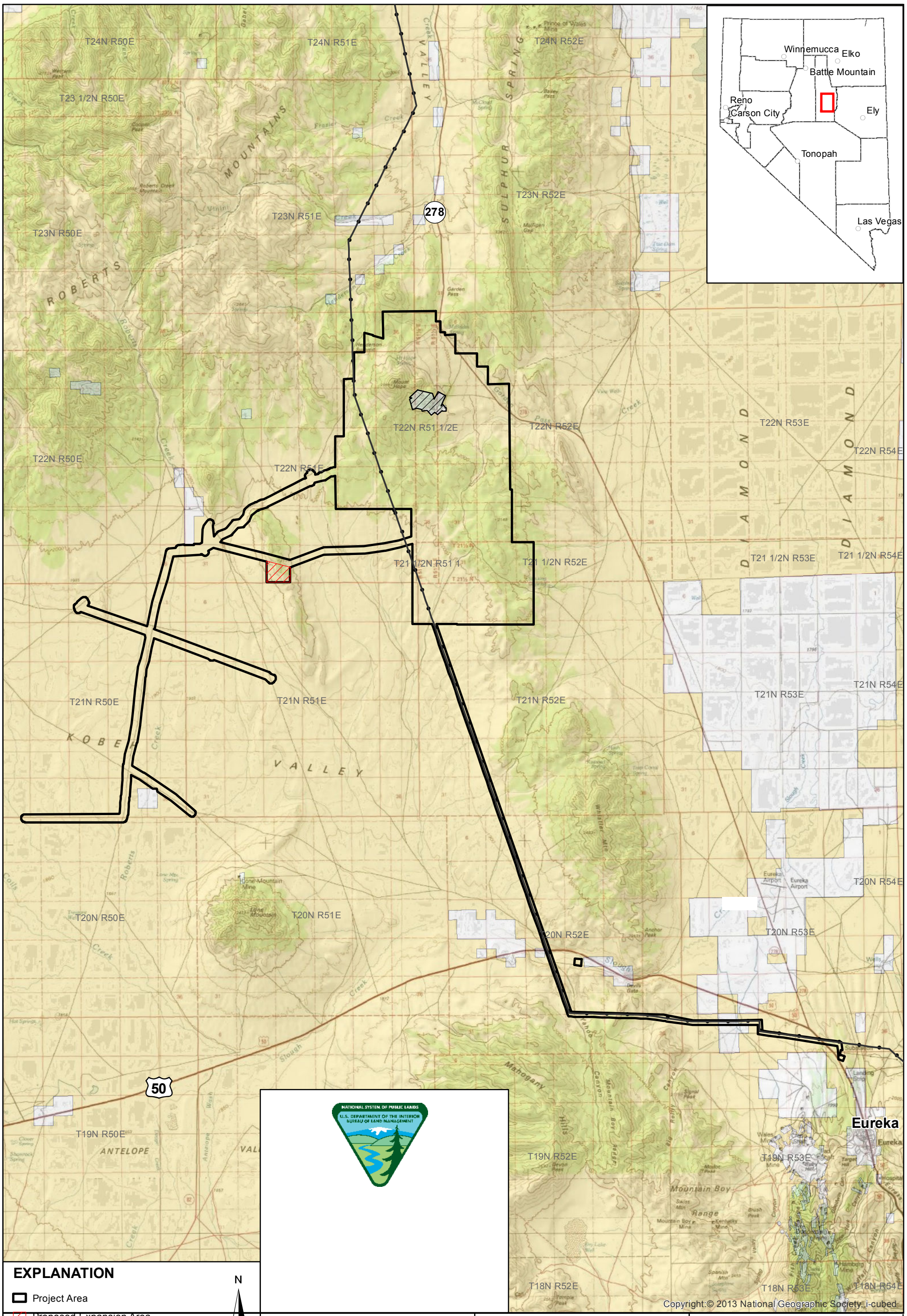
1.1 Introduction

Eureka Moly, LLC (EML) proposes an amendment to their approved Mount Hope Project (Project), as well as a modification to the 230 kilovolt (kV) powerline, both of which are located in north-central Nevada approximately 23 miles northwest of Eureka, Nevada, in Eureka County. The Project is located on public lands administered by the Bureau of Land Management (BLM) Mount Lewis Field Office (MLFO), and private lands. Access to the Project is by traveling north from Eureka approximately two miles on U.S. Highway 50, then north on Nevada State Route (SR) 278 for approximately 19 miles, then turning west onto Project Access Road.

The Project is located in all or parts of Sections 2 through 5, Township 20 North, Range 50 East, (T20N, R50E); Sections 1 through 3, 11 through 14, 23, 25, 26, and 32 through 36, T21N, R50E; Sections 1, 7, 8, 12, 16 through 18, and 31, T21N, R51E; Sections 4 through 9, T21N, R52E; Section 36, T21.5N, R51.5E; Sections 31 through 33, T21.5N, R52E; Section 36, T22N, R50E; Sections 1, 2, 11 through 15, and 20 through 36, T22N, R51E; Sections 1, 12, 13, 24, 25, and 36, T22N, R51.5E; Sections 6 through 8, 17 through 20, and 29 through 32, T22N, R52E; Sections 25, 35, and 36, T23N, R51E; and Section 31, T23N, R52E, Mount Diablo Base and Meridian (Project Area). The Project Area encompasses approximately 23,065 acres. Figure 1.1.1 shows the Project location, access, and land status.

EML originally submitted a Plan of Operations/Nevada Reclamation Permit Application for the Project to the BLM in June 2006. Revisions were subsequently submitted in September 2006, June 2007, May 2008, June 2008, July 2008, January 2009, October 2009, January 2010, July 2010, January 2011, July 2011, and July 2012 (approved 2012 Plan) (EML 2012) as required under the regulations. The Mount Hope Project Plan of Operations Amendment and Application for Reclamation Permit Modification (Plan Amendment) was submitted to the BLM and the Nevada Division of Environmental Protection (NDEP) Bureau of Mining Regulation and Reclamation (BMRR) on February 10, 2014 (revised May 2014, June 2014, and November 2014), in accordance with BLM Surface Management Regulations 43 Code of Federal Regulations (CFR) 3809, as amended, and Nevada reclamation regulations at Nevada Administrative Code (NAC) 519A (EML 2014a). The purpose of this Plan Amendment is to increase the surface disturbance by approximately 365 acres to facilitate the development of the previously authorized operations. This additional disturbance proposed under this Plan Amendment is primarily attributable to cut and fill grading that is required for construction but was not anticipated during the development of the approved 2012 Plan.

EML also submitted a modification to the 230 kV powerline within the Project Area, previously authorized under N-84632 and N-91272. This modification would remove 22 acres associated with the powerline right-of-way (ROW) out of the acreage identified in the proposed Plan Amendment, and would also realign the powerline within the Project Area.



EXPLANATION

- Project Area
- Proposed Expansion Area
- Falcon-Gondor Power Line
- EMLLC Private Land
- Bureau of Land Management
- Private

N

0 1 2 3 4 Miles

DESIGN: EMLLC	DRAWN: GSL	REVIEWED: RFD
CHECKED: -	APPROVED: RFD	DATE: 03/03/2015

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BUREAU OF LAND MANAGEMENT

MOUNT HOPE PROJECT AMENDMENT

DRAWING TITLE:

Project Access and Land Status

Figure 1.1.1

1.2 Purpose of and Need for Action

The BLM is responsible for administering mineral rights access on certain federal lands as authorized by the General Mining Law of 1872. Under the law, qualified prospectors are entitled to reasonable access to mineral deposits on public domain lands, which have not been withdrawn from mineral entry.

The purpose of the Project is to profitably extract molybdenite (molybdenum disulfide) from public lands where EML holds mining claims and private land to the optimal extent possible. The Project need is to meet the prevailing market demand for molybdenum (Mo). The prevailing market demand is regularly adjusted at market exchanges throughout the world. This adjustment results from buyers and sellers agreeing on a specific transaction price, which reflects the current supply and demand for the commodity and other factors.

The purpose and need for the federal action is multifold. One aspect of the purpose and need is established by the BLM's responsibilities under the Federal Land Policy and Management Act of 1976 (FLPMA) to respond to a request for a Plan of Operations for the applicant to exercise their rights under the General Mining Law and an application to modify an existing ROW under FLPMA. Other aspects of the purpose and need of the federal action are: (1) to further the "Minerals" objective of the applicable resource management plan, which is to "[m]ake available and encourage development of mineral resources to meet national, regional, and local needs consistent with national objectives for an adequate supply of minerals" (BLM 1986); and (2) to provide for mining and reclamation of the Project Area in a manner that is environmentally responsible and in compliance with federal mining laws, the FLPMA, Nevada Mine Reclamation Law, and other applicable laws and regulations.

In addition, the BLM's purpose in considering approval of the ROW amendment is to continue to provide legitimate use of the public lands to EML, as well as to allow EML to continue to provide power to the Project site. Legitimate uses are those that are authorized under FLPMA or other Public Land Acts and meet the proponent's objective while preventing undue and unnecessary degradation. The BLM needs to consider approval of the ROW amendment to respond to its mandate under FLPMA to manage the public lands for multiple use.

1.2.1 Decision to be Made

The decision the BLM would make, based on the National Environmental Policy Act of 1969 (NEPA), includes the following options: 1) approve the Plan and/or ROW amendment with no modifications; 2) approve the Plan and/or ROW amendment with additional mitigation measures that are needed to prevent unnecessary or undue degradation of public lands; or 3) deny the approval of the Plan and/or ROW amendment as currently written and not authorize the Project if it is found that the Proposed Action does not comply with the 3809 regulations and the FLPMA mandate to prevent unnecessary or undue degradation.

1.3 Existing Activities and Facilities

The currently approved Project is an approximately 80-year project that includes a 24-month construction phase, 44 years of mining and ore processing, 30 years of reclamation, and five years of post-closure monitoring. The actual Project development schedule is subject to

sufficient Project financing, which is an ongoing activity for EML and has resulted in an extended Project construction schedule. Concurrent reclamation would not commence until after the first 15 years of the Project. The Mount Hope ore body contains approximately 966 million tons of molybdenite ore that would produce approximately 1.1 billion pounds of recoverable Mo during the ore processing time frame. Approximately 1.7 billion tons of waste rock would be produced by the end of the 32-year mine life and approximately one billion tons of tailings would be produced by the end of the 44 years of ore processing. Optimal development of the Mo deposit, to meet the market conditions and maximize Mo production, would utilize an open pit mining method and would process the mined ore using a flotation and roasting process. The authorized surface disturbance totals 8,253 acres on both public and private lands. Figure 1.3.1 shows the location of existing authorized disturbance in the Project Area.

To date EML has created approximately 1,652 acres of surface disturbance related to mine development and construction inside and outside of the approved Plan disturbance footprint (within the approved 2012 Plan boundary). This disturbance typically consists of topsoil clearing and grubbing in some areas and only brush and vegetation clearing (i.e. brush-hogging) in others.

In November 2013, the BLM issued a Noncompliance Order to EML for surface disturbance that occurred outside of the approved surface disturbance footprints, but within the approved 2012 Plan boundary. The unauthorized disturbance totals 153 acres and is generally associated with construction of powerlines, water lines, roads, collection channels, and ancillary facilities.

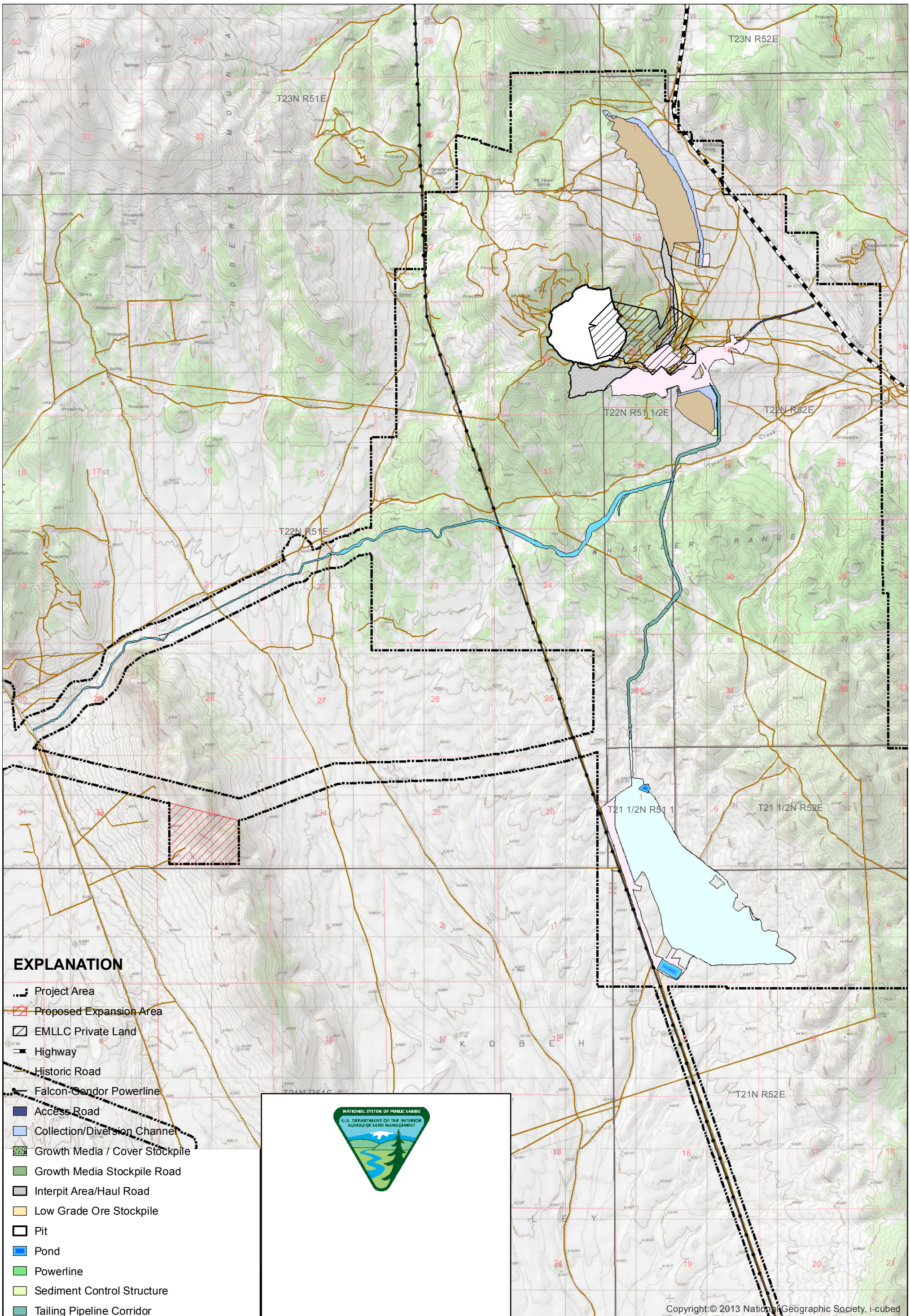
1.4 BLM Responsibilities and Relationship to Planning

The BLM has the responsibility and authority to manage the surface and subsurface resources on public lands located within the jurisdiction of the MLFO. The public lands within the Project Area are designated as open for mineral exploration and development. This EA was prepared in conformance with the policy guidance provided in BLM's NEPA Handbook (BLM Handbook H-1790-1) (BLM 2008a). The BLM Handbook provides instructions for compliance with the Council on Environmental Quality regulations (40 CFR 1500) for implementing the procedural provisions of the NEPA and United States (U.S.) Department of the Interior's manual on NEPA (Departmental Manual Part 516). This EA specifically utilizes and is tiered off the Mount Hope Project Final Environmental Impact Statement (Final EIS), dated October 2012 (NV063-EIS07-019) (BLM 2012).

1.4.1 Resource Management Plan

The Proposed Action conforms with the BLM's Shoshone-Eureka Resource Management Plan (RMP), as amended, dated March 1986 (BLM 1986). Specifically, on page 29 in the RMP Record of Decision, under the heading "Minerals" subtitled "Objectives" number 1:

> "Make available and encourage development of mineral resources to meet national, regional, and local needs consistent with national objectives for an adequate supply of minerals."


T23N R51E
T23N R52E
T22N R51 1/2E
T22N R52E
T22N R51E
T21 1/2N R51 1
T21 1/2N R52E
T21N R52E
ROBERTS MOUNTAINS
WHISTLER RANGE
KOBEH
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EXPLANATION
Project Area
Proposed Expansion Area
EMLLC Private Land
Highway
Historic Road
Falcon-Condor Powerline
Access Road
Collection/Diversion Channel
Growth Media / Cover Stockpile
Growth Media Stockpile Road
Interpit Area/Haul Road
Low Grade Ore Stockpile
Pit
Pond
Powerline
Sediment Control Structure
Tailing Pipeline Corridor
Tailing Storage Facility
Waste Rock Disposal Facility
Waterline
Yard
NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
0 2,000 4,000 6,000
Feet
DESIGN: EMLLC
DRAWN: GSL
REVIEWED: RFD
CHECKED: -
APPROVED: RFD
DATE: 03/03/2015
FILE NAME: 3218X_MtHopeEA_Figure_1.3.1_ExistingDisturbance.mxd
BUREAU OF LAND MANAGEMENT
MOUNT HOPE
PROJECT AMENDMENT
DRAWING TITLE:
Existing Disturbance
in the Project Area
Figure 1.3.1

Under "Management Decisions," "Locatable Materials," page 29, number 1:

> "All public lands in the planning areas will be open for mining and prospecting unless withdrawn or restricted from mineral entry."

Under "Management Decisions," "Current Mineral Production Areas," number 5:

> "Recognize these areas as having a highest and best use for mineral production and encourage mining with minimum environmental disturbance..."

1.4.2 Surface Management Authorizations and Relevant Plans

BLM regulations for surface management of public lands under the General Mining Law of 1872, as amended (43 CFR 3809), recognize the statutory right of mineral claim holders, such as EML, to explore for and develop federal mineral resources and encourage such development. These federal regulations require the BLM to review proposed operations to ensure that the following items are included: a) adequate provisions to prevent unnecessary or undue degradation of public lands; b) measures to provide for reclamation; and c) operations that comply with other applicable federal, state, and local laws and regulations.

The General Mining Law of 1872 allows individuals to locate and patent mining claims, such as lode claims. Since 1994, Congress has maintained a moratorium on BLM processing of mineral patent applications. Under the mill site provision, 30 U.S. Code 42, no location of a claim on nonmineral lands, called mill sites, may exceed five acres each. Under 43 CFR Section 3832.32, the maximum size of an individual mill site is five acres; however, more than one mill site per mining claim can be located if each site is used for at least one of the purposes described in 43 CFR Section 3832.34. The amount of located mill site acreage is that which is reasonably required for use or to be occupied for efficient and reasonably compact mining or milling operations.

Authorized ROWs on BLM-administered land are granted through the FLPMA, BLM ROW Regulations at 43 CFR 2800, and the BLM Rights-of-Way Manual MS-2800 through MS-2809. BLM ROW policy is extracted and implemented from these affecting regulations.

1.4.3 Site Reclamation Requirements

The Mining and Mineral Policy Act of 1970 (MMPA) mandates federal agencies to ensure that closure and reclamation of mine operations are completed in an environmentally responsible manner. The MMPA states that the federal government should promote the following:

> "...development of methods for the disposal, control, and reclamation of mineral waste products, and the reclamation of mined lands, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities."

The BLM's long-term reclamation goals are to shape, stabilize, revegetate, or otherwise treat disturbed areas in order to provide a self-sustaining, safe, and stable condition providing productive use of the land, which conforms to the approved land use plan for the area. The BLM's long-term goals also include management of any discharges from process components.

The short-term reclamation goals are to stabilize disturbed areas and to protect both disturbed and adjacent undisturbed areas from unnecessary or undue degradation. Relevant BLM policy and standards for reclamation are set forth in the BLM Solid Minerals Reclamation Handbook (BLM Manual Handbook H-3042-1), which provides consistent reclamation guidelines for all solid non-coal mineral activities conducted under the authority of the BLM Minerals Regulations in Title 43 CFR 3809 (BLM 1992a). The BLM has reviewed the site reclamation portions of the Plan to ensure that the Project would meet BLM reclamation standards and goals. The Project would also be required to obtain a reclamation permit from, and meet the reclamation standards of, the State of Nevada Department of Conservation and Natural Resources NDEP BMRR. Reclamation Permit 0330 was issued on November 17, 2014.

1.4.4 Local Land Use Planning and Policy

The Eureka County 1973 Master Plan, updated in 2000 and again in 2010, contains a description of land uses, restrictions on development, and recommendations for future land use planning. The Eureka County Master Plan 2010 included an Economic Development Element, which incorporated recommendations for increased land use planning that expands and diversifies the County's economy. The Natural Resources and Federal or State Land Use Element was developed and included into the Master Plan in response to Nevada Senate Bill 40, which was passed in 1983, which directs counties to develop plans and strategies for resources that occur within lands managed by federal and state agencies. Policies within the Eureka County Master Plan promote the expansion of mining operations/areas. Some elements of the Proposed Action would be in conformance with Eureka County plans and policies while other elements of the proposed mine may be inconsistent with these plans and policies. Appendix A of the Final EIS (BLM 2012) outlines these inconsistencies between the Project and the Eureka County Master Plan. The BLM acknowledges that EML would have to comply with any applicable Eureka County codes.

The Natural Resources and Federal or State Land Use Element, included in the Eureka County Master Plan, outlines objectives for natural resource management and land use on federal and state administered lands in Eureka County. This element is designed to accomplish the following: 1) protect the human and natural environment of Eureka County; 2) facilitate federal agency efforts to resolve inconsistencies between federal land use decisions and County policy; 3) enable federal and state agency officials to coordinate their efforts with Eureka County; and 4) provide strategies, procedures, and policies for progressive land and resource management (Eureka County 2010).

1.5 Scoping and Issues

1.5.1 Scoping and Public Involvement

The EA was made available for a 30-day public comment period ending on March 4, 2015. Notifications of the availability of the EA were sent to persons and agencies on the Project mailing list and the EA was posted on the Battle Mountain District ePlanning webpage. Additionally, the BLM issued a press release the same day providing a link to the EA and instructions of how to comment. Three comment letters were received from the public or other federal, state, or local agencies. Substantive comments were evaluated and considered by the BLM during the decision making process. Minor corrections or updates to the EA were made as

a result of the substantive comment review. The BLM reviewed and considered these comments and determined that they did not identify or present any significant new information or changed circumstances that would warrant additional NEPA analysis. Responses to substantive comments are provided in Appendix B of this EA.

