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

Preliminary Environmental Assessment
DOI-BLM-NV-L030-2013-0031-EA
January 2014

GOLD SPRINGS, LLC
GOLD SPRINGS EXPLORATION PROJECT

Location:

Lincoln County, Nevada

Applicant/Address:

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BLM

Gold Springs, LLC
Gold Springs Exploration Project

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Appendix B: **BLM Ely District Recommended Bird Nest Buffer Sizes**

Appendix C: **Noxious and Invasive Weeds Risk Assessment**

1 INTRODUCTION

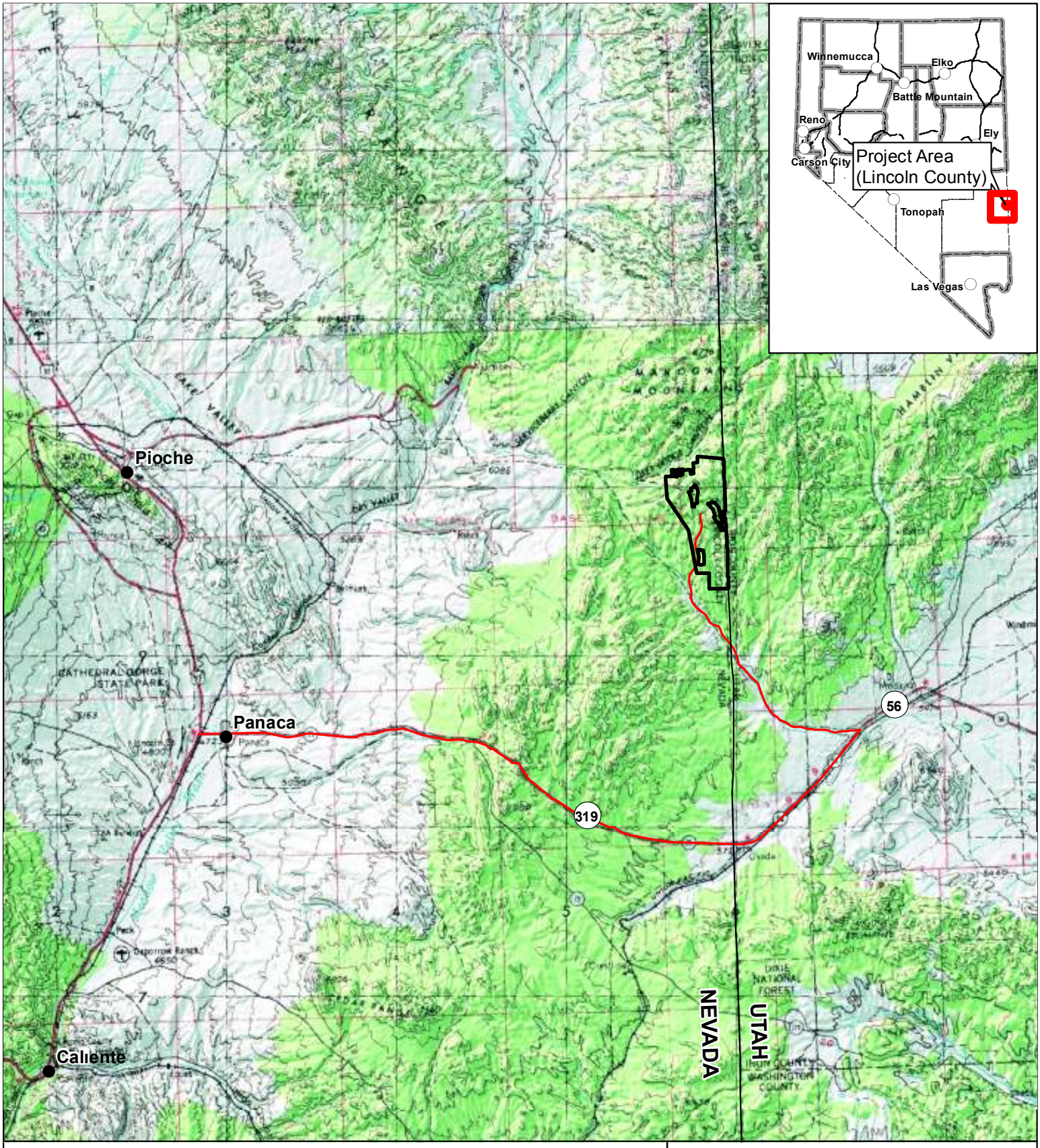
This Environmental Assessment (EA) analyzes the Gold Springs, LLC (GSLLC) proposal relative to the Gold Springs Exploration Project (Project). The EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the proposed action. The EA assists the Bureau of Land Management (BLM) in project planning and ensuring compliance with the National Environmental Policy Act of 1969 (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by the NEPA and is found in Chapter 40 of the Code of Federal Regulations (CFR) §1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI).