1.5.2 Issues

The Project was internally scoped by the BLM interdisciplinary team at a meeting held on July 31, 2014, at the BLM office in Battle Mountain. During this meeting, BLM resource specialists identified the elements associated with supplemental authorities and other resources and uses to be addressed in this document as outlined in Chapter 3 of this EA. Issues and impacts related to specific resources associated with the Proposed Action were identified:

Auditory/Noise
Cultural Resources
Fish Habitat
Forests and Rangelands
Geology and Minerals
Historic Trails
Migratory Birds
Native American Religious Concerns
Soils
Special Status Species
Vegetation
Wastes, Hazardous or Solid
Water Quality, Surface and Ground
Wetlands and Riparian Zones
Wildlife

2 PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The Plan Amendment would result in additional and modified surface disturbance in support of the originally approved Mo mining and processing operation (Proposed Action). The additional 365 acres of surface disturbance proposed is primarily attributable to cut and fill grading that is required for construction but was not anticipated during the development of the approved 2012 Plan. In addition, there is a 180-acre increase in the size of the Project Area, due to the proposed expansion of the approved 2012 Project Area boundary to accommodate the proposed communication repeater and associated access road. The proposed activities would consist of the following:

a) a modified alignment and disturbance amounts for the 230 kV power transmission line, the 24.9 kV power distribution lines, the fresh water supply corridor, the tailing and reclaim pipeline corridor, and several access roads, including the use, and subsequent reclamation of existing roads;

b) a modified design and additional disturbance for the permanent diversion channel for the South Tailings Storage Facility (TSF);

c) a modified footprint for the Low Grade Ore (LGO) Stockpile and potentially acid generating (PAG) Waste Rock Disposal Facility (WRDF) and a modified design for the associated storm water diversion and collection facilities;

d) modified haul road alignments;

e) modified storm water controls within the mill facilities;

f) removal of two construction water wells and their associated access road, pipeline, and power line;

g) additional communication equipment and facilities;

h) a modified design for the components of the South TSF, including the booster pumps, tailing distribution pipeline, and underdrain collection pond;

i) a modified design for the tailing corridor emergency catchment ponds and associated pumps and pipelines;

j) a reconfigured and additional mill and ancillary buildings and facilities;

k) a hazardous waste storage area;

l) an additional booster station for the fresh water pipeline;

m) five construction water ponds (CWPs); and

n) the relocation of the meteorological monitoring station.

The Plan Amendment also included a revised Growth Media Management Plan, a revised Interim Management Plan, a revised Water Resources Monitoring Plan, and a revised discussion of the blast hole sampling frequency for consistency with the Mount Hope Waste Rock Management Plan in the approved 2012 Plan.

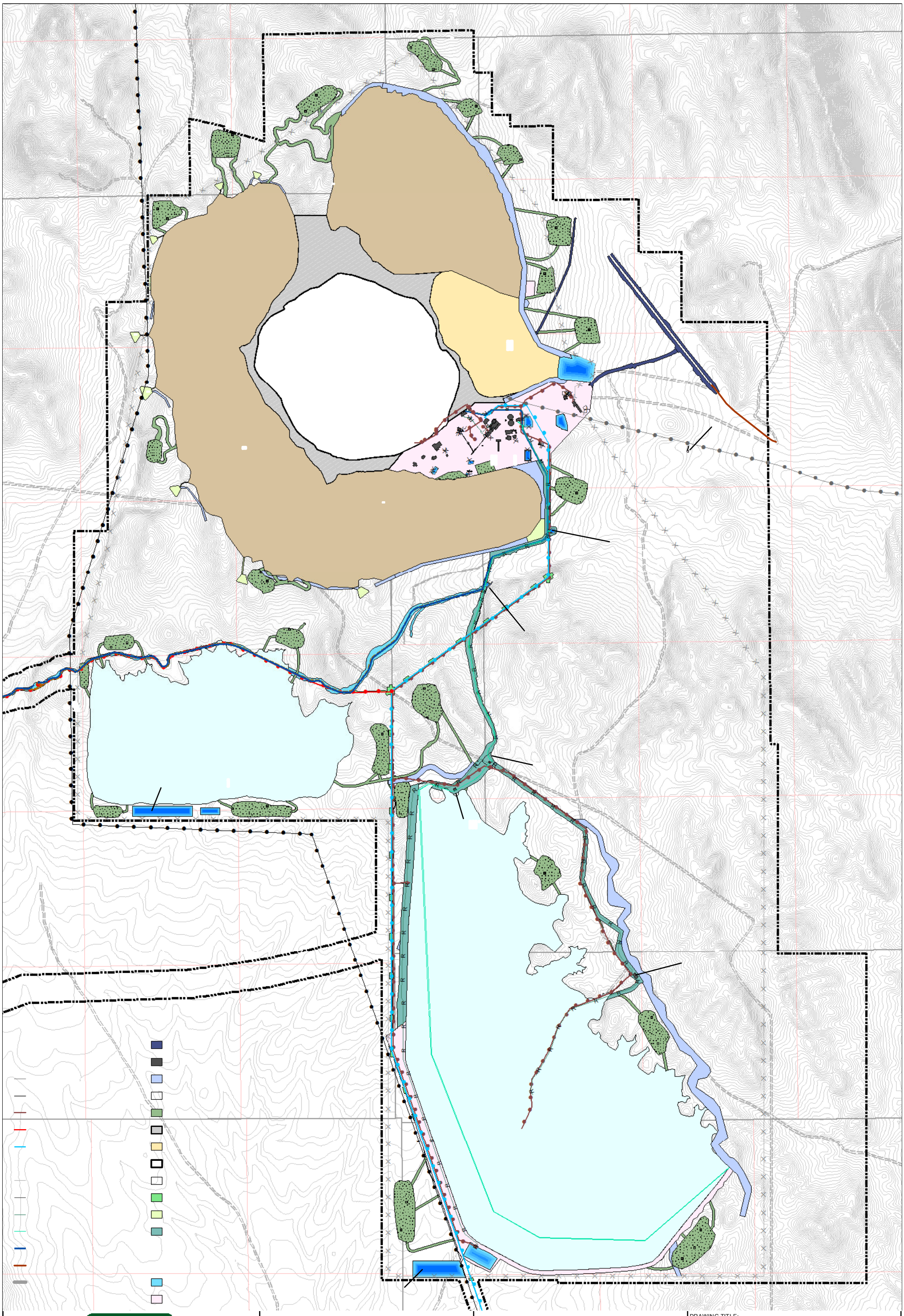
Other than these proposed activities listed above, EML would conduct construction, mining, and milling operations, and reclamation and closure at the Project in accordance with the approved 2012 Plan, which is described in the 2012 Final EIS in pages 2-1 through 2-96 (BLM 2012).

Under the Proposed Action, the authorized surface disturbance of 8,253 acres within the Project Area would increase by 365 acres to 8,618 acres. Table 2.1-1 summarizes and Figure 2.1.1 illustrates the proposed surface disturbance changes through the life of the mine. Figure 2.1.2 illustrates the proposed surface disturbance changes to the Phase I of Operations (end of Year 3).

Table 2.1-1: Authorized and Proposed Project Surface Disturbance for Life-of-Mine

Project Components	Authorized Surface Disturbance (acres)	Proposed Surface Disturbance (acres)	Total Surface Disturbance (acres)
Low Grade Ore footprint	417	-162	255
Interpit Area[1]	262	11	273
Open Pit	734	-	734
Yards[2]	334	71	405
Main Project Access Roads	9	34	43
Growth Media/Cover Stockpiles	380	-	380
Growth Media/Cover Stockpile Roads	108	12	120
Tailing and Reclaim Lines, Diversion and Collection Channels, Access Road, and Emergency Catchment Ponds	118	49	167
230-kV Power Line Corridor[3]	22	-	22
Well Field Power Line, Water Line, and Access Road[4]	98	92	190
Exploration[5]	50	-	50
Fence	40	-	40
Storm Water Controls[6]	-	5	5
Waste Rock Disposal Facilities			
PAG WRDF	564	154	718
Non-PAG WRDF	1,682	-45	1,637
Collection Channels and Access Road	47	64	111
PAG and Low Grade Ore Stockpile Storm Water Pond	5	17	22
Sediment Control Structures	12	10	22
Tailing Storage Facilities			
North	879	-	879
South	2,380	-1	2,379
Underdrain Collection Ponds	17	-1	16
Evapotranspiration Cells	38	-	38
South TSF Permanent Diversion Channels	49	62	111
TSF Power Line Corridor	8	-7	1
Total	**8,253**	**365**	**8,618**

[1] Includes mine perimeter powerline and haul roads.
[2] Includes all buildings, laydown areas, fueling areas, parking areas.
[3] Source: ECI 2008; includes roads, structures, and pulling sites.
[4] Includes construction water well access road, pipeline disturbance, Kobeh Valley production wells, and three booster stations.
[5] Exploration disturbance associated with existing notices included in the Project Area would be part of the 50 acres
[6] Unspecified construction for additional stormwater controls with the Project Area.



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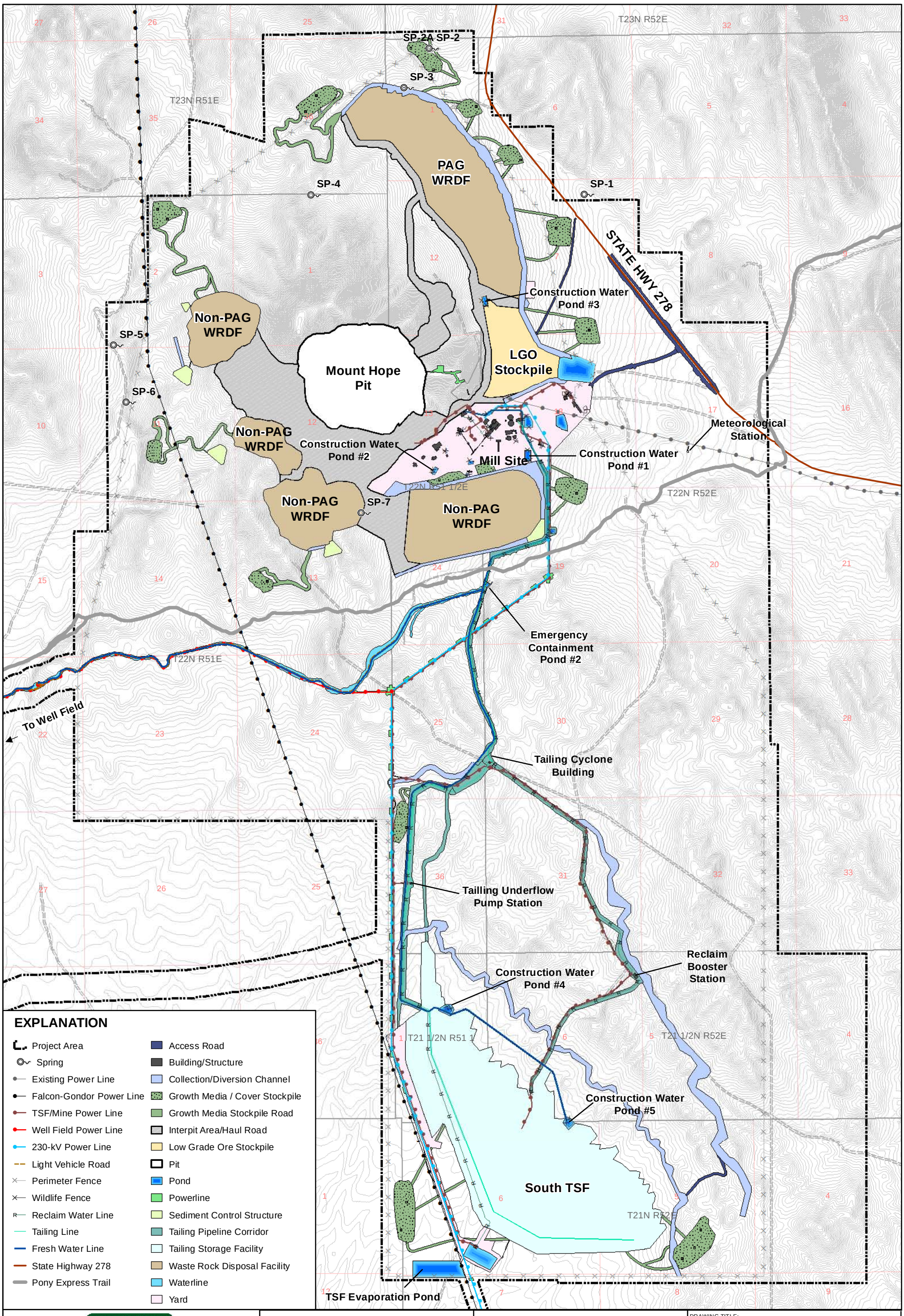
BUREAU OF LAND MANAGEMENT

MOUNT HOPE PROJECT AMENDMENT

DRAWING TITLE:

Year 44 (Life-of-Mine) Proposed Disturbance

Figure 2.1.1



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BUREAU OF LAND MANAGEMENT

MOUNT HOPE PROJECT AMENDMENT

DRAWING TITLE:

Year 3 (Phase I) Proposed Disturbance

Figure 2.1.2

2.1.1 Construction Schedule and Period of Operations

Pre-construction activities began in January 2013 and continued until mid-year 2013. Once construction resumes, a remaining construction period of 18 to 24 months, as described in the approved 2012 Plan, would be anticipated. No changes to the operations or reclamation schedule are proposed under this Project.

2.1.2 Open Pit Mining Methods

Mine bench heights would range from 40 to 50 feet in height, instead of only 50-foot bench heights as in the approved 2012 Plan. The pit design change from 50-foot bench heights to a range of 40-foot to 50-foot bench heights utilized and respected the original design criteria from the approved 2012 Plan for inter-ramp slope angles and overall final pit design angles. Consequently, there is no change in the inter-ramp angles and overall pit slope angles with 40-foot or 50-foot bench heights. The overall stability of inter-ramp slopes or the final overall slopes would not be negatively affected by the application of 40-foot benches (Independent Mining Consultants, Inc. [IMC] 2014). The specific height at any given location would be based on a variety of factors including geology, Plan requirements, safety, and geotechnical data.

2.1.3 PAG Waste Rock Disposal Facility and Low Grade Ore Stockpile

EML proposes to modify the configuration of the PAG WRDF and LGO Stockpile from the approved 2012 Plan by shifting the divide between the PAG WRDF and the LGO Stockpile to the south to correspond with the natural drainage. The PAG WRDF footprint would increase from 564 acres to 718 acres, and the footprint of the LGO Stockpile would decrease from 417 acres to 255 acres. The PAG WRDF and LGO Stockpile would be constructed to the same design parameters as in the approved 2012 Plan.

Revisions to the storm water management and designs for the PAG WRDF and LGO Stockpile are also proposed. The proposed modifications include the re-alignment and re-location of upgradient storm water diversion channels and downgradient collection channels and ponds. Specifics on the change in configuration and storm water design are located in the Plan Amendment (EML 2014a).

2.1.4 Non-PAG Waste Rock Disposal Facility

Modification of the configuration and construction sequencing of the Non-PAG WRDF from the approved 2012 Plan is proposed. These proposed changes would reduce the Non-PAG WRDF footprint from 1,682 acres to 1,637 acres as shown under the Non-PAG WRDF disturbance category in Table 2.1-1. No change to the final height of the Non-PAG WRDF is proposed.

The modified footprint configurations and construction sequencing of the Non-PAG WRDF would also result in revisions to the locations and configurations of the downstream sediment control structures and sediment collection channels.

2.1.5 Waste Rock Management

As described in the approved 2012 Plan, blast hole cuttings would be collected for LECO Corporation (LECO) analytical equipment analysis at the on-site laboratory or off-site laboratory

if needed. Consistent with the Waste Rock Management Plan in the approved 2012 Plan, one cutting sample would be collected from every tenth blast hole. If justified by data collected during operations, a reduction in sampling frequency may be proposed.

2.1.6 Processing

Proposed changes to the process components would consist of minor relocation and resizing of select mill buildings, tanks, silos, and thickeners. Specific proposed changes include:

- Removal of the concentrate leach thickener;
- Increase in the diameter of the regrind thickener from 75 feet to 105 feet;
- Increase in the diameter of the concentrate thickener from 20 feet to 50 feet;
- Addition of two wet scrubbers for the lime slaking mill and leach tanks;
- Addition of a 500-ton lime silo;
- Enlargement of the tailing thickener emergency overflow pond; and
- Redesign of the plant area storm water pond (Pond 1) and mill area storm water controls (i.e. ditches).

These changes would not result in increased disturbance. Detailed engineering designs for these changes are provided in Appendix 5 of the Plan Amendment (EML 2014a).

2.1.7 Tailing Conveyance and Distribution System

Proposed design and operational changes associated with the South TSF include: the addition of a concrete underdrain collection tank; relocation of the reclaim pipeline and booster station; modification of the South TSF underdrain pond and pumping strategy; modification of and additional disturbance for the temporary and permanent diversion channels; and additional disturbance for the embankment toe access road and containment berm. Specifics on the changes to the tailing conveyance and distribution system are outlined in the Plan Amendment (EML 2014a).

2.1.8 South TSF Permanent Diversions

Additional disturbance is proposed to provide access during construction of the South TSF permanent diversion channels. The proposed additional disturbance for these diversion channels include construction-related disturbance for the following activities:

- Clearing, grubbing, and stockpiling of vegetation and topsoil;
- Widening of the diversion access road from ten to 12 feet; and
- Cut and fill grading.

Additional proposed disturbance associated with the South TSF diversion channels is shown under the TSF (South TSF Permanent Diversion Channels) disturbance category in Table 2.1-1. Additionally, a portion of the northwest diversion channel was eliminated due to a minimal contributing watershed basin.

2.1.9 Haul and Main Access Roads

Mine haul roads connecting the WRDFs, open pit, and stockpiles would be rerouted, and the disturbance corridor for the main access road into the Project Area would be widened to provide more efficient haul routes and provide for adequate access and safe running widths. The proposed disturbance increase for the main access road is due to the following:

- Clearing, grubbing, and stockpiling of vegetation and topsoil;
- Cut and fill grading;
- Widening of the road running surface from 24 feet to 40 feet;
- Installation and maintenance of storm water BMPs to control erosion; and
- Construction of safety berms according to Mine Safety and Health Administration (MSHA) standards.

Additional disturbance acreage has been accounted for in Table 2.1-1 in the Access Roads disturbance category for turn and acceleration lanes constructed within the existing ROW for SR 278 at the Project entrance. As part of this construction, additional culverts would be installed under SR 278 to handle anticipated high flow events. Although these highway improvements were approved in the 2012 Plan, the disturbance acres for these facilities are now included in the overall disturbance.

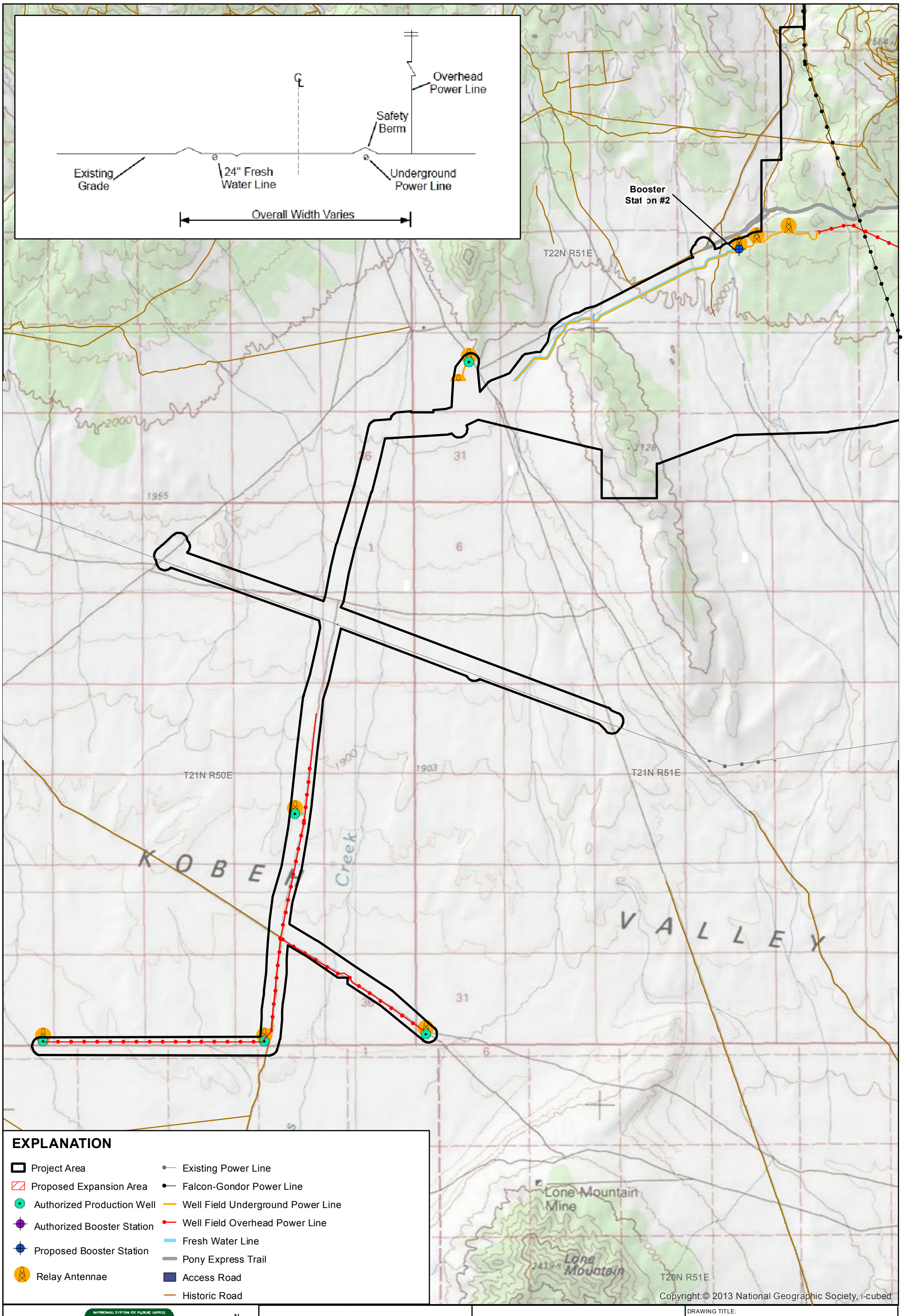
2.1.10 Infrastructure

Proposed modifications to the Mount Hope Mine infrastructure include the following:

- A modified route of the 230 kV power transmission and 24.9 kV power distribution lines and addition of substations;
- Removal of approximately 5.2 miles of the approved well field power line (permitted as a buried power line);
- Re-alignment and additional disturbance for the fresh water pipeline and access roads;
- The addition of a fresh water booster station along the fresh water pipeline;
- The addition of a communication facility; and
- Modification of the construction water supply and storage (Figure 2.1.3).

2.1.10.1 Electrical Power Transmission and Distribution

The routes of the 230 kV power transmission and the 24.9 kV power distribution lines within the Project Area would be modified to avoid mine and process facilities and to reduce disturbance by following other facility disturbance and existing roads where possible. The original alignment of the 230 kV power transmission line that was analyzed in the Final EIS and the proposed realignment to be analyzed with this Project are located adjacent to one another and disturb the same amount of acreage. The realignment would not result in any additional impacts outside of what was analyzed in the Final EIS. Therefore, the proposed surface disturbance does not include the 22 acres associated with the 230 kV power transmission line realignment.



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BUREAU OF LAND MANAGEMENT

MOUNT HOPE PROJECT AMENDMENT

DRAWING TITLE:

Wellfield Water and Powerline Routes

Figure 2.1.3

The length of the 24.9 kV power distribution lines would be reduced for the fresh water well field from approximately 29 miles to approximately 23.8 miles. Of these 23.8 miles of power distribution lines, approximately 9.5 miles would remain as overhead power lines and approximately 14.3 miles would be buried along the approved alignment. The buried portion of the power line would be located within the access road disturbance corridor. Figure 2.1.3 shows the buried and above-ground portion of the power line.

One substation within the mill site disturbance area would be constructed. No new disturbance would be associated with this substation.

2.1.10.2 Fresh Water Pipeline and Access Roads

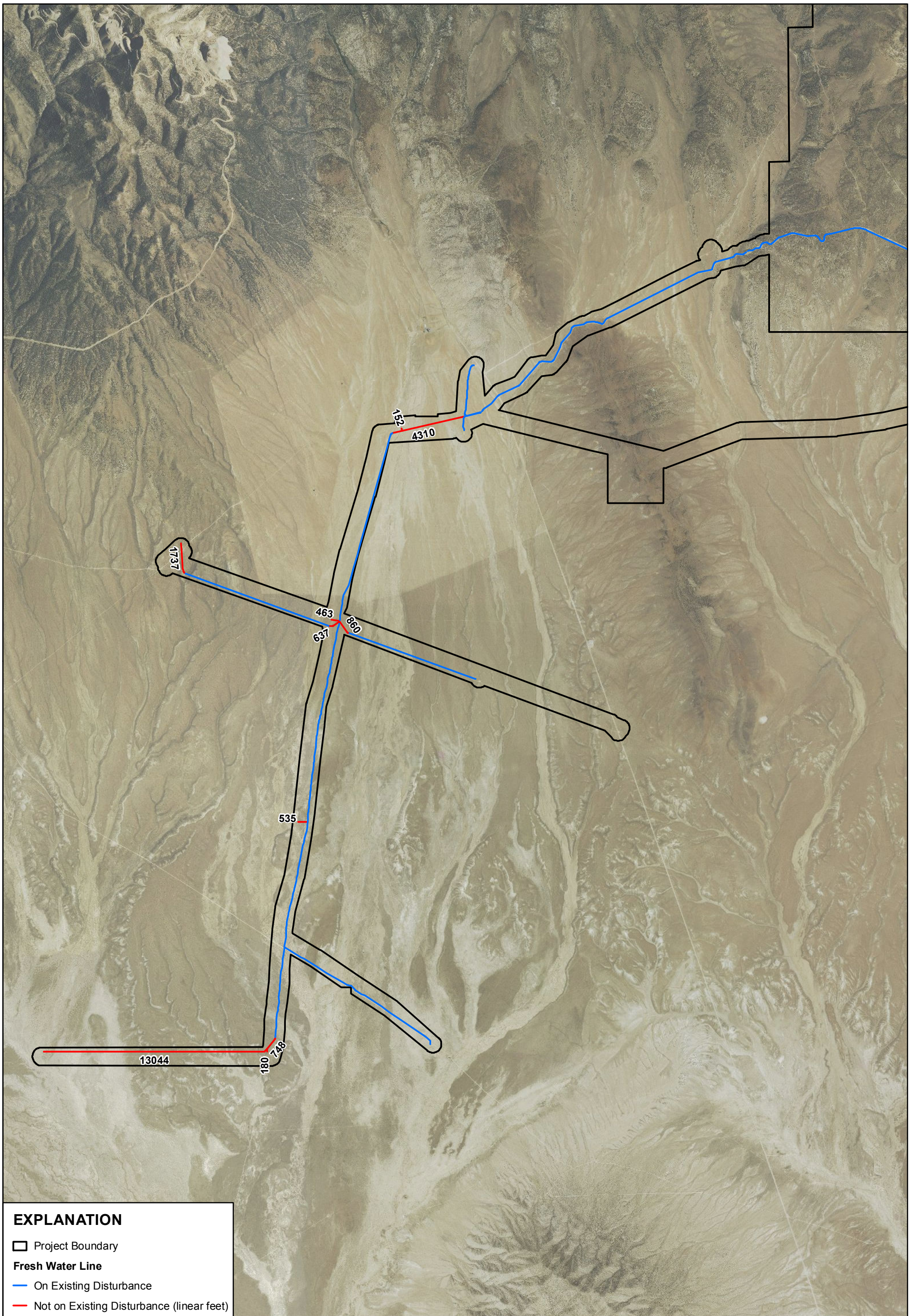
The fresh water pipeline route and associated access roads from the Kobeh Valley well field are proposed to be realigned over existing unimproved roads and widened to an average width of approximately 53 feet with a maximum width of approximately 140 feet. This widening and re-alignment is proposed to facilitate construction and improved vehicle access as well as construction of the booster pump stations. Figure 2.1.4 shows the location of the portions of the waterline/access road/buried powerline route that is coincident with the existing roads and the portions of roads considered new disturbance. Additional proposed disturbance accounts for the following:

- Installation and maintenance of stormwater best management practices (BMPs) to control erosion;
- Clearing, grubbing, and stockpiling of vegetation and topsoil;
- Cut and fill grading; and
- Construction of safety berms according to MSHA standards.

This additional disturbance has been included in the Well Field Power Line, Water Line, and Access Road disturbance category in Table 2.1-1 and is shown on Figure 2.1.3. The precise location of the fresh water pipeline route may be modified in the field to avoid topographic or other features, reduce disturbance, or make the route more efficient. The disturbance would be no greater than the authorized amount and would be confined to the Project Area. Part of the proposed disturbance would be located within the 450-foot buffer on each side of the Pony Express Trail. Portions of the fresh water line located within the buffer would be buried.

2.1.10.3 Fresh Water Booster Station

As indicated in the approved 2012 Plan, ground water would be pumped from the Kobeh Valley well field to the mill through two booster stations (Booster Station #1 and Booster Station #3). Continued engineering analysis revealed the need for a third booster station along the fresh water pipeline route. This proposed booster station is planned to be of similar configuration and surface facilities as the approved booster stations.



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U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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BUREAU OF LAND MANAGEMENT

MOUNT HOPE PROJECT AMENDMENT

DRAWING TITLE:

Water Line Disturbance

Figure 2.1.4

At each booster station, surface facilities would include:

- A 120-foot by 70-foot concrete pad;
- A ten-foot high chain link fence around the pad perimeter and access gate with ten-foot high acoustic panels on the inside of the fence to reduce potential noise exposure to sage grouse leks;
- A fresh water surge tank;
- Three duty pumps and one standby pump; and
- An electrical building.

Booster Station #1 and proposed Booster Station #2 would have acoustic panels around the entire booster station, and Booster Station #3 would have acoustic panels only along the west side and a small portion along the north side which face sage grouse leks.

2.1.10.4 Construction Water Supply and Storage

In the approved 2012 Plan, two construction water wells and a pipeline would be used to deliver freshwater to a single construction water pond, which was to be used during construction of the South TSF. The two construction water wells were to be located along the pipeline alignment. However, those wells were found to be inadequate to deliver the water needed for the TSF construction. The construction of the pipeline, access road, and associated power line for these wells is no longer proposed.

Under this Plan Amendment, it is proposed to use the approved fresh water wells to supply construction water needs. The fresh water pipeline would deliver water to five CWPs, of which two would be located within the mill footprint (CWP #1 and CWP #2), one would be located within the PAG WRDF and LGO Stockpile footprints (CWP #3), and two (CWP #4 and CWP #5) would be located within the South TSF footprint. Each CWP would be lined with a single 30 mil high density polyethylene liner and would be supplied with a pump and standpipe for filling water trucks for construction activities. All five CWPs would encompass a surface area of approximately 11 acres, with a total storage capacity of approximately 42.6 acre-feet.

Fresh water needed for the two CWPs at the South TSF would be supplied from the fresh water pipeline. At the intersection of the fresh water pipeline and the tailing conveyance corridor, a branch pipeline from the fresh water pipeline would deliver water to two CWPs at the South TSF. This new surface pipeline would follow the tailing and reclaim pipeline corridor. These CWPs would create no additional disturbance since they would be constructed within the approved footprints of other facilities. The fresh water pipeline may not be removed at the end of construction activities. The utility of leaving the pipes in for future construction staging or water management would be assessed at the end of water pond construction activities.

2.1.10.5 Communication Equipment and Facilities

Installation of a series of line-of-site repeaters are proposed to provide communications between the well field and the process plant. A small communication repeater system is also proposed to support communications for emergency services, business and operational needs, and for telephones throughout the mill site. This proposed communication repeater and its access road

would be located outside the currently approved Plan boundary in Section 33, T22N R51E. Modification of the authorized Plan boundary is proposed to encompass this proposed communications tower and access road.

New disturbance associated with the communications repeater would be approximately three acres and would include a 2,500-foot long by 50-foot wide construction corridor for the access road and small pad area where the repeater and small solar power system would be installed. This proposed disturbance has been added to Table 2.1-1 under the Access Roads category. The repeater tower would be a single-pole structure approximately 20 feet tall.

Approximately 28 repeater antennae would be located within the approved 2012 Plan boundary and would not result in any additional disturbance. Repeater antennae would be less than two feet high and would be secured to small structures such as road signs, water tanks, or power poles (where possible), so they are approximately 20 feet above ground level. Where securing to structures is not feasible, repeater antennae would be attached to two-inch diameter metal poles installed so that they are no more than 20 feet above ground level or at least five feet above structures. As the communication system depends strictly on line-of-site, the actual number of repeaters and their specific location might have to be adjusted in the field, if required.

2.1.11 Ancillary Facilities

Ancillary facilities, as described in the 2012 Plan, include the following: mine, mill, and support buildings; fuel and mill reagent storage; waste management areas, explosive storage areas; sediment control structures; borrow areas; and fencing. The disturbance area for the mill site has been somewhat modified from the approved 2012 Plan due to topography and through the refinement of design. This proposed disturbance area modification is included in the Yards disturbance category in Table 2.1-1. Proposed modifications to ancillary facilities include:

- Additional and reconfigured buildings and support facilities;
- A relocated meteorological monitoring station;
- Additional disturbance for storm water controls; and
- A reconfigured mill disturbance boundary.

2.1.11.1 Buildings and Support Facilities

Various buildings and support facilities would be added, removed, or relocated within the mill site. These modifications, which would add no new surface disturbance, would include:

- Re-oriented and relocated lime silos and slakers;
- Relocated and reconfigured truck shop and petroleum tank farm;
- Relocated equipment fueling area and truck wash;
- Two concrete pads to manage petroleum contaminated soils at the truck wash facility;
- Light vehicle fueling area and tire repair pad;

- Relocated and reconfigured administration building, change house, safety/security building, and septic leach field;
- Warehouse near administration area with dedicated septic system;
- Relocated heli-pad away from overhead power lines;
- Temporary modular laboratory and concrete batch plant;
- Relocated potable water, fresh water, and process water tanks;
- Expanded size of roaster and grinding buildings;
- Reduced size of filtration/packaging building;
- Relocated mill maintenance adjacent to flotation building;
- Relocated explosive magazines;
- Relocated ammonium nitrate and fuel oil support facilities and building;
- Truck ready-line and shovel assembly yard;
- Reduced size of primary crusher pad;
- Removed core shed; and
- Hazardous material storage area with covered concrete containment.

2.1.11.2 Meteorological Station

The Project includes a meteorological station located near the old mill site. Its approved location would have been impacted by the approved construction. Relocation of this station is proposed southeast of the mill site accessible from an existing power line access road. The relocation of this meteorological station would disturb approximately 0.14 acre and is included in the ancillary disturbance category in Table 2.1-1.

2.1.11.3 Sediment Control Structures

Up to five acres of disturbance is proposed for unspecified construction of additional storm water controls at unspecified locations within the approved Project Area. This proposed disturbance allows for storm water BMP installation (i.e. berms, sediment traps or check dams, etc.) as needed for sediment and erosion control. This additional disturbance has been included in the Storm Water Controls disturbance category in Table 2.1-1.

2.1.12 Growth Media Salvage and Stockpiles

Growth media access roads would be realigned and widened to a running width of approximately 28 feet to facilitate construction and improved vehicle access. Additional proposed disturbance of approximately 12 acres for these access roads includes:

- Installation and maintenance of storm water BMPs to control erosion;
- Clearing, grubbing, and stockpiling of vegetation and topsoil;
- Cut and fill grading; and
- Construction of safety berms according to MSHA standards.

The proposed disturbance and realignments for these growth media access roads are included in the Growth Media/Cover Stockpile Roads disturbance category in Table 2.1-1.

2.1.13 Reclamation

Reclamation of disturbed areas resulting from activities outlined in the Reclamation Plan would be completed in accordance with BLM and NDEP regulations. The purpose of Subpart 43 CFR 3809 – Surface Management is to prevent unnecessary or undue degradation of public lands by operations authorized by the mining laws. Anyone intending to develop mineral resources on public lands must prevent unnecessary or undue degradation of the land and reclaim disturbed areas. This subpart establishes procedures and standards to ensure that operators and mining claimants meet this responsibility and provide for the maximum possible coordination with appropriate state agencies to avoid duplication and to ensure that operators prevent unnecessary or undue degradation of public lands by operations authorized by the mining laws. The State of Nevada requires that a reclamation plan be developed for any new mining projects and for expansions of existing operations (NAC 519A).

EML anticipates that, with the exception of the open pit, surface mine components would be reclaimed and revegetated.

The approved mining and milling operations would be active for approximately 44 years which is consistent with the approved 2012 Plan. No changes to the reclamation schedule or activities are proposed under this Project.

Concurrent reclamation would be ongoing over the life of the mine for areas that have reached their final configurations. However, reclamation of waste rock disposal facilities would be started in Year 15 as that is when the final build-out is expected to be completed on a portion of the storage areas, and would continue through around Year 34. Upon completion of mining, the WRDF recontouring, cover and/or growth media placement, and seeding, would be completed.

Closure of the South TSF would commence about Year 36. The South TSF would be allowed to drain and consolidate prior to earthwork and reclamation beginning. Closure and reclamation of the process facilities and ancillary facilities would begin after the completion of milling in Year 44.

2.1.14 Applicant-Committed Practices

EML would continue to commit to following applicant-committed practices (ACPs) described in the approved 2012 Plan that would prevent undue and unnecessary degradation during the life of the Project. No changes to these committed practices are proposed in this Plan Amendment. However, a new cultural resources measure has been added to this Project.

- Within the expanded portion of the Project Area, EML would avoid all National Register of Historic Places (NRHP)-eligible sites and/or contributing elements of eligible cultural Districts by a buffer zone of 100 feet. If deemed necessary by the BLM, EML would place a qualified archaeologist on site during surface disturbing activities near known cultural resources to monitor Project implementation and ensure eligible cultural sites are avoided, unless superseded by more restrictive requirements.

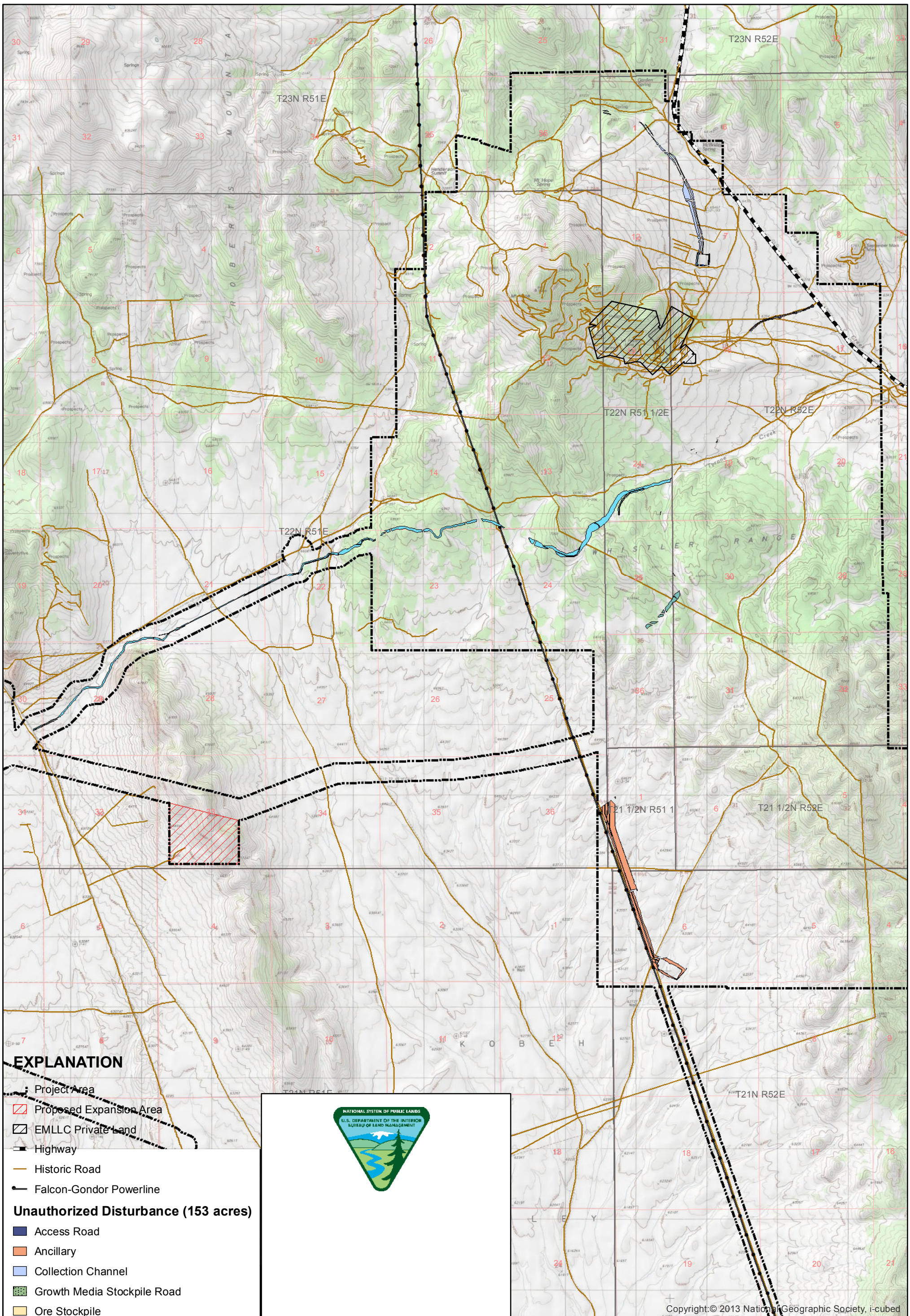
2.2 No Action Alternative

In accordance with BLM NEPA guidelines H-1790-1, Chapter V (BLM 2008a), this EA evaluates the No Action Alternative. The objective of the No Action Alternative is to describe the environmental consequences that would result if the Proposed Action were not implemented. The No Action Alternative forms the baseline for which the impacts of all other alternatives can be measured.

Under the No Action Alternative, EML would not conduct additional surface disturbance activities, add new facilities, or expand their Project boundary from the approved 2012 Plan. EML would continue construction and operation activities under the approved 2012 Plan. Under the No Action Alternative, activities associated with the 153 acres of unauthorized disturbance would only include reclamation and no other authorized activities would be allowed to continue. The unauthorized disturbance is generally associated with construction of powerlines, water lines, roads, collection channels, and ancillary facilities (Figure 2.2.1).

2.3 Alternatives Considered but Eliminated from Detailed Analysis

There were no other alternatives considered since this Project is a modification of the surface disturbance associated with the approved facilities or is a modification of the facilities at an approved mine.



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BUREAU OF LAND MANAGEMENT

MOUNT HOPE PROJECT AMENDMENT

DRAWING TITLE:

Unauthorized Disturbance in the Project Area

Figure 2.2.1

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

The purpose of this section of the EA is to describe the existing environment of the Project Area, as well as environmental consequences from implementation of the Proposed Action.

EML is currently authorized to conduct 8,253 acres of surface disturbance within the Project Area under the approved 2012 Plan. This Project proposes an additional 365 acres of surface disturbance, bringing the total of authorized and proposed disturbance to 8,618 acres. Approximately 362 acres of surface disturbance would be conducted within the approved 2012 Project Area boundary, while three acres would be conducted within the proposed expansion area. This existing baseline condition of the Project Area serves as the basis for the analysis of the Proposed Action.

3.1.1 Supplemental Authorities

Supplemental authorities subject to requirements specified by statute or Executive Order (EO) must be considered in all BLM environmental documents. The elements associated with the supplemental authorities identified in the NEPA Handbook (BLM 2008, Appendix 1) and in the Nevada Instruction Memorandum (IM) 2009-030, Change 1, are listed in Table 3.1-1. The table lists the elements and the determination whether the element is present in the Project Area and whether the element would be affected by the Proposed Action.

Table 3.1-1: Elements Associated with Supplemental Authorities and Rationale for Detailed Analysis for the Proposed Action

Supplemental Authority Element	Not Present	Present/ Not Affected	Present/May be Affected	Rationale/Reference Section
Air Quality		X		Air quality impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Areas of Critical Environmental Concern (ACEC)	X			This element is not present within the Project Area or vicinity and is not further analyzed in this EA.
Cultural Resources		X		Cultural resource impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Environmental Justice	X			No minority or low-income groups would be disproportionately affected by health or environmental effects as a result of the implementation of the Proposed Action. This element is not present within the Project Area or vicinity and is not further analyzed in this EA.
Farm Lands (Prime or Unique)	X			This element is not present within the Project Area or vicinity and is not further analyzed in this EA.

Supplemental Authority Element	Not Present	Present/ Not Affected	Present/May be Affected	Rationale/Reference Section
Fish Habitat		X		Fish habitat impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Floodplains	X			This element is not present within the Project Area or vicinity and is not further analyzed in this EA.
Forests and Rangelands (Healthy Forest Restoration Act [HFRA] projects only)	X			This Project does not meet the requirements to qualify as an HFRA project and is not further analyzed in this EA.
Historic Trails			X	See Section 3.2.1.
Human Health and Safety (Herbicide Projects)	X			The Project may use herbicides to eradicate noxious weeds; however, EO 13045, "Protection of Children from Environmental Health Risks and Safety Risks", would not apply to this Project as there would be no children on the site during application of herbicides. This element is not further analyzed in this EA.
Migratory Birds			X	See Section 3.2.10.
Native American Cultural Concerns			X	See Section 3.2.2.
Noxious Weeds, Invasive and Non-native Species			X	See Section 3.2.3.
Threatened or Endangered Species		X		Threatened or endangered species impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Wastes – Hazardous/Solid		X		Hazardous or solid wastes impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Water Quality, surface and ground			X	See Section 3.2.9 for surface water quality. Ground water impacts would not result in greater impacts than those analyzed in the Final EIS.
Wetlands and Riparian Zones		X		Wetlands and riparian zones impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Wild and Scenic Rivers	X			This element is not present within the Project Area or vicinity and is not further analyzed in this EA.