1.1 Background

GSLLC has been conducting surface disturbing activities in the Project Area under two mineral exploration Notices: the Deer Lodge Notice (#NVN-090793) and the Midnight Notice (#NVN-090873). Notice-level activities include construction of drill sites and sumps, new road construction, and trench construction for a total surface disturbance of nine acres on public land. GSLLC proposes to conduct additional exploration-related activities in phases that would create approximately 90 acres of new surface disturbance subject to reclamation. The as-built/acknowledged and proposed surface disturbance for the Project would total 100 acres. As-built disturbance is existing roads and/or drill sites that are existing (or have been constructed under the proponent's Notice), and acknowledged disturbance is roads and/or drill sites that have been approved by the BLM in the proponent's Notice but have not yet been constructed.

The combined acres of as-built/acknowledged and proposed surface disturbance on BLM-administered land would be greater than five acres; therefore, in May 2013 (revised July 2013), GSLLC submitted Plan of Operations #NVN–092216/Nevada Reclamation Permit application (Plan) to the BLM and the Nevada Division of Environmental Protection (NDEP), Bureau of Mining Regulation and Reclamation (BMRR) in accordance with the BLM's Surface Management Regulations 43 CFR 3809, as amended, and the Nevada reclamation regulations under Nevada Administrative Code (NAC) 519A.

The Project is located approximately 20 miles northeast of the town of Panaca, Nevada, and approximately 25 miles northeast of Caliente, Nevada, at elevations ranging between approximately 6,230 feet above mean sea level (amsl) to 7,660 feet amsl. The Project boundary encompasses all or portions of Sections 24, 25, and 36, Township 1 North, Range 70 East (T1N, R70E), Sections 19, 20, and 29 through 32, T1N, R71E, and Sections 4, 5, 8, 9, 16, and 17, T1S, R71E, Mount Diablo Base and Meridian, in Lincoln County, Nevada (Project Area). The Project Area includes approximately 4,187 acres and is located entirely on public land administered by the BLM Ely District, Caliente Field Office. Figure 1.1.1 shows the Project location and access. Figure 1.1.2 shows the land ownership status.



Explanation

- Project Area
- Access Roads
- Cities

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GOLD SPRINGS EXPLORATION PROJECT