Supplemental Authority Element	Not Present	Present/ Not Affected	Present/May be Affected	Rationale/Reference Section
Wilderness/Wilderness Study Areas (WSAs)/lands with wilderness characteristics (lwc)	X			These elements are not present within the Project Area. The Roberts Mountain WSA is located within the vicinity of the Project Area, but would not be impacted by Project activities. The BLM conducted a lwc inventory of the Project Area in April 2011 in association with the Final EIS, and determined there are no lwc in the Project Area. Therefore, these elements are not further analyzed in this EA.

Those elements listed under the supplemental authorities not occurring in the Project Area and not affected are not discussed further in this EA, based on the rationale provided in Table 3.1-1. Elements present are analyzed in Section 3.2, and include justification for the resources present and determined to be affected by the Proposed Action. The resources that are present but determined not to be affected by the Proposed Action are summarized below.

Air Quality

The Proposed Action would add approximately 365 acres of surface disturbance to the acreage included in the approved 2012 Plan. This acreage includes approximately 153 acres of disturbance that has been conducted within the approved 2012 Plan boundary, but outside the approved disturbance area footprint. Project activities would be consistent with those described in the approved 2012 Plan. The air quality impacts associated with the additional acreage would result from fugitive dust emissions primarily from construction activities. Air quality impacts from activities associated with the approved 2012 Plan were analyzed based on a 32-year mining life in the Final EIS (BLM 2012, Section 3.6). Fugitive dust emissions associated with the Proposed Action would be temporal, and would not result in greater impacts than those analyzed in the Final EIS. In addition, ACPs identified in the Final EIS (BLM 2012, Section 2.1.14.2), as well as EML's Fugitive Dust Control Plan, would continue to be implemented for the Proposed Action. Therefore, no further analysis for this element is included in this EA.

Cultural Resources

A Class III cultural resource survey was conducted within the Area of Potential Effect (APE) in 2008 for the approved 2012 Plan. The APE included the approved 2012 Project Area and a one-mile buffer. Mitigation measures identified for the Final EIS (BLM 2012, Section 3.21.3.3) would continue to be implemented for the Proposed Action that is located within the 2008 APE. Any new NRHP-eligible sites located within the proposed expansion area would be avoided. Activities associated with the Proposed Action would not reasonably be expected to change the impacts beyond what was analyzed in the Final EIS (BLM 2012, Section 3.21.3.3). No further analysis for this element is included in this EA.

Fish Habitat

Fish habitat is present for brook trout (*Salvelinus fontinalis*), rainbow trout (*Oncorhynchus mykiss*), and brown trout (*Salmo trutta*) in the vicinity of the Project Area in the perennial drainages of Roberts Creek and Pete Hanson Creek in the Roberts Mountains. Habitat for the federally listed threatened species Lahontan cutthroat trout (LCT) (*Oncorhynchus clarki henshawi*) is also present in the vicinity of the Project Area in Birch Creek, Pete Hanson Creek, Henderson Creek, Vinini Creek, and Willow Creek. Mitigation measures included in the Final EIS were determined to be adequate to mitigate any potential indirect impacts to the fish habitat located in the vicinity of the Project Area. Any indirect impacts from the Proposed Action would not reasonably be expected to measurably change the impacts beyond what was previously discussed and analyzed in the Final EIS (BLM 2012, Section 3.23.3.3). In addition, all surface disturbing activities are located downgradient of the fish habitat in the vicinity of the Project Area and well above the water table which results in a hydrological disconnect from the fisheries, and there is no additional groundwater pumping associated with the Proposed Action. Therefore, no further analysis for this element is included in this EA.

Threatened or Endangered Species

The BLM identified the federally threatened LCT as having potential to occur in the Project Area region as discussed in the Final EIS (BLM 2012, Section 3.23.2.1). A portion of the approved 2012 Project Area was located in the Humboldt River basin, but there were no direct impacts identified in the Final EIS (BLM 2012, Section 3.23.3.3.2). A potential indirect impact identified in the Final EIS was a possible reduction in flow in Henderson Creek. Activities in the proposed expansion area would not result in a potential reduction in flow in Henderson Creek. In addition, any indirect impacts from the Proposed Action would not reasonably be expected to measurably change the impacts beyond what was previously discussed and analyzed in the Final EIS (BLM 2012, Section 3.23.3.3.2). Therefore, no further analysis for this element is included in this EA.

Wastes, Hazardous or Solid

Activities associated with the Proposed Action would not require the use, storage, or transport of hazardous materials beyond what was analyzed in the Final EIS (BLM 2012, Sections 2.1.11.1 and 3.19). EML would continue to comply with federal, state, and local regulations regarding hazardous materials, as well as with the Spill Contingency Plan prepared for the approved 2012 Plan. No further analysis for this element is included in this EA.

Water Quality, Ground

Activities associated with the Proposed Action would not impact ground water quality since there are no proposed facilities or disturbance that would include contact with the ground water table either through direct contact or draindown. In addition, the Proposed Action would not increase the amount of dewatering or water used for mine processing operations. No further analysis for this element is included in this EA.

Wetlands and Riparian Zones

Non-jurisdictional wetlands and riparian areas were identified in the approved 2012 Project Area (BLM 2012, Section 3.11.2.2, Figure 3.9.1). There were no wetlands or riparian areas identified in the proposed expansion area. Activities described in the Proposed Action would not reasonably be expected to change the impacts associated with potential water table drawdown over the impacts analyzed in the Final EIS. No further analysis for this element is included in this EA.

3.1.2 Additional Affected Resources

In addition to the elements listed under supplemental authorities, the BLM considers other resources and uses occurring on public lands and the issues that may result from the implementation of the Proposed Action. Other resources or uses of the human environment considered for this EA are listed in Table 3.1-2 below.

Table 3.1-2: Resources or Uses Not Associated with Supplemental Authorities

Other Resources or Uses	Not Present	Present/ Not Affected	Present/May Be Affected	Rationale/Reference Section
Auditory/Noise		X		Auditory/Noise impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Forest Resources			X	See Section 3.2.7.
Geology and Mineral Resources		X		Geology and mineral resource impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Land Use Authorization		X		Land use authorization impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Paleontological Resources	X			This element is not present within the Project Area or vicinity and is not further analyzed in this EA.
Rangeland Management			X	See Section 3.2.4.
Recreation		X		Recreation impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Socioeconomics			X	See Section 3.2.5.
Soils			X	See Section 3.2.6.
Special Status Species (Plants and Wildlife)			X	See Section 3.2.10.
Vegetation			X	See Section 3.2.7.
Visual Resources			X	See Section 3.2.8.
Wild Horses and Burros		X		Wild horses impacts would not result in greater impacts than those analyzed in the Final EIS. See summary below.
Wildlife			X	See Section 3.2.10.

Those other resources listed that do not occur in the Project Area and would not be affected are not discussed further in this EA, based on the rationale provided in Table 3.1-2. Resources or uses present in the Project Area are discussed and analyzed in Section 3.2, and include justification for the resources present and determined to be affected by the Proposed Action. The resources that are present but determined not to be affected by the Proposed Action are summarized below. The potential effects of the No Action Alternative on both supplemental authorities and other resources or uses are discussed in Section 3.3.

Auditory/Noise

Auditory/noise impacts associated with the Proposed Action, primarily from construction activities, would be temporal and the use of an additional booster station would not meaningfully change the analysis of auditory/noise impacts beyond what was analyzed in the Final EIS (BLM 2012, Section 3.16.3.3). Therefore, no further analysis for this element is included in this EA. Auditory/noise impacts to greater sage-grouse from the additional booster station are addressed in Section 3.2.10.2.

Geology and Mineral Resources

The regional and local geology within the approved 2012 Project Area and vicinity, seismicity, and slope stability of the WRDF and LGO stockpile were discussed in the Final EIS (BLM 2012, Section 3.4.3.2). The geology and seismicity discussions in the Final EIS would also be relevant for the proposed expansion area. The open pit design was changed with the Proposed Action from 50-foot bench heights to 40-foot bench heights. The overall configuration of the WRDF and LGO stockpile were modified from the approved 2012 Plan by shifting the divide between the WRDF and LGO stockpile to the south to correspond with the natural drainage, and thereby changing the footprints of the two facilities. The WRDF footprint would increase from 564 acres to 718 acres, and the LGO stockpile footprint would decrease from 417 acres to 255 acres.

Impacts to geology and mineral resources associated with surface disturbance and mining activities approved in the 2012 Plan were analyzed in the Final EIS (BLM 2012, Section 3.4.3). Although the overall surface disturbance footprints of the WRDF and LGO stockpile would be changing with the Proposed Action, they would be constructed with the same design parameters as in the approved 2012 Plan; therefore, the stability of the slopes would remain the same.

A memo was prepared by IMC that evaluated the slope stability of the pit design changes from 50-foot bench heights to 40-foot bench heights (IMC 2014). The pit design change associated with the Proposed Action maintained the design criteria for inter-ramp slope angles and overall final pit design angles; therefore, the overall stability of the inter-ramp slopes or the final overall slopes would not be affected by the change to 40-foot bench heights. No further analysis for this element is included in this EA.

Land Use Authorization

No new land use authorizations are located in the proposed amended Project boundary. No further analysis for this element is included in this EA.

Recreation

Dispersed recreation would remain the primary form of recreation in the area under the Proposed Action. The main portion of the Project Area as well as the well heads and booster stations would still be fenced and would remove this area from recreational opportunities in the short term. In the long term, the open pit would remain fenced. The area surrounding the well field would not be fenced, and there would remain ample opportunities in the vicinity of the Project for dispersed recreation opportunities. Activities associated with the Proposed Action would not result in greater impacts to recreation than what was previously analyzed in the Final EIS (BLM 2012, Section 3.15.3). Therefore, no further analysis for this element is included in this EA.

Wild Horses

The activities associated with the Proposed Action are located within the Roberts Mountain Herd Management Area (HMA) and Whistler Mountain HMA. The Proposed Action does not include additional fencing of the HMAs over what was discussed in the Final EIS, and would therefore not result in the additional loss to acreage within the HMAs. The proposed expansion area is located within the Roberts Mountain HMA; however, the activities proposed within the expansion area would not result in additional impacts to the ten-foot drawdown contour. The additional 365 acres of disturbance associated with the Proposed Action would not result in additional impacts that were not previously discussed in the Final EIS (BLM 2012, Section 3.13.3.3). In addition, EML would also continue to implement the Wild Horse and Wildlife Water Source Mitigation Plan, prepared for the approved 2012 Plan, for the reduction of impacts to wild horses. Therefore, no further analysis for this element is included in this EA.

3.2 Effects of the Proposed Action

Under the Proposed Action, the impacts associated with the activities outlined in the Plan Amendment (Section 2.1) would occur. EML would continue mining activities under the approved 2012 Plan and the impacts analyzed in the Final EIS (BLM 2012) would continue to occur. The analysis of the Proposed Action in this EA addresses the incremental increase of 365 acres of surface disturbance to the approved operations, which would result in a total surface disturbance of 8,618 acres. This additional disturbance would support the previously authorized mining operations within the Project Area.

3.2.1 Historic Trails

3.2.1.1 Affected Environment

A section of the Pony Express Trail and annual re-ride is located within the Project Area. The Historic Trails Affected Environment Section of the Final EIS is incorporated by reference (BLM 2012, Pages 3-587 to 5-591). The portion of this historic trail has been identified as the Overland Canyon to Simpson Park Station segment. In the vicinity of the Project Area, the trail is a two-track dirt road, which is used for general public land access, and access by grazing permittees and recreationists.

3.2.1.2 Environmental Consequences

The Proposed Action includes one additional booster station (Booster Station #2). This proposed booster station is planned to be of similar configuration and surface facilities as the approved booster stations and includes the following facilities: a 120-foot by 70-foot concrete pad; a ten-foot-high chain link fence around the pad perimeter and access gate with ten-foot high acoustic panels to reduce potential noise exposure to sage grouse leks; a fresh water surge tank; three duty pumps and one standby pump; and an electrical building.

A memo was prepared showing views of the proposed booster station site at six locations along the Pony Express Trail, and the level of visibility from each site (EML 2014b) (Appendix A). The descriptions of the views from the photo points to the site are as follows:

- Photo Point 1: the fresh water line corridor is visible, but the booster station and associated pad would not be because of the trees and distance;
- Photo Point 2: the fresh water line corridor is visible, but the view of the booster station is somewhat blocked by the bend in the fresh water line corridor and the trees;
- Photo Point 3: the booster station pad site is visible, but partially blocked by the bend in the fresh water line corridor and the trees;
- Photo Point 4: the pad site of the booster station is not really visible due to surrounding topography and tree and shrub growth, however, when the station is constructed to the design height of ten feet, it will be possible to see the booster station tank over the top of the vegetation;
- Photo Point 5: this location clearly shows the pad site of the booster station and when the station is constructed it will be visible from the trail; and
- Photo Point 6: the booster station is not visible from this point forward travelling east due to the surrounding topography and vegetation.

The two primary impacts analyzed in the Final EIS regarding the historic trail were viewshed impacts and access impacts. The historic trail access impacts that were analyzed in the Final EIS would not change with the Proposed Action (BLM 2012, pages 3-591 to 3-593). As stated in Mitigation Measure 3.20.3.3-1 in the Final EIS (BLM 2012, page 3-592), EML would be required to submit photodocumentation from segments along the trail that would be visually impacted by Project activities to capture the setting and feel of the Pony Express Trail adjacent to the Project. The visual impacts along the Pony Express Trail from the proposed booster station would not result in impacts beyond those that were analyzed in the Final EIS.

3.2.2 Native American Cultural Concerns

3.2.2.1 Affected Environment

The MLFO consultation initiation/notification with federally recognized tribes and tribal organizations for the Project began in January 2015. Letters were sent to the Duckwater Shoshone Tribe, the Ely Shoshone Tribe, and the Yomba Shoshone Tribe. The Native American

Affected Environment Section in the Final EIS is incorporated by reference (BLM 2012, pages 3-613 to 3-615). The previous ethnographic assessment identified the following concerns:

- Potential destruction of the existing piñon trees;
- Potential effects on the water, including potential destruction of springs;
- Potential effects on the wildlife in the area;
- Potential ecological effects of the removal of Mount Hope; and
- Air quality, particularly with respect to dust.

3.2.2.2 Environmental Consequences

The impacts to Native American Traditional Values analyzed in the Final EIS, relative to the scope of the Proposed Action, were direct effects to Native American remains or artifacts, loss of pine nut gathering sites, and direct effects to cultural sites (BLM 2012, pages 3-616 to 3-620). The Final EIS identified that surface disturbance activities would result in the removal of approximately 3,296 acres of piñon-juniper habitat, or approximately 34 percent of the habitat in the approved 2012 Project Area. In addition, approximately 4,600 acres of piñon-juniper habitat not directly affected would not be available for pine nut gathering for the duration of the Project because the habitat would be located within the Project fence boundary. Mitigation Measures 3.22.3.3-1 and 3.22.3.3-3 in the Final EIS (BLM 2012, pages 3-617 and 3-618) address the potential direct impacts to Native American remains or artifacts and pine nut gathering and would be implemented with activities associated with the Proposed Action. There is approximately nine acres of piñon-juniper woodland in the proposed expansion area; however, the three acres of proposed disturbance would not remove this habitat. In addition, the proposed expansion area is not located within a pine nut gathering area.

Various Tribes and Bands of the Western Shoshone have stated that federal projects and land actions can have widespread effects to their culture and religion as they consider the landscape as sacred and as a provider. Various locations throughout the BLM MLFO Battle Mountain administrative area host certain traditional, spiritual, and cultural use activities today, as in the past. TCPs, designated by the Tribes, are not known to exist in or within the vicinity of the Project Area. The BLM continues to solicit input from local tribal entities. The BLM is continuing to coordinate with the Tribes to identify any other sites or artifacts, or cultural, traditional, and spiritual use resources and activities that might experience an impact.

At this time, no impacts related to Native American Cultural Concerns have been identified and are not anticipated from the Proposed Action. Tribal relations and coordination does not terminate with the land use decision itself, but rather continues to engage Tribes regarding treatments, mitigation, reclamation, and disposition of artifacts and deports.

3.2.3 Noxious Weeds, Invasive, and Non-native Species

3.2.3.1 Effected Environment

Noxious weeds, invasive and non-native species are species that are highly competitive, highly aggressive, and spread easily. Noxious weeds and invasive plant species have been defined as pests by law or regulation. The BLM defines a noxious weed as, “a plant that interferes with management objectives for a given area of land at a given point in time.” The BLM Battle

Mountain District recognizes the current noxious weed list designated by the State of Nevada Department of Agriculture statute, found in NAC 555.010. An "invasive species" is defined as a species that is non-native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health (EO 13112, signed February 3, 1999). The BLM's policy relating to the management and coordination of noxious weed and invasive plant species is set forth in the BLM Manual 9015 – Integrated Weed Management (BLM 1992b).

There were no noxious weeds observed in the approved 2012 Project Area during the 2007 field surveys. The invasive species cheatgrass (*Bromus tectorum*), halogeton (*Halogeton glomeratus*), and Russian thistle (*Salsola tragus*) were observed during the 2007 field surveys (BLM 2012, Section 3.10.2.2). During additional field surveys conducted in August 2014 for the expansion area in Section 33, T22N R51E, no noxious weeds were observed. The invasive species cheatgrass and halogeton were observed during the August 2014 surveys (SRK 2014).

3.2.3.2 Environmental Consequences

Surface disturbance of approximately 365 acres could increase the potential for spread and establishment of noxious weeds, invasive and non-native species. EML would follow the ACPs identified in the Final EIS (BLM 2012, page 2-73). EML would also continue to implement the Noxious Weed Plan, prepared for the approved 2012 Plan, for the monitoring and treatment of noxious weeds.

3.2.4 Rangeland Management

3.2.4.1 Affected Environment

The Project Area is located within the Romano, Roberts Mountain, and 3 Bars Grazing Allotments. The Romano Allotment contains approximately 76,070 acres of public land, and the permitted animal unit months (AUMs) are 2,887. The Roberts Mountain Allotment contains approximately 151,060 acres of public land and the permitted AUMs are 9,624. The 3 Bars Allotment contains approximately 76,740 acres of public land, and the permitted AUMs are 5,840. The fence line is not changing as a result of the Proposed Action; therefore, the same number of acres of each allotment located in the fenced portion of the Project Area as discussed in the Final EIS (BLM 2012, page 3-418) remain the same (i.e., 6,252 acres of the Romano Allotment, and 7,954 acres of the Roberts Mountain Allotment). The proposed expansion area is located within the Roberts Mountain Allotment.

3.2.4.2 Environmental Consequences

Activities associated with the Proposed Action would result in the same loss of AUMs in the fenced area in the Romano and Roberts Mountain allotments as analyzed in the Final EIS (BLM 2012, pages 3-421 to 3-423). The additional three acres of disturbance in the proposed expansion area associated with the addition of a communication repeater and associated access road would remove three acres within the Roberts Mountain Allotment; however, these activities would not result in impacts to the ten-foot drawdown contour. The average active grazing preference for the Roberts Mountain Allotment is approximately 16 acres per AUM. The increase of three acres in this allotment would not impact one full AUM. Therefore, no appreciable impact to rangeland

management is anticipated from the activities associated with the Proposed Action. This resource element is not carried forward in additional analysis.

3.2.5 Socioeconomics

3.2.5.1 Affected Environment

The Proposed Action would not result in changes to the life of the approved 2012 Project, would not change the construction and operation schedule, would not add individuals to the work force described in the approved 2012 Plan, and would not affect tax revenues generated.

3.2.5.2 Environmental Consequences

Implementation of the Proposed Action would allow for the optimal use of available water and allow additional activities to occur on the previously unauthorized disturbance, which would result in a more economically efficient operation. Even though any amount of increased sales and use tax generated by the Project would be meaningful to Eureka County's budget, the amount of sales and use tax that would be generated from the equipment associated with the booster station would essentially be lost in the rounding for all the sales and use tax generated by the entire Project. That amount would not meaningfully add to the analysis of the socioeconomic impacts. Therefore, this resource element is not carried forward in additional analysis.

3.2.6 Soils

3.2.6.1 Affected Environment

The following soil associations or complexes were identified in the approved 2012 Project Area: Alhambra fine sandy loam; Atrypa association; Bartine-Overland association; Dianev silty clay loam; Kobeh sandy loam; Kobeh gravelly fine sandy loam; Labshaft-Rock outcrop complex; Mau stony loam; Nayped loam; Ratto gravelly fine sandy loam; Rubyhill fine sandy loam; Shipley fine sandy loam; Shipley silt loam; Shipley complex; Umil association; Pedoli-Poorcal association; Umil loam; Umil-Hayeston association; Dianev silt loam; Poorcal loam; Coils loam; Mau-Shagnasty-Eightmile association; Hopeka-Solak-Ados association; Kobeh gravelly loam; Beanflat silt loam; Akercan loam; Hayeston sandy loam; Rubyhill sandy loam; Rubyhill-Barrier association; Silverado sandy loam; Jesse Camp silt loam; Akerue-Simpark-Robson association; Chad-Cleavage-Softscrabble association; Shagnasty-Ravenswood-Rock outcrop association; Atrypa gravelly loam; Atrypa-Mau association; Fortank very stony loam; Handy loam; and Bubus loam. The erodibility hazards by wind were identified as slight to moderate, while the erodibility hazards by water were identified as slight to severe (BLM 2012, Section 3.8.2.2).

There are two soil types in the proposed expansion area: Akerue-Simpark-Robson association and Fortank very stony loam, four to eight percent slopes. The Akerue-Simpark-Robson association consists of very stony loams and is located on lower crests and sideslopes of mountains between elevations of 6,200 and 7,000 feet above mean sea level (amsl). The Akerue series consists of well-drained, slowly permeable soils that formed in residuum derived from andesite, rhyolite, and quartzite. The Simpark series consists of shallow, well-drained, moderately permeable soils that formed in residuum derived from rhyolite. The Robson series consists of shallow, well-drained, slowly permeable soils that formed in residuum derived from

rhyolite, andesite, and tuff. The erodibility factors for wind and water are slight (Natural Resource Conservation Service [NRCS] 1989).

The Fortank very stony loam association is located on side slopes of hills between elevations of 6,200 to 6,800 feet amsl. The Fortank series consists of moderately deep, well-drained, slowly permeable soils that formed in residuum derived from andesite, rhyolite, tuff, and quartzite. The erodibility factors for wind and water are slight (NRCS 1989).

3.2.6.2 Environmental Consequences

The Final EIS analyzed 8,253 acres of surface disturbance to soils. Surface disturbing activities associated with the Proposed Action would result in the disturbance to approximately 365 additional acres of soils (approximately 153 acres of unauthorized disturbance already exists), which includes approximately three acres within the proposed expansion area. Direct impacts from the additional disturbance would primarily include potential increases in soil erosion due to wind and storm water runoff. The majority of the 365 acres of surface disturbance would be unreclaimed for the life of the Project and then reclaimed at the end of the Project life. BMPs would be used to limit erosion and reduce sediment in precipitation runoff from proposed Project facilities and disturbed areas during construction, operations, and initial stages of reclamation. BMPs that would be used during construction and operation to minimize erosion and control sediment runoff and would include surface stabilization measures, runoff control and conveyance measures, and sediment traps and barriers (Kennedy/Jenks Consultants 2008).

Revegetation of disturbed areas would reduce the potential for wind and water erosion. Following construction activities, areas such as cut and fill embankments and growth media/cover stockpiles would be seeded as soon as practicable and safe. Concurrent reclamation would be maximized to the extent practicable to accelerate revegetation of disturbed areas. All sediment and erosion control measures would be inspected periodically, and repairs performed as needed.

3.2.7 Vegetation

3.2.7.1 Affected Environment

The following vegetation types were identified in the approved 2012 Project Area during 2007 field surveys: piñon-juniper; big sagebrush; big sagebrush/piñon-juniper; piñon-juniper/big sagebrush; big sagebrush/low sagebrush; salt desert scrub; and agricultural land (BLM 2012, pages 3-374 to 3-384).

A field survey was conducted in August 2014 within the proposed expansion area (SRK 2014). The vegetation within the proposed expansion area consisted of upland vegetation, including a combination of piñon-juniper, big sagebrush, and black sagebrush (*Artemisia nova*) intermixed communities. Specifically, the proposed expansion area includes the following: 118.1 acres of Mixed Sagebrush; 31.6 acres of Big Sagebrush; 21.1 acres of Sagebrush Steppe; and 9.2 acres of Piñon-Juniper.

The following species were observed during the surveys: black sagebrush; bluebunch wheatgrass (*Pseudoregneria spicata*); bottlebrush squirreltail (*Elymus elymoides*); Douglas rabbitbrush (*Chrysothamnus viscidiflorus*); globemallow (*Sphaeralcea ambigua*); Indian ricegrass

(*Achnatherum hymenoides*); long-leaf phlox (*Phlox longifolia*); Nevada ephedra (*Ephedra nevadensis*); prickly pear cactus (*Opuntia phaeacantha*); Sandberg's bluegrass (*Poa secunda*); singleleaf piñon (*Pinus monophylla*); Thurber's needlegrass (*Achnatherum thurberianum*); and Wyoming big sagebrush (*Artemisia tridentata wyomingensis*).

3.2.7.1.1 Forest Resources

The Final EIS identified approximately 12,795 acres of vegetation that included a singleleaf piñon and Utah juniper component in the approved 2012 Project Area (BLM 2012, page 3-693). Field surveys conducted in August 2014 within the proposed expansion area identified approximately 9.2 acres of piñon-juniper woodlands. Areas allotted for greenwood cutting, pine nut harvesting, and Christmas tree cutting occur within the approved 2012 Project Area, but not within the proposed expansion area.

3.2.7.1.2 Special Status Plant Species

The following special status plant species were identified in the approved 2012 Project Area during 2007 field surveys: round-headed desert buckwheat (*Eriogonum sphaerocephalum*); umbrella desert buckwheat (*Eriogonum umbellatum*); and parsley desert buckwheat (*Eriogonum heracleoides*).

Data was requested from the Nevada Natural Heritage Program (NNHP) for the proposed expansion area. The NNHP identified potential habitat for Beatley buckwheat (*Eriogonum beatleyae*) and least phacelia (*Phacelia minutissima).* Beatley buckwheat and least phacelia were not observed in the proposed expansion area during August 2014 field surveys.

3.2.7.2 Environmental Consequences

The Final EIS analyzed 8,253 acres of surface disturbance to vegetation. Surface disturbing activities associated with the Proposed Action would result in the disturbance to approximately 365 additional acres of vegetation (approximately 153 acres of unauthorized disturbance already exists), which includes approximately three acres within the proposed expansion area. The majority of the proposed disturbance would most likely affect big sagebrush/piñon-juniper, big sagebrush, piñon-juniper/big sagebrush, and piñon-juniper woodland communities.

Reclamation and revegetation activities are outlined in Section 2.1.13 of this EA and Section 2.1.16 of the Final EIS. Reclamation and revegetation activities would be in conformance with the BLM and State of Nevada reclamation regulations. Reclamation and revegetation would minimize the direct impacts to the vegetation communities within the Project Area.

3.2.7.2.1 Forest Resources

The Final EIS identified that approximately 3,296 acres of vegetation that is singleleaf piñon and Utah juniper would be removed resulting in a long-term loss as it would take approximately 75 to 100 years until mature trees could be reestablished. The Proposed Action would result in a long-term loss of approximately 3,381 acres of vegetation with a singleleaf piñon and Utah juniper component, which is an increase of approximately 85 acres. The three acres of proposed disturbance within the expansion area are not located within an area containing singleleaf piñon

or Utah juniper components. In addition, the three acres of proposed disturbance within the expansion area are located outside areas that are available for greenwood cutting, pine nut harvesting, and Christmas tree cutting.

3.2.8 Visual Resources

3.2.8.1 Affected Environment

Primary activities associated with the Proposed Action that may impact visual resources include the following: modified alignments and disturbance amounts for the 230 kV power transmission line, the 24.9 kV power distribution line, the fresh water supply corridor, the tailing and reclaim pipeline corridor, and several access roads; a modified footprint for the LGO Stockpile and PAG WRDF and associated storm water diversion and collection facilities; modified haul road alignments; a reconfigured and additional mill and ancillary buildings and facilities; an additional booster station for the fresh water pipeline; five construction water ponds; and the relocation of the meteorological monitoring station.

3.2.8.2 Environmental Consequences

The activities associated with the Proposed Action would primarily be located in areas classified as Visual Resource Management (VRM) Class IV, with portions of the PAG WRDF and growth media/cover stockpiles occurring in VRM Class III. These proposed changes may attract attention, but would not dominate the view of the casual observer as described in Section 3.7.3 of the Final EIS (BLM 2012). In addition, these activities would be subject to reclamation as outlined in Section 2.1.16 of the Final EIS, which would reduce any long-term impacts to visual resources. In addition, to maintain dark sky conditions, and minimize visual disturbance, facility perimeter lighting, including lighting used to illuminate walkways, roadways, staging areas and parking areas, would be shielded so that the light would be cast in a downward direction. Low-pressure sodium lighting (or an improved technology, if readily available) would be used to reduce or eliminate detrimental lighting impacts and prevent unnecessary light pollution.

3.2.9 Water Quality, Surface

3.2.9.1 Affected Environment

Surface Water

Activities associated with the Proposed Action that may impact surface water include the following: a modified design for the temporary and permanent diversion channels for the South TSF; a modified design for the WRDF storm water diversion and collection facilities; and modified storm water controls throughout the Project Area.

3.2.9.2 Environmental Consequences

The proposed Project would not require the alteration or diversion of existing natural surface water drainages or washes. The storm water collection channels and ponds have been reconfigured, and new storm water plans have been included as appendices in the Plan Amendment. In addition, activities associated with the Proposed Action would not reasonably be expected to change the impacts beyond what was analyzed in the Final EIS (BLM 2012,

Section 3.3), because the same storm water design features (based on a 24-hour 100-year storm event) described in the approved 2012 Plan and analyzed in the Final EIS would be used for the reconfigured channels outlined in the Proposed Action. Therefore, this resource element is not carried forward in additional analysis.

3.2.10 Wildlife Resources

3.2.10.1 Affected Environment

3.2.10.1.1 Special Status Wildlife Species

BLM policy for management of special status species is in the BLM Manual Section 6840. Special status species include the following:

- Federally Threatened or Endangered Species: Any species the USFWS has listed as an endangered or threatened species under the Endangered Species Act of 1973, as amended (ESA) throughout all or a significant portion of its range;
- Proposed Threatened or Endangered Species: Any species the USFWS has proposed for listing as a federally endangered or threatened species under the ESA;
- Candidate Species: Plant and animal taxa under consideration for possible listing as threatened or endangered under the ESA;
- Delisted Species: Any species in the five years following their delisting;
- BLM Sensitive Species: Native species found on BLM-administered lands for which the BLM has the capability to significantly affect the conservation status of the species through management, and either: 1) there is information that a species has undergone, is undergoing, or is predicted to undergo a downward trend such that the viability of the species or a distinct population segment of the species is at risk across all or a significant portion of the species range; or 2) the species depends on ecological refugia or specialized or unique habitats on BLM-administered lands, and there is evidence that such areas are threatened with alteration such that the continued viability of the species in that area would be at risk (BLM 2008b); and
- State of Nevada Listed Species: State-protected animals that have been determined to meet BLM's Manual 6840 policy definition.

Data was requested for the approved 2012 Plan from the NNHP and the U.S. Fish and Wildlife Service (USFWS) in 2005, 2006, and 2008. The NNHP and USFWS identified the pygmy rabbit (*Brachylagus idahoensis*), a BLM sensitive species, and the yellow-billed cuckoo (*Coccyzus americanus*), a USFWS Threatened species as having the potential to occur within the vicinity of the approved 2012 Project Area. In addition, the BLM identified the following special status species as having the potential to occur within the vicinity of the approved 2012 Project Area: greater sage-grouse (*Centrocercus urophasianus*), a USFWS candidate species; LCT, a federally listed Threatened species; and burrowing owl (*Athene cunicularia*), a BLM sensitive species. Surveys were also conducted for springsnails (*Pyrogulopsis* sp.) and special status bat species. There was no suitable habitat identified for the yellow-billed cuckoo during the 2005, 2006, and 2008 field surveys.

The NNHP and Nevada Department of Wildlife (NDOW) were contacted in August 2014 to obtain information on the potential occurrence of special status wildlife species in or within the vicinity of the proposed expansion area. Four species were identified as having the potential to occur in or within the vicinity of the proposed expansion area: greater sage-grouse; golden eagle (*Aquila chrysaetos*); pygmy rabbit; and ferruginous hawk (*Buteo regalis*). The NNHP identified the potential to occur for the western jumping mouse (*Zapus princeps*), a taxon determined to be imperiled by the NNHP; however, this species is not a BLM sensitive species or state protected species.

Greater Sage-Grouse

The Final EIS stated there was approximately 9,027 acres of Preliminary Priority Habitat (PPH) and approximately 4,173 acres of Preliminary General Habitat (PGH) in the approved 2012 Project Area. Based on recent Nevada BLM guidance provided in IM NV-2015-017, the BLM has adopted the following new greater sage-grouse habitat categories: High (equivalent to the previous PPH designation); Moderate (equivalent to the previous PGH designation); Low; and Non-habitat. Based on these categories, there would have been approximately 13,664 acres classified as High, approximately 6,855 acres classified as Moderate, approximately 418 acres classified as Low, and approximately 1,948 acres classified as Non-Habitat in the approved 2012 Project Area. In the proposed Project Area, there are approximately 13,843 acres classified as High, approximately 6,856 acres classified as Moderate, approximately 418 acres classified as Low, and approximately 1,948 acres of Non-Habitat. The entire proposed expansion area is classified as High.

The Final EIS identified the following surveyed lek sites as active: the Pony Express Lek; the Kobeh 8-1 Lek; the Lone Mountain Lek; the Dome House Lek; the Henderson Pass Lek; and the Roberts Creek #2 Lek (BLM 2012, Section 3.23.2.2.2). Seven known greater sage-grouse lek sites are located within four miles of the proposed expansion area: Henderson Pass; Kobeh Valley 1; Kobeh Valley 2; Kobeh Valley 3; Kobeh Valley 4; Kobeh Valley 5; and Roberts Creek #2. Kobeh Valley 2 and Kobeh Valley 4 were last surveyed in 1970, while the other five leks were surveyed in 2013. Basin and Range Resources LLC, under contract with EML, conducted surveys in 2014 and provided a report to the BLM. The active lek sites in 2013 were Henderson Pass, Kobeh Valley 1, and Roberts Creek #2 (SRK 2014). In the 2014 report, the Roberts Creek #2 lek site was identified as inactive (Basin and Range Resources LLC 2014).

Golden Eagle

Golden eagle is listed as a BLM sensitive species in Nevada. Golden eagles generally inhabit open country and barren areas in hilly or mountainous regions. Golden eagles nest in large trees or on cliff edges and rocks, and many have several nesting sites which they rotate through on various years. Golden eagles are protected by the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act. Golden eagle foraging habitat is located throughout the Project Area. Golden eagle nesting habitat is located in the rock ledges east of the Project Area. During 2006 field surveys, there was an active golden eagle nest located approximately 1.25 miles east of the Project Area in Section 22, T22N, R52E, and approximately three miles from Project activities. The nest was located on the east side of the ridge, approximately 40 to 60 feet below the ridgeline, and was facing away from Project activities. There was an inactive golden eagle nest located approximately 1.5 miles east of the Project Area in Section 27, T22N, R52E. This nest was also located on the east side of the ridge and more than 60 feet below the ridgeline, and

faced away from Project activities. The NDOW identified an active golden eagle nest approximately 8.4 miles southeast of the Project Area (BLM 2012, page 3-643).

An NDOW response letter dated August 13, 2014, identified eight golden eagle nests and eight golden eagle/raptor nests within ten miles of the proposed expansion area. One nest approximately nine miles north of the proposed expansion area was documented as active in 2013 by the NDOW. No golden eagles or golden eagle nests were observed during the August 2014 field surveys (SRK 2014).

Pygmy Rabbit

Pygmy rabbit is listed as a BLM sensitive species in Nevada. Pygmy rabbits are typically found in shrubland habitats with dense stands of old-growth sagebrush. Pygmy rabbits dig their own burrows, which may have multiple entrances. Pygmy rabbits also tunnel through snow in winter. Pygmy rabbits are active throughout the year in day or night, mainly at dusk and dawn. Pygmy rabbits are herbivores and their main source of food is sagebrush, but they also eat some grasses and forbs. The Project Area contains suitable habitat for occupation by pygmy rabbits. Nineteen burrows and ten pygmy rabbits were documented during 2006 field surveys primarily within the mine portion of the Project Area. The majority of the sightings and burrow locations occurred along the old railroad grade that parallels SR 278 to the west. There were also sightings of rabbits in the southern portion of the Project Area and in the well field portion of the Project Area (BLM 2012, pages 3-644 and 3-647).

Pygmy rabbit surveys were conducted during August 2014 field surveys within the proposed expansion area. No pygmy rabbits, habitat, burrows, or sign were observed during these surveys (SRK 2014).

Migratory Birds and Raptors

The following migratory birds or their sign were observed within or near the approved 2012 Project Area during 2007 field surveys: Cooper's hawk (*Accipiter cooperii*); prairie falcon (*Falco mexicanus*); American kestrel (*Falco sparverius*); common nighthawk (*Chordeiles minor*); and common raven (*Corvus corax*). A Cooper's hawk nest was observed within the approved 2012 Project Area during 2007 field surveys (BLM 2012; Section 3.23.2.2.2). Golden eagles are discussed in the previous sections.

Ferruginous hawk is a BLM sensitive species in Nevada. This species prefers grassland and shrub-steppe habitats with trees, rock outcrops, or structures nearby. They nest in trees, large shrubs, or utility structures, artificial platforms, and other structures. A ferruginous hawk nest and a pair of ferruginous hawks were identified in the Project Area near the nest during 2006 field surveys in Section 20, T22N, R52E.

An additional field survey was conducted in August 2014 for the expansion area. The following migratory bird species were observed during those surveys: Western bluebird (*Sialia mexicana*); sage thrasher (*Oreoscoptes montanus*); and sage sparrow (*Amphispiza belli*) (SRK 2014). No nests were observed within the proposed expansion area during the surveys. An NDOW response letter dated August 13, 2014, identified 14 ferruginous hawk nests within ten miles of the proposed expansion area. No ferruginous hawk or ferruginous hawk nests were observed during the August 2014 field surveys (SRK 2014).

3.2.10.1.2 General Wildlife

The following wildlife species or their sign were observed within or near the approved 2012 Project Area during 2007 field surveys: mule deer (*Odocoileus hemionus*); pronghorn antelope (*Antilocapra americana*); black-tailed jackrabbit (*Lepus californicus*); yellow-bellied marmot (*Marmota flaviventris*); coyote (*Canis latrans*); bobcat (*Lynx rufus*); badger (*Taxidea taxis*); mountain cottontail (*Sylvilagus nuttallii*); and a variety of other small mammals (i.e., mice, voles, and chipmunks). The game birds chukar (*Alectoris chukar*) and mourning dove (*Zenaida macroura*) were also observed within the approved 2012 Project Area. Mountain lions (*Felix concolor*) were reported to have occurred within the vicinity of the approved 2012 Project Area. Reptile surveys were not conducted during the 2007 field surveys (BLM 2012, Section 3.23.2.2.1). Recreational fisheries in the vicinity of the Project Area in Roberts Creek and Pete Hanson Creek were discussed in the Final EIS (BLM 2012, Section 3.23.2.2.1).

An additional field survey was conducted in August 2014 for the proposed expansion area (SRK 2014). The following wildlife species or their sign were observed within or in the vicinity of the expansion area during the surveys: mule deer; pronghorn antelope; black-tailed jackrabbit; mountain cottontail; coyote; bobcat; mountain lion; and badger. An NDOW response letter dated August 13, 2014, identified mule deer and pronghorn antelope distribution throughout the entire proposed expansion area. The following reptiles have been observed within the vicinity of the proposed expansion area: desert horned lizard (*Phrynosorna platyrhinos*); western fence lizard (*Sceloporus occidentalis*); northern sagebrush lizard (*Sceloporus graciosus graciosus*); leopard lizard (*Gambelia wislizenii*); and western whiptail lizard (*Cnemidophorus tigris*). Mine site employees reported having observed a western rattlesnake (*Crotalus viridi*).

3.2.10.2 Environmental Consequences

Greater Sage-Grouse

Based on the new greater sage-grouse habitat categories, activities associated with the approved 2012 Plan would have disturbed approximately 6,408 acres classified as High, approximately 1,834 acres classified as Moderate, approximately 14 acres classified as Low, and approximately six acres classified as Non-Habitat. Proposed Project activities would disturb approximately 107 acres classified as High, approximately 100 acres classified as Moderate, approximately four acres classified as Low, and approximately one acre classified as Non-Habitat. The measures identified in the Mitigation Summary Plan located in Appendix D of the Final EIS (BLM 2012), which describe off-site restoration/enhancement at a 3 to 1 ratio for the loss of PPH and a 2 to 1 ratio for the loss of PGH, may require modification as they apply to this Project, based on the new habitat categories outlined in the recent Nevada BLM IM NV-2015-017. The BLM may elect to conduct field verification, in coordination with NDOW, of greater sage-grouse habitat based on IM NV-2015-017 and adjust off-site mitigation obligations accordingly.

There were three active lek sites identified within four miles of the proposed expansion area, including Henderson Pass, Kobeh Valley 1, and Roberts Creek 2. Noise evaluations were calculated at the Henderson Pass, Roberts Creek #2, and Lone Mountain 5 leks, along with an unnamed lek co-located with the Kobeh Valley 1 lek (M3 2014). Mitigation requirements identified in the Final EIS state that sound levels of ten decibels above ambient levels (30 decibels) be achieved at each active lek location during operation of the sound-producing

facilities in the well field, identified as above ground pumps, including line shaft pumps for production wells, and pumps mounted on booster station tanks. Noise levels were calculated within a five-mile radius of each lek. Noise levels at all four lek locations were determined to be below 30 decibels when calculated for all above ground pumps. Noise levels were calculated based on the assumed noise output and sound frequency of the pumps and the assumed sound-dampening achieved by the acoustic panels. Any additional noise monitoring activities that would take place for this Project at the identified lek sites during noise-producing activities would follow accepted BLM noise monitoring protocols. If the noise monitoring shows that the booster pumps increase the noise at the leks to a level above established thresholds (more than 30 A-weighted decibels (dBA)), the amount of acoustic paneling would be adjusted accordingly to meet the noise threshold at the lek or additional noise dampening measures may be considered (i.e., earthern berms).

Any construction activities associated with the Proposed Action as well as vehicle travel would comply with the seasonal restrictions identified in the Mitigation Summary Plan located in Appendix D of the Final EIS (BLM 2012).

Golden Eagle

There were no golden eagles or golden eagle nests observed within the proposed expansion area during the August 2014 field surveys (SRK 2014). A golden eagle nest approximately nine miles north of the proposed expansion area was documented as active in 2013, but no nests were documented within five miles of the proposed expansion area (SRK 2014). Impacts to golden eagle nests and nesting habitat associated with mining activities authorized in the 2012 Plan were analyzed in the Final EIS (BLM 2012, pages 3-665 to 3-667). Mitigation measure 3.23.3.3-8 in the Final EIS identified that surveys would be conducted twice a year in suitable golden eagle nesting habitat within a five-mile radius of the approved 2012 Project Area. This mitigation would also be applicable to the Proposed Action and would continue to be implemented. Consistent with the analysis in the Final EIS, the Proposed Action would not have a direct or indirect effect on golden eagles.

Pygmy Rabbit

The Final EIS identified that pygmy rabbits and pygmy rabbit burrows would be impacted by Project activities, and that the PAG WRDF and LGO stockpile would be constructed over burrows where pygmy rabbits had been sighted. However, the impacts would only be to selected burrows, and are not anticipated to result in a population-level effect that would affect the potential listing of the species under the ESA. To reduce any impacts to the loss of pygmy rabbit habitat, Mitigation Measure 3.23.3.3-9 requires that EML provide for habitat improvement projects in an area that would directly benefit pygmy rabbits, on a ratio of two acres per every acre disturbed (BLM 2012, page 3-667). There was no pygmy rabbit habitat identified in the proposed expansion area (SRK 2014).

Migratory Birds and Raptors

Construction and operation of the Project would directly affect migratory bird and raptor habitat through removal of vegetation in areas proposed for disturbance. Approximately 365 acres of migratory bird and raptor habitat would be directly removed as part of surface disturbance activities associated with the Proposed Action (approximately 153 acres of unauthorized disturbance already exists), which includes three acres of surface disturbance within the

proposed expansion area. Potential impacts to breeding migratory birds and raptors from Project activities would include possible direct loss of nests (e.g., crushing) or indirect effects (e.g., abandonment) from increased noise and human presence within close proximity to an active nest site.

There were no nests observed within the proposed expansion area during August 2014 field surveys; therefore, no direct impacts from the loss of nests are anticipated within the proposed expansion area. EML has identified ACPs, which were included in the Final EIS (BLM 2012, page 2-72), that prevent disturbance to nesting migratory birds during breeding and nesting season within the Project Area. Indirect impacts from the potential loss of nesting and foraging habitat may occur; however, the potential loss of habitat within the Project Area is not anticipated to contribute to a loss of viability for any migratory bird species. In addition, impacts from the removal of habitat would be reduced through incremental reclamation. There is also extensive similar habitat available adjacent and within the vicinity of the Project Area.