Project Location and Access

Figure 1.1.1

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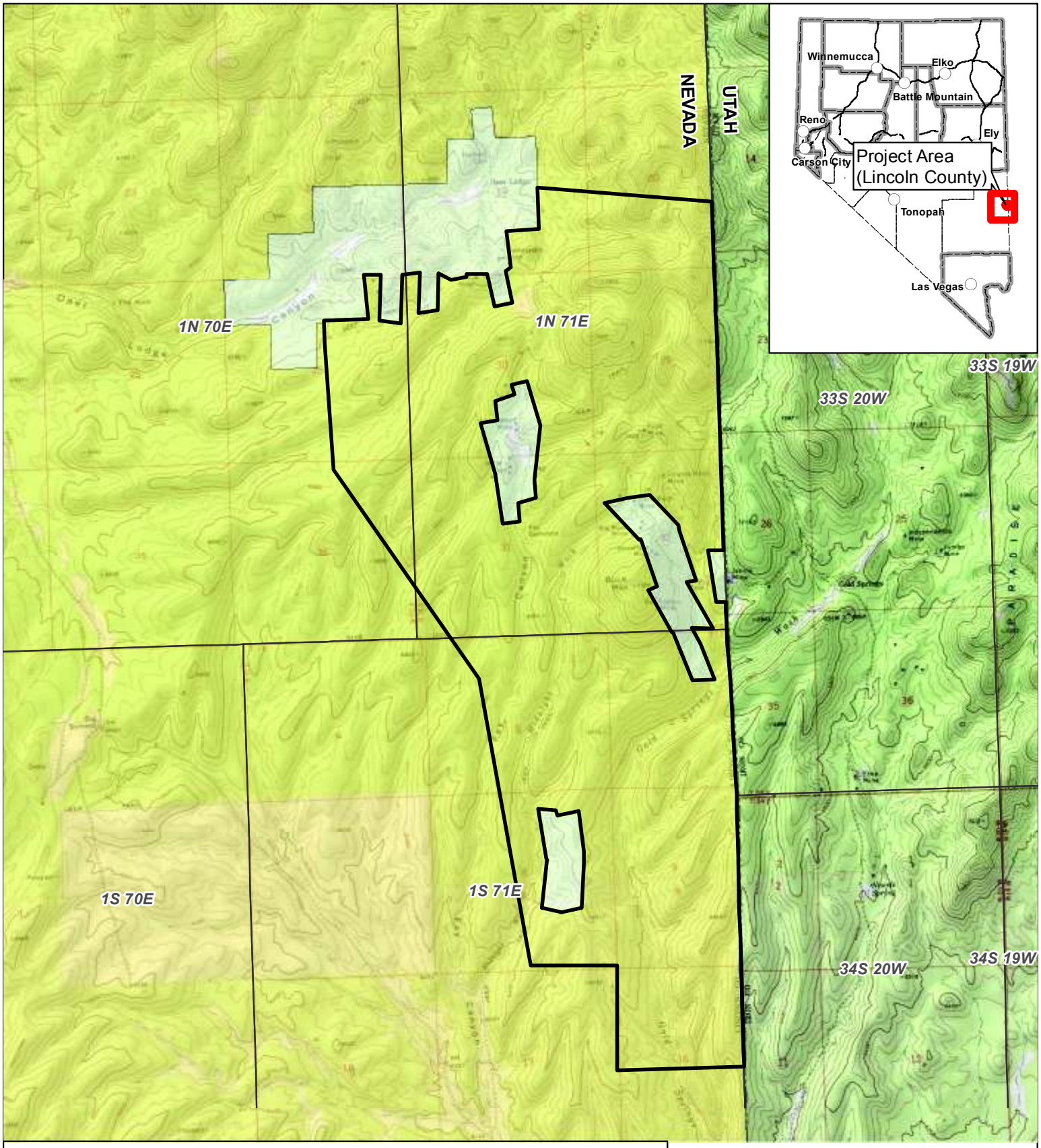

Explanation

- Project Area
- Bureau of Land Management
- Private

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GOLD SPRINGS EXPLORATION PROJECT

Land Ownership Status

Figure 1.1.2

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1.2 Purpose and Need for Action

The purpose of the Proposed Action is to provide GSLLC the opportunity to conduct exploration activities on their unpatented mining claims on public lands as provided under the General Mining Law of 1872, as amended (Mining Law).

The need for the action is established by the BLM's responsibility under Section 302 of the Federal Land Policy and Management Act of 1976 (FLPMA) and the BLM Surface Management Regulations at 43 CFR 3809, to respond to an exploration plan of operations and to take any action necessary to prevent unnecessary or undue degradation of the lands.

1.3 Decision to be Made

The decision the BLM would make is whether to approve GSLLC's Plan and authorize exploration activities, as proposed, approve the Plan with stipulations, or to not approve the Plan per 43 CFR 3809.411. The decision may include additional mitigation measures that are identified as a result of the analysis presented in this EA in order to prevent unnecessary or undue degradation of public lands, protect sensitive resource values, and provide for reclamation of disturbed areas. The BLM may disapprove the Plan and not authorize the exploration activities if it is found that the proposal does not comply with the 3809 regulations and the FLPMA mandate to prevent unnecessary or undue degradation.

1.4 Conformance with Land Use Plan and Other Plans

The Proposed Action described in this EA is in conformance with the BLM Ely District's Record of Decision (ROD) and Approved Resource Management Plan (RMP) (BLM 2008a). Specifically, on page 100 in the RMP, under the heading "Geology and Mineral Extraction" subtitled "Parameter – Locatable Minerals" MIN-14:

> "Open to locatable – Allow locatable mineral development on approximately 9.9 million acres of federal mineral estate, subject to the prevention of unnecessary or undue degradation of public lands."

1.5 Relationships to Statutes, Regulations, and Other Plans

The Lincoln County Public Lands Policy Plan (originally developed in 1997) was developed in response to Nevada Senate Bill 40 (1983), which directs counties to develop plans and strategies for resources that occur within lands managed by federal and state agencies. Policy 7-1 states: "Encourage the development and production of Lincoln County's mineral resources while recognizing the need to conserve other environmental resources and multiple uses of the public land" (Lincoln County 2010).

1.6 Identification of Issues

While many issues may arise during scoping, not all of the issues raised warrant analysis. Issues raised through scoping are analyzed if:

- Analysis of the issue is necessary to make a reasoned choice between alternatives;
- The issue is significant (an issue associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of impacts); or
- If there is a disagreement about the best way to use a resource, or resolve an unwanted resource condition, or potentially significant effects of a proposed action or alternative.

Internal scoping was conducted by an interdisciplinary team that analyzed the potential consequences of the Proposed Action. Potential impacts to the following resources/concerns were evaluated in accordance with criteria listed above to determine if detailed analysis was required. Consideration of some of these items is to ensure compliance with laws, statutes or executive orders that impose certain requirements upon all federal actions. Other items are relevant to the management of public lands in general and to the Ely District BLM in particular.

Table 1.6-1: Summary of Supplemental Authorities and Other Elements of the Human Environment

Resource/Concern	Issue(s) Analyzed? (Y/N)	Rationale for Dismissal from Detailed Analysis or Issue(s) Requiring Detailed Analysis
Air Quality	N	There would be temporary increased particulate matter (dust) resulting from surface disturbing activities. The affected area is not within an area of non-attainment or areas where total suspended particulates or other criteria pollutants exceed Nevada air quality standards. The proponent has obtained a Surface Area Disturbance Permit (#AP1041-3412) from the NDEP Bureau of Air Pollution Control, which includes a dust control plan to mitigate dust. Direct, indirect, or cumulative impacts would not approach a level of significance. Further analysis is not required.
Areas of Critical Environmental Concern	N	Not present.
Cultural Resources	Y	A Class III cultural resources inventory was conducted within the proposed disturbance areas of the Project Area. A Programmatic Agreement (PA) has been developed to direct all future Section 106 actions associated with this Project (Appendix A).