General Wildlife

Construction and operation of the Project would directly affect wildlife habitat through removal of vegetation in areas proposed for disturbance. Approximately 212 acres of wildlife habitat would be directly removed as part of surface disturbance activities associated with the Proposed Action (approximately 153 acres of unauthorized disturbance already exists), which includes three acres of surface disturbance within the proposed expansion area. Project activities may also impact mule deer migration, although it is not possible to quantify the impacts. Wildlife may be displaced by these activities, but would likely shift spatially into adjacent available habitat. There is similar habitat within and adjacent to the Project Area where mobile wildlife could relocate. Therefore, no impacts to regional populations are anticipated to result from the loss of habitat within the Project Area.

Indirect impacts could occur due to increased noise and human presence. However, noise within the Project Area would be temporary associated with construction and sporadic associated with mining blasts. Human presence would be spread throughout the Project Area.

Mitigation measures identified in the Final EIS that would reduce potential impacts to general wildlife species included the following: development of six water sites, which would increase water availability in the Project Area; low profile pumps and cabinetry that minimize contrast with the surrounding environment; buried pipelines that would not limit wildlife movement; fences constructed around areas of disturbance that would keep wildlife out of dangerous areas; buried transmission lines; perch deterrents on transmission lines that would decrease predation of smaller mammalian, reptilian, and avian species; electrocution prevention measures; the removal of nesting material from transmission lines and equipment that would ensure that the perch deterrents are effective; noise reducing enclosures or sound barriers on walls and pumps in the greater sage-grouse habitat that would also benefit other wildlife species in the area; and speed limits on Project roads that would decrease the potential of vehicular mortality of wildlife species (BLM 2012, page 660).

3.3 Effects of the No Action Alternative

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur. EML would not conduct additional surface disturbance activities, add new facilities, or expand their Project boundary from the approved 2012 Plan. EML would continue construction and operation activities under the approved 2012 Plan. Impacts analyzed in the Final EIS (BLM 2012) would continue to occur. In addition, approximately 153 acres of unauthorized surface disturbance exists within the Project Area. Under the No Action Alternative, activities associated with the 153 acres of unauthorized disturbance would only include reclamation and no other authorized activities would be allowed to continue. The unauthorized disturbance is generally associated with construction of powerlines, water lines, roads, collection channels, and ancillary facilities.

The Affected Environment under the No Action Alternative is essentially the same as that for the Proposed Action; therefore, the affected environment description for each resource is not repeated under the No Action Alternative. Refer to the affected environment discussion under the Proposed Action for the applicable resource specific text.

3.3.1 Historic Trails

Under the No Action Alternative, EML would not implement the Plan Amendment. Mining and associated activities detailed in the approved 2012 Plan would continue to occur, as well as approximately 8,253 acres of authorized surface disturbance. An analysis of the impacts to historic trails associated with the authorized surface disturbance is located in Section 3.20 of the Final EIS (BLM 2012). Approximately 153 acres of unauthorized surface disturbance already exists within the Project Area. Facilities and disturbance associated with mining would continue to occur and continue to alter the view from the Pony Express Trail. The potential for these impacts to occur would be similar but proportionally less than the impacts associated with the Proposed Action, as the Proposed Action would add an additional booster station and communication repeater tower.

3.3.2 Native American Cultural Concerns

Under the No Action Alternative, EML would not implement the Plan Amendment. Mining and associated activities detailed in the approved 2012 Plan would continue to occur, as well as approximately 8,253 acres of authorized surface disturbance. Native American consultation was conducted beginning in February 2007 with the following tribes: Te-Moak Tribal Council; Elko Band Council; Wells Band Council; Battle Mountain Band Council; South Fork Band Council; Ely Shoshone Tribe; Duckwater Shoshone Tribe; Yomba Shoshone Tribe; Duck Valley Shoshone-Paiute Tribes; and the Timbisha Shoshone Tribe. Native American concerns associated with the No Action Alternative would most likely be similar to any concerns associated with the Proposed Action. Consultation associated with the No Action Alternative is ongoing.

3.3.3 Noxious Weeds, Invasive, and Non-native Species

Under the No Action Alternative, EML would not implement the Plan Amendment. Mining and associated activities detailed in the approved 2012 Plan would continue to occur, as well as

approximately 8,253 acres of authorized surface disturbance. An analysis of the impacts associated with the potential for the introduction of noxious weeds, invasive, and non-native species associated with the authorized surface disturbance is located in Section 3.10 of the Final EIS (BLM 2012). Approximately 153 acres of unauthorized surface disturbance already exists within the Project Area. Direct impacts resulting from the potential for the introduction of noxious weeds, invasive, and non-native species would continue. Impacts associated with the No Action Alternative would be similar but proportionally less than the impacts associated with the additional 365 acres of proposed surface disturbance under the Proposed Action.

3.3.4 Rangeland Management

Under the No Action Alternative, EML would not implement the Plan Amendment. Mining and associated activities detailed in the approved 2012 Plan would continue to occur, as well as approximately 8,253 acres of authorized surface disturbance. An analysis of the impacts to rangeland management associated with the authorized surface disturbance is located in Section 3.12 of the Final EIS (BLM 2012). Approximately 153 acres of unauthorized surface disturbance already exists within the Project Area. Direct impacts to rangeland management would continue. Impacts associated with the No Action Alternative would be similar but proportionally less than the impacts associated with the additional 365 acres of proposed surface disturbance under the Proposed Action.

3.3.5 Socioeconomics

Under the No Action Alternative, Project facilities would be reclaimed, including approved and unauthorized disturbance, with the exception of the open pit. The No Action Alternative would result in increased operational costs and constraints. Booster Pump #3 would not be approved under the No Action Alternative. This would result in a lack of sufficient amounts of water for optimal mine operations which would severely limit throughput and increase operational costs and constraints. Potential cost increases could change the economics of the deposit, thus reducing the amount of ore and waste mined and the potential mine life of the operation.

3.3.6 Soils

Under the No Action Alternative, EML would not implement the Plan Amendment. Mining and associated activities detailed in the approved 2012 Plan would continue to occur, as well as approximately 8,253 acres of authorized surface disturbance. An analysis of the impacts to soils associated with the authorized surface disturbance is located in Section 3.8 of the Final EIS (BLM 2012). Approximately 153 acres of unauthorized surface disturbance already exists within the Project Area, and is primarily associated with the water line (approximately 68 acres), ancillary facilities (approximately 58 acres), and a collection channel (approximately 18 acres). Portions of facilities associated with other unauthorized disturbance include the following: the reclaim corridor; an access road; a pond; a powerline; an ore stockpile; and a road associated with the growth media stockpile. Impacts associated with the No Action Alternative would be similar but proportionally less than the impacts associated with the additional 365 acres of proposed surface disturbance under the Proposed Action.

3.3.7 Vegetation

Under the No Action Alternative, EML would not implement the Plan Amendment. Mining and associated activities detailed in the approved 2012 Plan would continue to occur, as well as approximately 8,253 acres of authorized surface disturbance. An analysis of the impacts to vegetation associated with the authorized surface disturbance is located in Section 3.9 of the Final EIS (BLM 2012). Approximately 153 acres of unauthorized surface disturbance already exists within the Project Area. The following vegetation types removed as a result of the unauthorized disturbance include the following: 74.7 acres of big sagebrush; approximately 40 acres of piñon-juniper woodland; 20.9 acres of big sagebrush/low sagebrush; 16.8 acres of big sagebrush/piñon-juniper; and 0.9 acre of piñon-juniper/big sagebrush. Direct impacts resulting from the loss of vegetation and indirect impacts resulting from airborne particulate deposition onto vegetation surfaces would continue. Impacts associated with the No Action Alternative would be similar but proportionally less than the impacts associated with the additional 365 acres of proposed surface disturbance under the Proposed Action.

3.3.8 Visual Resources

Under the No Action Alternative, EML would not implement the Plan Amendment. Mining and associated activities detailed in the approved 2012 Plan would continue to occur, as well as approximately 8,253 acres of authorized surface disturbance. An analysis of the impacts to visual resources associated with the authorized surface disturbance is located in Section 3.7 of the Final EIS (BLM 2012). Approximately 153 acres of unauthorized surface disturbance already exists within the Project Area, and is primarily associated with the water line (approximately 68 acres), ancillary facilities (approximately 58 acres), and a collection channel (approximately 18 acres). Portions of facilities associated with other unauthorized disturbance include the following: the reclaim corridor; an access road; a pond; a powerline; an ore stockpile; and a road associated with the growth media stockpile. Direct impacts from this unauthorized disturbance would continue. Since the unauthorized areas would still be reclaimed, impacts associated with the No Action Alternative would be similar to those described in the EIS but proportionally less than the impacts associated with the additional 365 acres of proposed surface disturbance under the Proposed Action.

3.3.9 Water Quality, Surface

Under the No Action Alternative, EML would not implement the Plan Amendment. Mining and associated activities detailed in the approved 2012 Plan would continue to occur, as well as approximately 8,253 acres of authorized surface disturbance. An analysis of the impacts to surface water quality associated with the authorized surface disturbance is located in Section 3.3.3.3.1 of the Final EIS (BLM 2012). Approximately 153 acres of unauthorized surface disturbance already exists within the Project Area. Direct impacts resulting from the modified surface water features would continue. Impacts associated with the No Action Alternative would be similar but proportionally less than the impacts associated with the additional 365 acres of proposed surface disturbance under the Proposed Action.

3.3.10 Wildlife, including Migratory Birds and Special Status Animal Species

Under the No Action Alternative, EML would not implement the Plan Amendment. Mining and associated activities detailed in the approved 2012 Plan would continue to occur, as well as approximately 8,253 acres of authorized surface disturbance. An analysis of the impacts to wildlife, including migratory birds and special status animal species, associated with the authorized surface disturbance is located in Section 3.23 of the Final EIS (BLM 2012). Approximately 153 acres of unauthorized surface disturbance already exists within the Project Area. Wildlife, including special status animal species, would continue to be displaced under the No Action Alternative because the authorized mine activities would continue. Wildlife, including special status animal species, displaced by the No Action Alternative activities would likely shift spatially into adjacent available habitat. In addition, it is not anticipated that migratory bird habitat loss would contribute to the loss of viability for any migratory bird species because extensive similar habitat is available adjacent to the approved 2012 Project Area. It is unlikely that the No Action Alternative would result in a decline in local or regional migratory bird populations. Impacts associated with the No Action Alternative would be similar but proportionally less than the impacts associated with the additional 365 acres of proposed surface disturbance under the Proposed Action.

4 CUMULATIVE IMPACT ANALYSIS

4.1 Introduction

For the purpose of this EA, the cumulative impacts are the sum of all past, present, and reasonably foreseeable future actions (RFFAs) resulting primarily from mining, commercial activities and public uses. The purpose of the cumulative analysis in the EA is to evaluate the significance of the Proposed Action's contributions to cumulative impacts. A cumulative impact is defined under federal regulations as follows:

> "...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individual minor but collectively significant actions taken place over a period of time" (40 CFR 1508.7).

As required under the NEPA and the regulations implementing the NEPA, this chapter addresses those cumulative effects on the environmental resources in the Cumulative Effects Study Areas (CESAs) that could result from the implementation of the Proposed Action and reasonable alternatives, past actions, present actions, and RFFAs. The extent of the CESAs will vary by each resource, based on the geographic or biological limits of that resource. As a result, the list of projects considered under the cumulative analysis may vary according to the resource being considered. In addition, the length of time for cumulative effects analysis will vary according to the duration of impacts from the Proposed Action on the particular resource.

For the purposes of this analysis and under federal regulations, 'impacts' and 'effects' are assumed to have the same meaning and are interchangeable. The cumulative impacts analysis was accomplished through the following three steps:

Step 1: Identify, describe, and map CESAs for each resource evaluated in this chapter.

Step 2: Define timeframes, scenarios, acreage, and activity estimates for cumulative impact analysis.

Step 3: Identify and quantify the location of possible specific impacts from the Proposed Action and judge the significance of these contributions to the overall impacts.

4.2 Cumulative Effects Study Areas

Environmental consequences of the Proposed Action were previously evaluated in Chapter 3 for the various environmental resources. Discussed in the following sections are the resources that have the potential to be cumulatively impacted by the Proposed Action or the No Action Alternative within the identified CESAs. The discussions are based upon the previous analysis in Chapter 3 for each environmental resource. Based on the preceding analysis, the Proposed Action and the No Action Alternative would not impact the following resources and would therefore not have cumulative impacts: Air Quality; Cultural Resources; Forests and Rangelands; Geology and Mineral Resources; Grazing Management; Land Use Authorization; Native

American Cultural Values; Social Values and Economics; Wastes (hazardous and solid); Water Quality, Surface and Ground; Wetlands and Riparian Zones; and Wild Horses and Burros.

The following four elements or resources have been brought forward for cumulative impact analysis: Historic Trails; Soils; Vegetation; and Wildlife, including Migratory Birds and Special Status Species. The geographic areas considered for further analysis of cumulative effects vary in size and shape to reflect each evaluated environmental resource and the potential area of impact to each from the Proposed Action as determined through the analysis in Chapter 3.

The CESA for historic trails was determined to be the viewshed of the Project from the Pony Express Trail, based on the fact that it is the area where Project effects could be viewed relative to cumulative activities.

The CESA for wildlife (including special status animal species and migratory birds) was determined to be two hunt units (142 and 143), since the majority of the effects from the Project would occur to wildlife habitat within the two hunt units (Figure 4.2.1).

The CESA for noxious weeds, invasive, and non-native species, soils, and vegetation (including special status plant species) was determined to be the local watershed, based on an assessment that each of these resources would have similar impact characteristics within the local watershed for the Project Area (Figure 4.2.1).

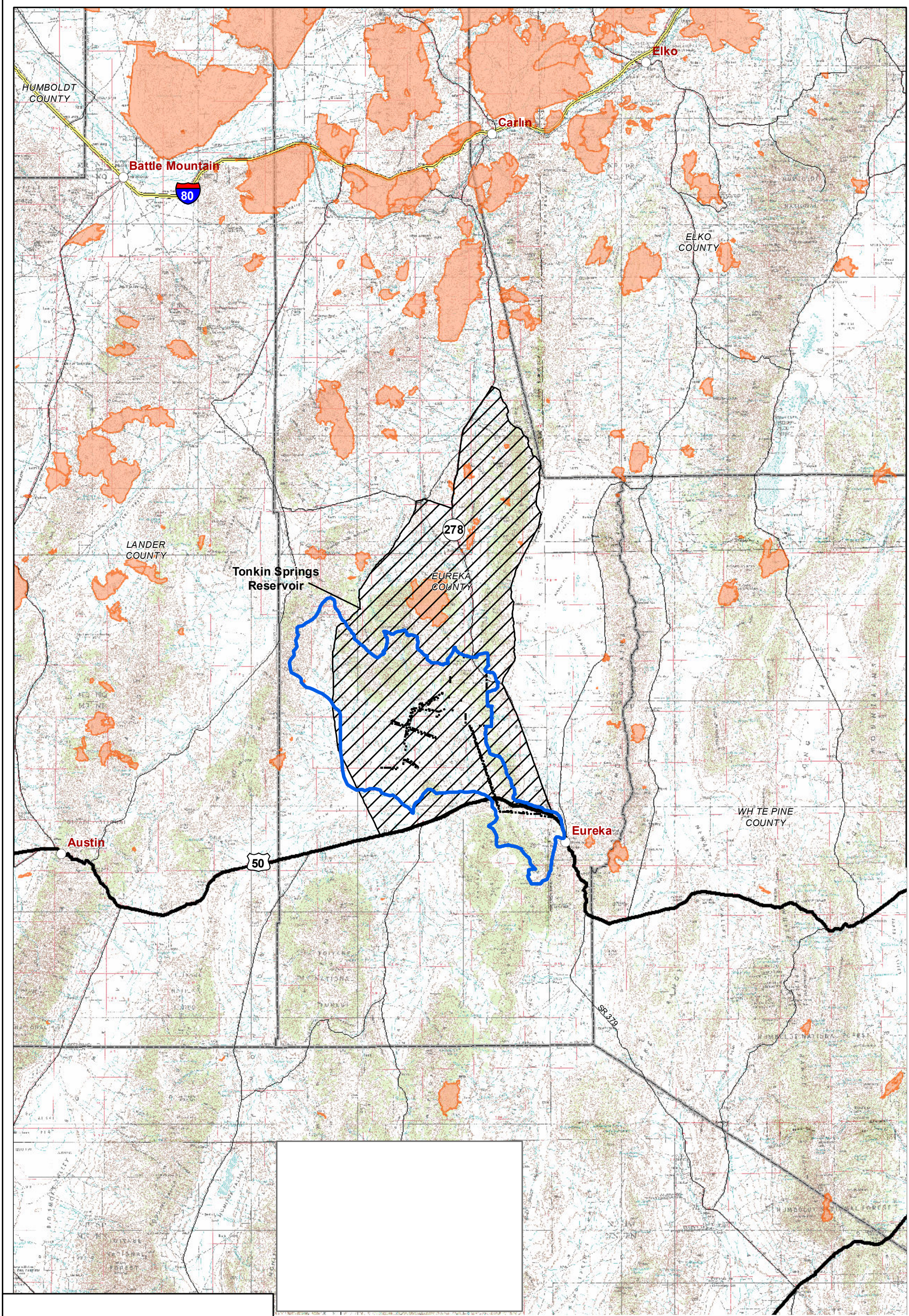
Table 4.2-1 describes each CESA area by resource.

Table 4.2-1: Cumulative Effects Study Areas

Resources Analyzed	Description of CESA	Size of CESA (acres)	Figure Number Reference
Historic Trails	Viewshed of the Project from the Pony Express Trail	N/A	N/A
Migratory Birds, Special Status Animal Species, Visual Resources, and Wildlife	NDOW Hunt Units 142 and 143	516,266	4.2.1
Noxious Weeds, Invasive, and Non-native Species, Soils, and Vegetation	Immediate Watershed	262,490	4.2.1

4.2.1.1 Past and Present Actions

Past and present actions in the two CESAs include the following: livestock grazing; wildland fires; vegetation treatments; wildlife habitat management; utility and other ROW construction and maintenance; mineral exploration and mining; and dispersed recreation.



0 5 10 15 20 Miles

DESIGN: EMLLC	DRAWN: GSL	REVIEWED: RFD
CHECKED: -	APPROVED: RFD	DATE: 03/03/2015
FILE NAME: 3218X_MtHopeEA_Figure_4.2.1_CESA_Fire.mxd		

BUREAU OF LAND MANAGEMENT

MOUNT HOPE PROJECT AMENDMENT

DRAWING TITLE:

Cumulative Effects Study Areas and Fire History

Figure 4.2.1

Livestock Grazing and Rangeland Improvements

Portions of ten allotments are located in the Immediate Watershed CESA and portions of 17 allotments are located in the Wildlife CESA. The allotments located in each of the CESAs are listed in Table 4.2-2.

Table 4.2-2: Allotments Located Within the CESAs

Grazing Allotment Name	Immediate Watershed CESA	Wildlife CESA
Arambel	X	
Bruffy		X
Flynn/Parman		X
Grass Valley	X	
JD	X	X
LJiggs		X
Lucky C	X	X
Mineral Hill		X
North Diamond		X
Pine Creek		X
Roberts Mountain	X	X
Romano	X	X
Ruby Hill	X	X
Santa Fe/Ferguson	X	X
Shannon Station	X	X
South Buckhorn		X
Three Bars	X	X
Union Mountain		X
Willows Ranch		X

Table 4.2-3 includes the rangeland improvements located within the two CESAs.

Table 4.2-3: Rangeland Improvements Located Within the CESAs

CESA	Rangeland Improvement Type
Immediate Watershed	Cattle guards (13), corrals (2), gabions (6), spring (1), spring developments (6), troughs (22), well (1), well/trough (1), windmills (2), allotment fences (62 miles), corral fence (1 mile), exclosure fences (7 miles), gap fences (8 miles), ownership fences (11 miles), pasture fences (84 miles), ROW fences (5 miles)

CESA	Rangeland Improvement Type
Wildlife	Cattle guards (26), corrals (7), dam (1), exclosures (6), flowing wells (5), gabions (6), pipelines (5), pond (1), reservoirs (2), springs (12), spring developments (6), springs/troughs (3), troughs (29), wells (6), well/tank (1), well/trough (1), windmills (2), allotment fences (108 miles), corral fence (1 mile), drift fence (4 miles), exclosure fences (13 miles), gap fences (9 miles), ownership fences (18 miles), pasture fences (202 miles), protection fences (15 miles), ROW fences (5 miles), seeding fences (1 mile), temporary fence (6 miles), water pipelines (6 miles), other fences (12 miles)

Wildland Fires

Although there are no recorded wildland fires within the Project Area, there has been wildland fire disturbance within the two CESAs. The wildland fire disturbance is shown on Figure 4.2.2. Between 2000 and 2013, there were approximately 24 acres of wildland fire disturbance within the Immediate Watershed CESA and approximately 13,937 acres of wildland fire disturbance within the Wildlife CESA.

Vegetation Treatments

Vegetation treatments within the Immediate Watershed CESA total approximately 12,792 acres and include the following: approximately 4,839 acres of chaining; and approximately 7,953 acres of drill seeding. Vegetation treatments within the Wildlife CESA total approximately 21,725 acres and include the following: approximately nine acres of chaining; approximately 17,811 acres of drill seeding; and approximately 3,905 acres of hand thinning.

Wildlife Habitat Management/Restoration/Hazardous Fuel Treatment

Research and management of big game and wildlife are undertaken by the NDOW and the BLM and may include modification to existing habitat and rangeland facilities. The Wildlife CESA, or NDOW Hunt Units 142 and 143, contains portions of 17 allotments, as listed in Table 4.2-2.

Rights-of-Way

The BLM-maintained Land and Mineral Legacy Rehost 2000 System (LR2000) database was queried by Township, Range, and Section to show the past and present ROWs that have been approved within the Geology and Minerals, Immediate Watershed, and Wildlife CESAs. These ROWs include the following: roads and highways; telecommunications; power transmission; communication sites; irrigation and water facilities; wind energy facilities; and other ROWs. The approximate total acreage of existing and approved ROWs within each CESA is listed in Table 4.2-4. The exact acreage of surface disturbance associated with these ROWs cannot be quantified; however, it is assumed that these types of ROWs and the construction and maintenance associated with these facilities would create a level of surface disturbance that would contribute to cumulative impacts to various resources. In addition, certain types of ROWs can fragment habitat or create barriers or hazards for wildlife passage. The LR2000 database was queried on September 29, 2014, for the Immediate Watershed CESA and February 1, 2015, for the Wildlife CESA. Any newly approved ROWs that have been added to the LR2000 database after these dates are not included in the analysis.

Table 4.2-4: Past and Present Rights-of-Way Acres in the CESAs

ROW Type	Immediate Watershed CESA (acres)	Wildlife CESA (acres)
Roads and Highways	5,205	6,832
Telecommunications	1,220	1,288
Power Transmission	10,406	10,212
Communication Sites	81	3
Irrigation/Water Facilities Pipelines	128	151
Other	26	6
Total	**17,066**	**18,492**

Mineral Exploration and Mining

The LR2000 database was queried by Township, Range, and Section to show the past and present mineral exploration or mining activities (i.e., authorized Notices, closed Notices, authorized and closed plans of operation, and mineral material disposal sites) that have been issued within the two CESAs. Past and present mineral exploration and mining activities in the Immediate Watershed and Wildlife CESAs include historic exploration and mining operations. Table 4.2-5 shows the results of the LR2000 query, in acres, of the exploration and mining activities within each CESA. The LR2000 database was queried on September 29, 2014, for the Immediate Watershed CESA and February 1, 2015, for the Wildlife CESA. Any newly authorized Notices or plans of operation that have been added to the LR2000 database after these dates are not included in the analysis. There are other gold mines in proximity to the Project Area, including the Ruby Hill Mine, currently on hold until the pit wall is repaired.

Table 4.2-5: Past and Present Minerals Disturbance Acres in the CESAs

Disturbance Type	Immediate Watershed CESA (acres)	Wildlife CESA (acres)
Acknowledged and Closed Notices	335	452
Authorized and Closed Plans	10,370	11,217
Mineral Material Disposal Sites	532	1,908
Total	**11,237**	**13,577**

Dispersed Recreation

Dispersed recreation opportunities in the CESAs include sightseeing, pleasure driving, rock collecting, photography, winter sports, off-highway vehicle use, mountain biking, picnicking, camping, fishing, hunting, and hiking. This wide range of opportunities is possible because virtually all of the public lands in the CESAs are accessible and offer a variety of settings suitable for different recreational activities.

4.2.1.1 Reasonably Foreseeable Future Actions

RFFAs in the Immediate Watershed CESA include livestock grazing, wildland fires, vegetation treatments, wildlife and game habitat management, ROW construction and maintenance, mineral exploration, mining, and dispersed recreation.

RFFAs in the Wildlife CESA include livestock grazing, wildland fires, vegetation treatments, wildlife and game habitat management, ROW construction and maintenance, mineral exploration, mining, and dispersed recreation.

The Project Area and portions of the two CESAs are within the boundary of the proposed 3 Bars Ecosystem and Landscape and Restoration Project (3 Bars). The 3 Bars preferred alternative includes treating approximately 127,000 acres to control noxious weeds and other invasive species, primarily by using manual and mechanical methods, fire (prescribed and wildland), and biological controls (use of livestock and classic biological controls including nematodes, fungi, mites, and insects) (BLM 2013).

The Gold Bar Mine, located in both the Immediate Watershed and Wildlife CESAs, is proposing approximately 1,300 acres of surface disturbance associated with mining activities.

4.3 Evaluation of Potential Cumulative Impacts

4.3.1 Historic Trails

The CESA for historic trails is the viewshed from the Pony Express Trail, including a distance of approximately three miles away from the trail.

Past and Present Actions: Past and present actions that could have impacted and may be currently impacting the historic trail include powerlines, fences, traffic on paved and unpaved roads, SR 278, and mining operations.

RFFAs: Powerline and fence construction, traffic on paved and unpaved roads including SR 278, and mining operations are expected to continue.

4.3.1.1 Proposed Action

Impacts to the visual setting of the historic trail by adding visual elements that detract from the experience of those using the trail associated with the Proposed Action result primarily from the proposed Booster Station #2. The cumulative environment for historic trail impacts includes the impacts associated with the approved 2012 Plan as analyzed in the Final EIS (BLM 2012, Section 4.4.18). Therefore, the incremental cumulative impacts associated with the proposed booster station would be minimal.

4.3.1.2 No Action Alternative

Cumulative impacts to the viewshed from the Pony Express Trail under the No Action Alternative were analyzed in the Final EIS (BLM 2012, Section 4.4.18). The incremental cumulative impacts resulting from activities associated with the No Action Alternative would be

similar, but slightly less than the incremental cumulative impacts associated with the Proposed Action.

4.3.2 Noxious Weeds, Invasive, and Non-native Species

The CESA for noxious weeds, invasive and non-native species is the Immediate Watershed CESA. This CESA totals approximately 262,490 acres and is shown on Figure 4.2.1.

Past and present actions: Past and present actions with impacts created from noxious weeds, invasive, and non-native species could have included and may currently include livestock grazing, wildland fires, vegetation treatments, wildlife and game habitat management, ROW construction and maintenance, mineral exploration, mining, and dispersed recreation. These actions could have disturbed vegetation and soils creating an opportunity for invasive plant colonization and the introduction of noxious weed, invasive or non-native species seeds. There are no specific data to quantify impacts from noxious weeds, invasive and non-native species that resulted from wildlife and game habitat management, livestock grazing, or dispersed recreation.

Historic fires (2000–2013) have burned approximately 24 acres in this CESA (approximately 0.009 percent of the CESA). Authorized and closed mineral exploration and mining Notices and plans of operation, as well as mineral material disposal sites, total approximately 11,237 acres (approximately 4.3 percent of the CESA) of surface disturbance. Approximately 17,066 acres of ROWs were issued within the Immediate Watershed CESA that had the potential to introduce noxious weeds, invasive and non-native species. There were also approximately 12,792 acres of vegetation treatments that occurred within the Immediate Watershed CESA. The total quantifiable past and present actions have affected approximately 41,119 acres, or approximately 16 percent of the CESA.

RFFAs: Potential impacts from noxious weeds, invasive and non-native species as a result of livestock grazing, wildlife and game habitat management, dispersed recreation, ROW construction and maintenance, mineral exploration activities, vegetation treatments, or loss of native vegetation associated with potential wildland fires are expected to continue. There are no specific data to quantify impacts from noxious weeds, invasive and non-native species as a result of dispersed recreation, livestock grazing, wildlife and game habitat management, vegetation treatments, or potential wildland fires. There are approximately 1,732 acres of disturbance from pending minerals projects in the Immediate Watershed CESA including the proposed Project and approximately 142 acres of pending ROW projects. In addition, there are approximately 1,300 acres of proposed disturbance associated with the Gold Bar Mine in the Wildlife CESA.

4.3.2.1 Proposed Action

The Proposed Action (approximately 365 acres) would impact approximately 0.1 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Immediate Watershed CESA total approximately 44,293 acres, which results in an incremental impact from the new surface disturbance associated with the Proposed Action of approximately 0.8 percent. Since there are minimal quantifiable data for activities within the CESA, this calculation is a conservative analysis of the potential incremental impact of the Proposed Action. Project-related impacts would be localized and minimized due to implementation of the ACPs outlined in the

Final EIS (BLM 2012, Section 2.1.14) and concurrent reclamation. Therefore, based on the above analysis and findings, incremental impacts from noxious weeds, invasive, and non-native species, as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

4.3.2.2 No Action Alternative

A total of the past and present actions and RFFA disturbance within this CESA is approximately 44,293 acres. The No Action Alternative would not authorize any additional disturbance and there would be no additional incremental cumulative impacts associated with the No Action Alternative beyond what was analyzed in the Final EIS.

4.3.3 Soils

The CESA for soils is the Immediate Watershed CESA. This CESA totals approximately 262,490 acres and is shown on Figure 4.2.1.

Past and Present Actions: Past and present actions that could have impacted and may be currently impacting soils include livestock grazing, fire management, mineral exploration and mining, ROW construction and maintenance, dispersed recreation, wildland fires, and fire rehabilitation that disturbed or impacted soils, or that increased erosion or sedimentation. Impacts from these activities include loss of soils productivity due to changes in soil physical properties, soil fertility, soil movement in response to water and wind erosion, and loss of soil structure due to compaction. Historic mining pits or other unreclaimed activities that have unvegetated tailings or waste rock dumps may have resulted in increased erosion or sedimentation.

Historic fires (2000–2013) have burned approximately 24 acres in this CESA (approximately 0.009 percent of the CESA). Authorized and closed mineral exploration and mining Notices and plans of operation, as well as mineral material disposal sites, total approximately 11,237 acres (approximately 4.3 percent of the CESA) of surface disturbance. State and federal regulations require reclamation; therefore, it is reasonable to assume that some areas have been reclaimed, become naturally stabilized, or have been naturally revegetated over time. However, historic mining was not reclaimed leaving areas of disturbance that are incapable of producing vegetation and also include areas that have undesirable species that are less capable of stabilizing soils. Approximately 17,066 acres of ROWs were issued within the CESA that had the potential to create surface disturbance. There are also ongoing revegetation treatments in the Immediate Watershed CESA that total approximately 12,792 acres. The total quantifiable past and present actions have affected approximately 41,119 acres, or approximately 16 percent of the CESA.

RFFAs: Potential wildland fires, fire rehabilitation, habitat management, ROW construction and maintenance, mineral exploration, livestock grazing and management, vegetation treatments, soil compaction due to travel by heavy equipment on unpaved roads, and dispersed recreation are expected to continue. There are no specific data to quantify impacts to soils as a result of dispersed recreation, livestock grazing and management, habitat management, vegetation treatments, or potential wildland fires. There are approximately 1,732 acres of disturbance from pending minerals projects in the Immediate Watershed CESA including the proposed Project and approximately 142 acres of pending ROW projects. In addition, there are approximately 1,300 acres of proposed disturbance associated with the Gold Bar Mine in the Wildlife CESA.

4.3.3.1 Proposed Action

The Proposed Action (approximately 365 acres) would impact approximately 0.1 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Immediate Watershed CESA total approximately 44,293 acres, which results in an incremental impact from the new surface disturbance associated with the Proposed Action of approximately 0.8 percent. Since there are minimal quantifiable data for activities within the CESA, this calculation is a conservative analysis of the potential incremental impact of the Proposed Action. Project-related impacts would be localized and minimized due to implementation of the ACPs outlined in the Final EIS (BLM 2012, Section 2.1.14) and concurrent reclamation. Therefore, based on the above analysis and findings, incremental impacts to soils as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

4.3.3.2 No Action Alternative

A total of the past and present actions and RFFA disturbance within this CESA is approximately 44,293 acres. The No Action Alternative would not authorize any additional disturbance and there would be no additional incremental cumulative impacts associated with the No Action Alternative beyond what was analyzed in the Final EIS.

4.3.4 Vegetation

The CESA for vegetation is the Immediate Watershed CESA. This CESA totals approximately 262,490 acres and is shown on Figure 4.2.1.

Past and Present Actions: Past and present actions that could have impacted and may be currently impacting vegetation include livestock grazing and management, wildland fires, fire rehabilitation, habitat management, ROW construction and maintenance, mineral exploration, mining, vegetation treatments that altered the structure, composition, and ecology of plant communities, and dispersed recreation. There are no specific data to quantify impacts to vegetation from livestock grazing and management, habitat management, or dispersed recreation. Impacts caused by hunting activities and associated off-road vehicle travel include the introduction of noxious weeds, invasive or non-native species and trampled vegetation.

Historic fires (2000–2013) have burned approximately 24 acres in this CESA (approximately 0.009 percent of the CESA). Authorized and closed mineral exploration and mining Notices and plans of operation, as well as mineral material disposal sites, total approximately 11,237 acres (approximately 4.3 percent of the CESA) of surface disturbance. State and federal regulations require reclamation; therefore, it is reasonable to assume that some areas have been reclaimed, become naturally stabilized, or have been naturally revegetated over time. However, historic mining was not reclaimed leaving areas of disturbance that are incapable of producing vegetation and also include areas that have undesirable species that are less capable of stabilizing soils. Approximately 17,066 acres of ROWs were issued within the CESA that had the potential to create surface disturbance. There are also ongoing revegetation treatments in the Immediate Watershed CESA that total approximately 12,792 acres. The total quantifiable past and present actions have disturbed approximately 41,119 acres, or approximately 16 percent of the CESA.

RFFAs: Potential wildland fires, fire rehabilitation, habitat management, ROW construction and maintenance, mineral exploration, livestock grazing and management, vegetation treatments, and dispersed recreation are expected to continue. There are no specific data to quantify impacts to vegetation as a result of dispersed recreation, livestock grazing and management, habitat management, vegetation treatments, potential wildland fires, or fire rehabilitation. There are approximately 1,732 acres of disturbance from pending minerals projects in the Immediate Watershed CESA including the proposed Project and approximately 142 acres of pending ROW projects. In addition, there are approximately 1,300 acres of proposed disturbance associated with the Gold Bar Mine in the Wildlife CESA.

4.3.4.1 Proposed Action

The Proposed Action (approximately 365 acres) would impact approximately 0.1 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Immediate Watershed CESA total approximately 44,293 acres, which results in an incremental impact from the new surface disturbance associated with the Proposed Action of approximately 0.8 percent. Since there are minimal quantifiable data for activities within the CESA, this calculation is a conservative analysis of the potential incremental impact of the Proposed Action. Project-related impacts would be localized and minimized due to implementation of the ACPs outlined in the Final EIS (BLM 2012, Section 2.1.14) and concurrent reclamation. Therefore, based on the above analysis and findings, incremental impacts to vegetation as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

4.3.4.2 No Action Alternative

A total of the past and present actions and RFFA disturbance within this CESA is approximately 44,293 acres. The No Action Alternative would not authorize any additional disturbance and there would be no additional incremental cumulative impacts associated with the No Action Alternative beyond what was analyzed in the Final EIS.

4.3.5 Visual Resources

The CESA for visual resources is the Wildlife CESA. This CESA totals approximately 516,266 acres and is shown on Figure 4.2.1.

Past and Present Actions: Past and present actions that could have impacted and may be currently impacting visual resources, include livestock grazing, wildland fires, ROW construction and maintenance, mineral exploration, mining, and vegetation treatments, that may have altered the visual elements of line, form, color, and texture within the CESA. Impacts to visual resources from past and present actions are dependent upon the four categories of the BLM's VRM program, which allows minimal to major modifications of the landscape. Man-made features tend to be linear or rectangular in character, while natural events such as wildland fires tend to be patchy in character.

Historic fires (2000–2013) have burned approximately 13,937 acres in this CESA (approximately 2.7 percent of the CESA). Authorized and closed mineral exploration and mining Notices and plans of operation, as well as mineral material disposal sites, total approximately 13,577 acres (approximately three percent of the CESA) of surface disturbance. State and federal

regulations require reclamation; therefore, it is reasonable to assume that some areas have been reclaimed, become naturally stabilized, or have been naturally revegetated over time. Approximately 18,492 acres of ROWs were issued within the CESA that had the potential to create surface disturbance. There are also ongoing vegetation treatments in the Wildlife CESA that total approximately 21,725 acres. The total quantifiable past and present actions have disturbed approximately 67,731 acres, or approximately 13 percent of the CESA. All these activities may have altered the line, form, color, and texture within the CESA.

RFFAs: Potential wildland fires, ROW construction and maintenance, mineral exploration, livestock grazing, and vegetation treatments. There are no specific data to quantify impacts to visual resources as a result of livestock grazing, vegetation treatments, or potential wildland fires. There are approximately 5,794 acres of disturbance from pending minerals projects in the Wildlife CESA including the proposed Project and approximately 68 acres of pending ROW projects. In addition, there are approximately 1,300 acres of proposed disturbance associated with the Gold Bar Mine in the Wildlife CESA.

4.3.5.1 Proposed Action

The Proposed Action (approximately 365 acres) would impact approximately 0.07 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA total approximately 74,893 acres, which results in an incremental impact from the new surface disturbance associated with the Proposed Action of approximately 0.5 percent. Since there are minimal quantifiable data for activities within the CESA, this calculation is a conservative analysis of the potential incremental impact of the Proposed Action. Project-related impacts would be localized and minimized due to implementation of the ACPs outlined in the Final EIS (BLM 2012, Section 2.1.14) and concurrent reclamation. Therefore, based on the above analysis and findings, incremental impacts to visual resources, as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

4.3.5.2 No Action Alternative

A total of the past and present actions and RFFA disturbance within this CESA is approximately 74,893 acres. The No Action Alternative would not authorize any additional disturbance and there would be no additional incremental cumulative impacts associated with the No Action Alternative beyond what was analyzed in the Final EIS.

4.3.6 Wildlife, including Migratory Birds and Special Status Animal Species

The CESA for wildlife, including migratory birds and special status animal species, is the Wildlife CESA. This CESA totals approximately 516,266 acres and is shown on Figure 4.2.1.

Past and Present Actions: Past and present actions that could have impacted and may be currently impacting wildlife, including migratory birds and special status animal species, include livestock grazing, wildland fires, wildlife and game habitat management, ROW construction and maintenance, mineral exploration, mining, vegetation treatments, and dispersed recreation. Impacts to wildlife, including migratory birds and special status animal species, could have resulted from the following: 1) indirect impacts from the destruction of habitat associated with

building roads and clearing vegetation; or 2) indirect impacts from the disruption from human presence or noise from construction equipment, haul trucks, and other vehicles and equipment. A number of these past and present actions, such as roads, fences, and agricultural development, may result in habitat fragmentation and migration route disruption, as well as affecting the success of reproduction. The extent of these impacts vary with the type of activity.

Historic fires (2000–2013) have burned approximately 13,937 acres in this CESA (approximately 2.7 percent of the CESA). Authorized and closed mineral exploration and mining Notices and plans of operation, as well as mineral material disposal sites, total approximately 13,577 acres (approximately three percent of the CESA) of surface disturbance. State and federal regulations require reclamation; therefore, it is reasonable to assume that some areas have been reclaimed, become naturally stabilized, or have been naturally revegetated over time. Approximately 18,492 acres of ROWs were issued within the CESA that had the potential to create surface disturbance. There are also ongoing revegetation treatments in the Wildlife CESA that total approximately 21,725 acres. The total quantifiable past and present actions have disturbed approximately 67,731 acres, or approximately 13 percent of the CESA.

RFFAs: Potential wildland fires, wildlife and game habitat management, ROW construction and maintenance, mineral exploration, livestock grazing, vegetation treatments, and dispersed recreation are expected to continue. There are no specific data to quantify impacts to wildlife, including migratory birds and special status animal species, as a result of dispersed recreation, livestock grazing, wildlife and game habitat management, vegetation treatments, or potential wildland fires. There are approximately 5,794 acres of disturbance from pending minerals projects in the Wildlife CESA including the proposed Project and approximately 68 acres of pending ROW projects. In addition, there are approximately 1,300 acres of proposed disturbance associated with the Gold Bar Mine in the Wildlife CESA.

4.3.6.1 Proposed Action

The Proposed Action (approximately 365 acres) would impact approximately 0.07 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA total approximately 74,893 acres, which results in an incremental impact from the new surface disturbance associated with the Proposed Action of approximately 0.3 percent. Since there are minimal quantifiable data for activities within the CESA, this calculation is a conservative analysis of the potential incremental impact of the Proposed Action. Project-related impacts would be localized and minimized due to implementation of the ACPs outlined in the Final EIS (BLM 2012, Section 2.1.14) and concurrent reclamation. Therefore, based on the above analysis and findings, incremental impacts to wildlife, including migratory birds and special status animal species, as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

4.3.6.2 No Action Alternative

A total of the past and present actions and RFFA disturbance within this CESA is approximately 74,893 acres. The No Action Alternative would not authorize any additional disturbance and there would be no additional incremental cumulative impacts associated with the No Action Alternative beyond what was analyzed in the Final EIS.

5 CONSULTATION AND COORDINATION

This EA was prepared at the direction of the BLM MLFO, Battle Mountain District, Nevada, by Enviroscientists, Inc., under a contract with EML. The following is a list of persons, groups, and agencies consulted, as well as a list of individual responsible for the preparation of this EA.

5.1 Persons, Groups, and Agencies Consulted

State Agencies

Eric Miskow, NNHP
Timothy Herrick, NDOW

Native Americans

Duckwater Shoshone Tribe
Ely Shoshone Tribe
Yomba Shoshone Tribe

5.2 List of Preparers and Reviewers

Bureau of Land Management, MLFO

Chris Worthington	Project Lead, Planning and Environmental Coordinator
David Djikine	Minerals, Mining Engineer
Jon Sherve	Hazardous Materials
Jason Spence	Rangeland Management, Vegetation, Soils
John Kinsner	Cultural Resources
Ben Cramer	Recreation, Visual Resources
Kent Bloomer	Noxious Weeds, Invasive, and Non-native Species
Jon Kramer	Lands and Realty
William O'Neill	Wildlife, Migratory Birds, Special Status Species, Fish Habitat
Alden Shallcross	Surface Hydrology, Floodplains, Wetlands, Riparian
Shawna Richardson	Wild Horses
Juan Martinez	Native American Concerns and Consultation
Chris Lewis	Fire Management, Forestry
Kathy Graham	GIS Specialist

Enviroscientists, Inc.

Rich DeLong	Project Manager, Technical Review
Catherine Lee	Senior NEPA Specialist
Gail Liebler	GIS Specialist

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APPENDIX A

MT. HOPE MINE BOOSTER STATION #2 VIEW FROM PONY EXPRESS TRAIL

Eureka Moly LLC.

EUREKA MOLY

PO Box 1067
Eureka, Nevada 89316
Email: cdubray@generalmoly.com
Website: www.generalmoly.com

September 4, 2014

Mr. Chris Cook
Bureau of Land Management
Mount Lewis Field Office
50 Bastian Road
Battle Mountain, Nevada 89820

RE: Mt. Hope Mine Booster Station #2 View from Pony Express Trail

Dear Chris:

Pursuant to our discussion during our July 31, 2014 regarding outstanding supporting information related to the Mt. Hope Plan of Operations Amendment submittal, I am submitting the requested photographs of Booster Station #2 as viewed from the Pony Express Trail/Henderson Creek Road segment where it is visible to anyone traversing that portion of the Trail via the county maintained road.

There are 6 photographs taken from various points along the route to show the 'visibility' of the site from those locations and denoted on the accompanying figure for reference. The photographs are labeled Photo Point #1 through #6 and were taken along the route traveling west to east. The following is a brief description of what is visible from each location:

Photo Point #1: the Fresh Water Line (FWL) Corridor is visible, but the booster station and associated pad are not because of the trees and distance.

Photo Point #2: the Fresh Water Line (FWL) Corridor is visible, but the view of the booster station is somewhat blocked by the bend in the FWL corridor and the trees.

Photo Point #3: the booster station pad site is visible, but partially blocked by the bend in the FWL corridor and the trees.

Photo Point #4: the pad site of the booster station is not really visible due to surrounding topography and tree and shrub growth, however when it is constructed to the design height of 10' it will be possible to see the booster station tank over the top of the vegetation.

Photo Point #5: this location clearly shows the pad site of the booster station and when the station is constructed it will be visible from the Trail.

Photo Point #6: the booster station is not visible from this point forward travelling east due to the surrounding topography and vegetation.

No photographs were taken from the Pony Express Trail past Photo Point #6 as no views exist of the site prior to reaching Photo Point #5 when traveling on the Trail from east to west. After passing Photo Point #5 individuals travelling from east to west will have to turn and look back over the trail in order to see the booster station as described for Photo Points #1 - #4.

Should you have any questions regarding this submittal or require additional information, please contact me at 775-237-1012 or Pat Rogers at 775-748-6008.

Sincerely,

Carrie M. Dubray, REM
Sr. Environmental Coordinator
Mount Hope Project

Enclosures: As Described

cc: Pat Rogers, GMI
File

Mt. Hope Mine Booster Station #2 View from Pony Express Trail

Photo Point #1: Booster Station #2 site looking east.

Photo Point #2: Booster Station #2 site looking east.

Photo Point #3: Booster Station #2 site looking east.

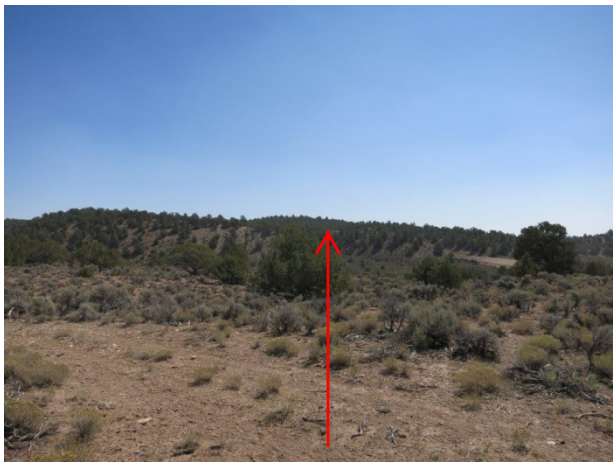


Photo Point #4: Booster Station #2 site looking southeast.

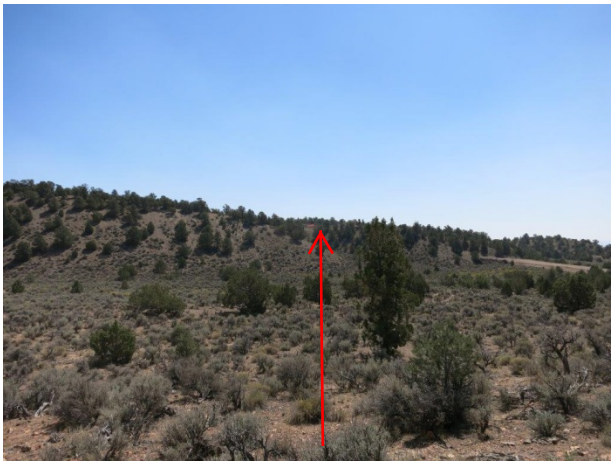


Photo Point #5: Booster Station #2 site looking southeast.

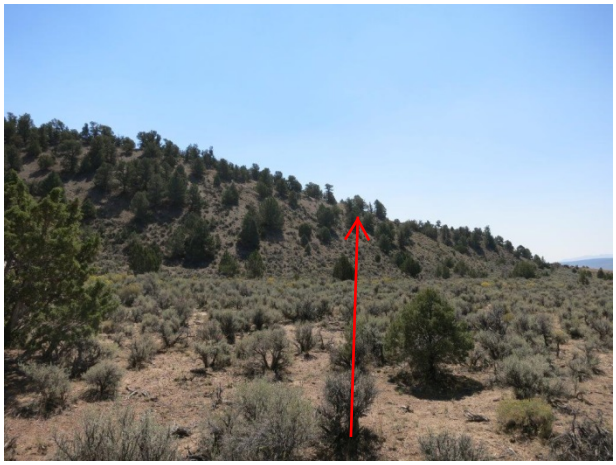
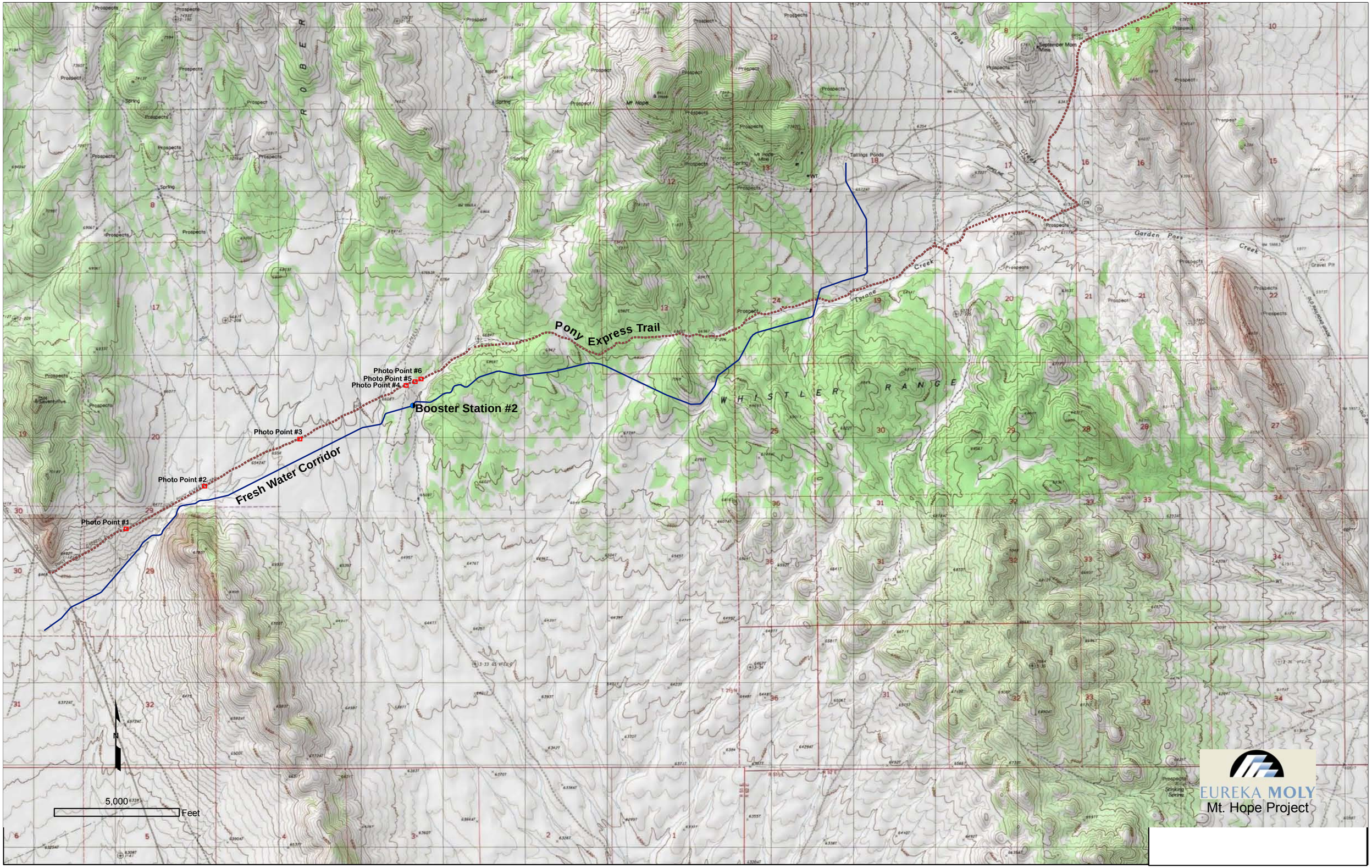


Photo Point #6: Booster Station #2 site looking south.

No photos were taken from the Pony Express Trail past Photo Point 6 as no views exist of the site prior to reaching Photo Point #5 when traveling on the Trail from East to West.


Pony Express Trail
Fresh Water Corridor
Booster Station #2
Photo Point #1
Photo Point #2
Photo Point #3
Photo Point #4
Photo Point #5
Photo Point #6
WHISTLER RANGE
Mt Hope
Tailings Ponds
Tyrone Creek
Garden Pass Creek
Gravel Pit
5,000 Feet
N
EUREKA MOLY
Mt. Hope Project

APPENDIX B

MOUNT HOPE PROJECT AMENDMENT ENVIRONMENTAL ASSESSMENT RESPONSES TO PUBLIC COMMENTS

Appendix B: Mount Hope Project Amendment Environmental Assessment Responses to Public Comments			
Commenter	**Comment Number**	**Comment**	**Response**
Carolyn Bailey	A-1	I am submitting these comments regarding the current Environmental Assessment related to the Mount Hope Mine Project Amendment. As one of the nearest neighbors to the project, I originally submitted comments for the EIS. All of my original comments and concerns are still relevant and important. I did not feel that my concerns were alleviated in any way in the EIS process. I just take this opportunity to ask a few more questions.	Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-2	I asked why our farm and ranch were not shown on figure 3.6.2 of the draft EIS and the answer was to make the same figure show a smaller area grid so as not to show nearby private property and residences. Why do almost all of the maps not show where people and private property are in relation to the project in a meaningful way?	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-3	I pointed out that the wind would blow from the roaster directly toward our ranch on figure 3.6.3 of the draft EIS, the answer was to change the figure to show the direction the wind was coming from (opposite) instead of the direction it would blow to. Why was that done? It clearly blows into Diamond Valley.	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-4	I asked why all of the private property controlled by the Mt. Hope subsidiaries was not shown in the maps purposed to show their private property holdings. The answer says they only list property tied to applications EML submitted to BLM. Where would the man camp be? What is the plan for the Romano Ranch and the Dubrey property since they are next to our family? Isn't a man camp a connected action (40 CFR 1508.25(a))? Are properties purchased in order to transfer water rights connected actions? How about property purchased to house employees on a long term basis, is this not connected? Why not show all the properties?	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-5	What would be the mitigation for lost recharge water to Diamond Valley from storm collection?	There would be no mitigation as some storm water would infiltrate into the ground after it is rerouted around the engineered facilities. Some of the diverted water would flow off-site as surface flow. A small amount of water that would be intercepted by the waste rock facilities or tailing storage facility and would be managed in accordance with NDEP regulations.

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	A-6	What if toxins from the facility were located in ground water? How would the problem be rectified if the ground water was contaminated?	If there is an unauthorized release from the facility, the BLM and the Nevada Division of Environmental Protection would each require an assessment of the release and implementation of a plan to correct the condition.
	A-7	What if toxins from the facility were found in the surface water or storm flow from the facility? A mine recently was fined for discharging mercury. Does that get cleaned up?	If there is an unauthorized release from the facility, the BLM and the Nevada Division of Environmental Protection would each require an assessment of the release and implementation of a plan to correct the condition.
	A-8	It is clear from the water models, that springs in the Pine Valley Water Basin were predicted to go dry from mining operations in Kobeh and Diamond Valley Water Basins. Why do proponents claim that the basins are not connected underground? Why would the drawdown from pit dewatering not affect Diamond Valley when it is almost entirely in Diamond Valley?	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-9	Could you please answer my original question: How can a five or ten foot drawdown be measured when the static level is dropping at the same time?	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-10	How could the amount of water that would fill the pit lake at closing be mitigated since it will be unusable? How does this pit lake benefit the local residents? How does this sustain the health, use, and enjoyment of this area?	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-11	It is wrong to say that Fugitive Emissions from the roaster would be adverse but not irreversible. The particles land on the surface in the area and remain toxic. True?	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.

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	A-12	When considering cumulative impacts of air quality why was the toxic problem in Eureka not considered? Soil levels in the area are high in lead and arsenic from prior mining activity. There is an Emergency Response Program to remove soil from yards and replace them with fresh soil. The roaster particles would combine with the particles that settled from the prior smelter activity which should be part of the cumulative data. Also, why was Ruby Hill Mine in Diamond Valley not combined with Mt. Hope in Diamond Valley? Most all of the mining activity would be in Diamond Valley. How about the farming activity? All of these things, and more, do not equal zero. Did the EIS detail this serious impact from past projects (40 CFR 1508.7)?	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-13	Are fugitive particles and roaster smoke only measured inside the project boundary? Does that consider the health of residents living outside the boundary, especially if the roaster is very near the project boundary edge? There is also public land outside the fence, and smoke would quickly leave the project.	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-14	Most all of the mine activity would take place in Diamond Valley. The pit, roaster, processing, highway in-and-out, toll roasting activity and housing are all in Diamond Valley. Does the BLM think "the impact would not be significant" to Diamond Valley and Eureka residents and the farming community? Are the consequences of noise, schools, air quality, haul trucks in the neighborhood etc., really outside the scope of the BLM allowing this mine to operate in Diamond Valley?	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-15	Why is toll roasting material or related consequences of these trucks and the materials they bring to the project not considered a connected action as well as a cumulative action (40 CFR 1502.4 and 40 CFR 1508.25)?	This comment does not relate to the current Plan of Operations or NEPA analysis being conducted by the BLM. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
	A-16	What kind of Legacy Management is the BLM considering for central Nevada? How would Mount Hope sustain the health of the public lands for use and enjoyment of future generations in Diamond Valley?	These questions are not applicable to the current Plan of Operations and NEPA process and would be more appropriately addressed as part of BLM's ongoing Resource Management Plan revision process.

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Eureka County	B-1	We have reviewed the Environmental Assessment (EA) for the Mount Hope Project Plan of Operations Amendment. As you are aware, Eureka County also reviewed the Administrative Draft EA for the Project. We thank BLM for providing this opportunity. We note that there were some changes made according to our previous comments and there were many previous comments that were not addressed in the EA. Please consider, for the record, that our previous unresolved comments still apply. We thank BLM for the offer provided to the County to coordinate on changes that can be made on the EA, based on our previous comments, before the EA becomes finalized and a FONSI or Decision Record are contemplated. Thank you for considering our comments. We look forward to coordinating with BLM to make the changes accordingly.	Please see the responses to the comments Eureka County provided during the BLM's drafting of the EA.
Great Basin Resource Watch (along with the Western Shoshone Defense Project)	C-1	As the EA and proposed approval relies upon the previously-issued Final EIS (FEIS) and Record of Decision (ROD) for the Mount Hope Project, these comments incorporate and adopt the previous comments submitted by GBRW and WSDP regarding the Mount Hope Project.	Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document (BLM 2012).
	C-2	GBRW/WSDP are currently challenging the FEIS, ROD, and BLM approvals of the Mount Hope Project as illegal under numerous federal laws. Accordingly, these comments incorporate and adopt all filings submitted by GBRW/WSDP in that federal court litigation, Civ. No. 3:13-cv0078-RCJ-VPC (D. Nevada). BLM and the Interior Department are in possession of all of these documents and thus do not need to be attached hereto. GBRW/WSDP maintain that the currently approved Project is illegal and that any approval of additions or revisions to the current Project is similarly illegal as detailed in GBRW/WSDP's previous comments and litigation filings.	BLM acknowledges that GBRW/WSDP have challenged the 2012 Mt. Hope FEIS, ROD, and associated ROW grants (Case number 3:13-cv-0078-RJC-VPC) BLM does not agree that the Mt. Hope project is illegal, and has addressed GBRW/WSDP's assertions otherwise through the aforementioned litigation. BLM does not view the current comment as raising any specific substantive issue in relation to the EA that needs a further response.
		<u>Map Information</u> Map Figure 1.3.1 does not delineate the reconfiguration of the PAG WRDF, the NON-PAG WRDF, or the LGO Stockpile. As an overview map all changes should be clear on this map. GBRW had initially assumed that the expansion shown on the map was the only significant change in the mine plan. Figure 1.3.1 is misleading and should be revised to show other changes to the mine plan.	Chapter 2 of the EA provides the description of the Proposed Action. Figure 2.1.1 shows the revised configuration of the Non-PAG WRDF, PAG WRDF, and the LGO Stockpile.

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	C-4	Figure 2.1.1 does show the 44-year revised configuration of the mine plan, but there is not comparison from the approved mine plan of 2012. GBRW would like to see this map revised so that the proposed changes to the mine plan are clearly delineated.	The changes in the Mine Plan for the 2012 approval are superficially discussed in the Proposed Action text of the EA. Figure 2.1.1 shows the revised configurations of the proposed changes.
	C-5	<u>PAG WRDF</u> One of the significant changes proposed in the EA is a reconfiguration of the PAG WRDF. As best as GBRW can discern based on Figure 2.1.1 and from a similar map view from the Final EIS on Mt Hope there appears to be a shift east in the western boundary of the PAG WRDF and an expansion southward to where the LGO stockpile is to be located. The rational for this change given in the EA is, "by shifting the divide between the PAG WRDF and the LGO Stockpile to 22 the south to correspond with the natural drainage." (EA, pg. 2-5). GBRW finds this very brief statement to be insufficient. It is reasonable to assume that the increase of 154 acres of the PAG WRDF might be to accommodate additional PAG waste. However, the EA does not suggest this at all. If there is a need for more PAG capacity, then what new analysis has been done that forces this change to the mine plan? Is there more PAG rock than previously supposed? The EA needs to confirm whether there is expected to be a greater amount of PAG waste rock and the analysis which lead to this conclusion. If, as seems likely, that additional PAG rock will be generated than that predicted by the FEIS, then the BLM must prepare a revised geochemical analysis from that prepared for the FEIS. The EA should also discuss the new analysis that leads to the need to shift the boundary of the PAG WRDF. What changed since 2012? The natural drainage of the region was well established in the existing analysis. What is the new analysis that requires the shifting in the boundary, especially in the western boundary? GBRW was able to very briefly review the amended Plan of Operations (Mount Hope Project Plan of Operations Amendment and Application for Reclamation Permit Modification, NVN – 082096) and we notes that we did not see an indication of an increase in PAG waster rock. However, the EA, as the primary public document, needs to confirm whether this is the case.	As stated in the approved Plan of Operations, upgradient water would be diverted around the PAG WRDF and LGO Stockpile. The original diversion design routed water from the northern portion of the water shed above the PAG WRDF and LGO Stockpile in a northerly direction around the PAG/LGO facility; the original design routed water from the southern portion of the upgradient water shed in a southerly direction around the PAG WRDF and LGO Stockpile. The revised design routes water from the northern portion of the water shed in a southerly direction, and routes water from the southern portion of the watershed in a northerly direction. The confluence of these diversion structure components would be at the existing drainage, immediately upgradient of the PAG WRDF and LGO stockpile. Thus, reconfiguration of the PAG WRDF and LGO Stockpile allows the water to be directed into the existing drainage, and this natural drainage would be used to convey the diverted water offsite. The changes in acreage of the PAG WRDF and LGO Stockpile were only to address this storm water drainage. There are no proposed change to the volumes of PAG or LGO.

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	C-6	Unauthorized disturbance areas The EA states the following, "The unauthorized disturbance totals 153 acres and is generally associated with powerlines, water lines, roads, collection channels, and ancillary facilities. Figure 1.3.1 shows the location of existing authorized and unauthorized disturbance in the Project Area." (pg. 1-4). The legend of this figure does not contain a key for unauthorized disturbances. Figure 1.3.1 needs to be revised to clearly show the areas of unauthorized disturbance.	Figure 1.3.1 does show the existing disturbance at the Project, which includes the total unauthorized disturbance. Figure 2.2.1 shows the breakdown of the unauthorized disturbance. For the perspective of NEPA, the potential impacts of the process and unauthorized disturbance has been fully disclosed based on the information presented in the EA. The surface disturbance that was constructed by EML outside of the approved surface disturbance footprint is being addressed by the BLM through their non-compliance process.
	C-7	Scoping process The EA was internally scoped as stated on pg 1-7, "by the BLM interdisciplinary team at a meeting held on July 31, 2014, at the BLM office in Battle Mountain." Given the controversial nature of the Mt. Hope project GBRW sees this kind of scoping as inadequate. There should have been a public process prior to the release of the EA.	The scoping process for the Plan of Operations was consistent with BLM guidance in the NEPA Handbook and regulations.
	C-8	Fresh Water Booster Station The addition of this booster station implies a need for more electrical power. The EA needs to revise the power requirements for the mining operation and include this change in the EA. The analysis of the need for the booster station needs to be at least cited as well.	Electrical power demand for fresh water supply is a function of pump efficiency, the amount of water pumped, and total dynamic head. Total dynamic head is primarily a function of the "lift", or increase in elevation over which the water will be pumped, and frictional resistance in the pipelines. The addition of a booster station will not result in increased power demand. The additional booster station is based on engineering optimization of the pumping system and for the reduction of pressure in the pipeline between the booster station at the northern end of the wellfield and the plant site.

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	C-9	Construction Water Supply and Storage The EA states, "The fresh water pipeline would deliver water to five construction water ponds CWPs), of which two would be located within the mill footprint (CWP #1 and CWP #2), one would be located within the PAG WRDF and LGO Stockpile footprints (CWP #3), and two (CWP #4 and CWP #5) would be located within the South TSF footprint." (pg. 2-11). It is not clear why is there to be construction of a water pond within the PAG WRDF? The EA should clarify this aspect of the mine plan.	The construction water pond to be located within the footprint of the PAG WRDF would allow storage of water during construction of facilities in that area. Ponds located close to the various construction areas will allow efficient and timely use of water for dust suppression. Additionally, water will be used in the PAG and LGO areas for soil conditioning necessary to achieve the liner design criteria. The pond would be removed as the PAG and LGO facilities expand beyond initial construction phases. This is made clear by comparison of Figures 2.1.1 (Life of Mine footprint) and Figure 2.1.2 (3 Year footprint) in the EA.
	C-10	Water Quality, Surface and Ground GBRW does not agree with the following state from the EA, "Activities associated with the Proposed Action would not impact ground water quality since there are no proposed facilities or disturbance that would include contact with the ground water table either through direct contact or draindown." (pg. 3-4) As stated in our comments on the draft and Final EIS for the Mt. Hope mine GBRW anticipates significant water quality problems in the long term. The US EPA in their comments on this mine also had similar concerns. The need for the Long-Term Funding Mechanism is also an indication of anticipated long-term water contamination at the Mt. Hope site. The EA contains changes to the mine plan, in particular, the reconfiguration of the PAG WRDF and LGO stockpile, which could impact surface and groundwater. The EA needs to address these potential impacts, especially if there is to be an increase in the amount of PAG waste rock.	The PAG WRDF and the LGO, as well as the associated seepage collection pond are lined facilities. Therefore, none of the seepage would be able to infiltrate to the ground water table. Please refer to the Mount Hope Project Final EIS (BLM 2012) regarding comments and responses on that NEPA document.
		Greater Sage-Grouse In the noise analysis relative to affected sage grouse leks the EA states, "Noise levels at all four lek locations were determined to be below 30 decibels when calculated for all above ground pumps." (pg. 3-17) Noise level should be measured and not based on calculations, unless there is clear evidence of the accuracy of noise modeling under the conditions at the site. BLM needs to get the data to assure that sage grouse will not be affected.	The only way to determine noise levels in the future, prior to the construct of facilities (i.e. pumps) is to model the potential impacts, since there are no noises to measure. Noise monitoring will also be conducted once the facilities are in place (see EA Section 3.2.10.2).

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	C-12	Conclusion As noted in the above comments and previous GBRW/WSDP comments and litigation filings, the current and now this proposed Project violate federal law and cannot be approved.	Comment noted. See response to C-2. BLM does not view the current comment as raising any specific substantive issue in relation to the EA that needs a further response.