Resource/Concern	Issue(s) Analyzed? (Y/N)	Rationale for Dismissal from Detailed Analysis or Issue(s) Requiring Detailed Analysis
Forest Health	N	The Project does not meet Healthy Forests and Rangeland Act criteria.
Migratory Birds, including bald and golden eagles, and BLM sensitive species	Y	See Section 3.3.4.
Native American Religious Concerns	No	Letters were sent to 18 Tribes on November 7, 2013. A letter requesting a site visit by the Duckwater Shoshone Tribe was received by the BLM on December 9, 2013. No further analysis is required.
Wastes, hazardous or solid	N	The Project would involve the use of diesel fuel, gasoline, hydraulic fluids, lubricating grease, and possibly herbicides to eradicate weeds, if found. The Project would be required to comply with all federal, state, and local laws and regulations regarding the use and spills of hazardous substances, as well as transport. Solid waste would be removed and transported to an authorized off-site landfill facility. Portable toilets would be used at the Project site and would be maintained by a Nevada-based contractor. Protection measures have been incorporated into the Project design standards to reduce any impacts to hazardous or solid wastes. No further analysis is required.
Water Quality, Drinking/Ground (Water Resources, Water Rights)	N	Best Management Practices (BMPs) for road and drill pad construction would be utilized to reduce any impacts from erosion and sedimentation resulting from surface disturbing activities. In addition, the potential for spilled petroleum products are minimized by implementation of the Project's Spill Contingency Plan. If ground water is encountered during drilling activities, the hole would be plugged as a well pursuant to NAC 534.420. No impacts to surface or ground water quality are anticipated from the Proposed Action. In addition, water resources or water rights would not be affected. No further analysis is required.
Environmental Justice	N	The Project Area is located in a remote portion of Lincoln County, approximately 25 miles northeast of Caliente. No minority or low-income groups would be disproportionately affected by health or environmental effects. No further analysis is required.
Floodplains	N	Not present.
Farmlands, Prime and Unique	N	Not present.

Resource/Concern	Issue(s) Analyzed? (Y/N)	Rationale for Dismissal from Detailed Analysis or Issue(s) Requiring Detailed Analysis
Wetlands/Riparian Zones	N	Not present.
Invasive, Nonnative Species	Y	See Section 3.3.2.
Wilderness/WSA	N	Not present.
Human Health and Public Safety	N	The Project may use herbicides to eradicate weeds for the Project; however, Executive Order (EO) 13045, "Protection of Children from Environmental Health Risks and Safety Risks," would not apply to this Project as there would be no children at the site. There would be negligible impacts to public access to the area during construction activities. No further analysis is required.
Wild and Scenic Rivers	N	Not present.
Special Status Animal Species, other than those listed or proposed by the United States Fish and Wildlife Service (USFWS) as Threatened or Endangered.	N	Based on the absence of quality pygmy rabbit (*Brachylagus idahoensis*) habitat and pygmy rabbit sign, the Proposed Action is unlikely to affect pygmy rabbits or their habitat, or contribute to the listing of this species as Threatened or Endangered. The Project Area is not located within Preliminary Priority Habitat or Preliminary General Habitat for greater sage-grouse (*Centrocercus urophasianus*) as determined by the NDOW habitat characterization data. In addition, no BLM sensitive animal species were identified in the Project Area during 2012 field surveys. No further analysis is required.
Special Status Plant Species, other than those listed or proposed by the USFWS as Threatened or Endangered.	Y	See Section 3.3.6.
Fish and Wildlife	Y	See Section 3.3.8.
Wild Horses	N	The Project Area is located within the Eagle Herd Management Area. Wild horses would be expected to move away from Project-related activities and return to the area once activities cease. No further analysis is required.
Soils	Y	See Section 3.3.5.
Visual Resources	N	The Project Area is within Visual Resource Management Class IV. The Project would meet Class IV objectives, and no additional impacts are anticipated from the Project. No further analysis is required.

Resource/Concern	Issue(s) Analyzed? (Y/N)	Rationale for Dismissal from Detailed Analysis or Issue(s) Requiring Detailed Analysis
Livestock Grazing	N	The Project Area is located within the Mahogany Peak Grazing Allotment (01040). This allotment is permitted for 718 active animal unit months (AUMs). Loss of key grazing forage would be minimal; therefore, the active AUMs would not have to be adjusted as a result of the Project. No further analysis is required.
Lands and Realty	N	Land is managed for multi-use. The Proposed Action is within the scope of the current land use designation. The land use designation is not changed by the Proposed Action. No further analysis is required.
Lands with Wilderness Characteristics	Y	See Section 3.3.3.
Recreation	N	The Proposed Action would not preclude dispersed recreation opportunities within the Project Area and vicinity as the roads would remain open for use and the Project Area would not be fenced. In addition, no annual commercial or competitive Special Recreation Permit events occur within the Project Area, so there would be no conflicts between organized recreation events and drilling activities. No further analysis is required.
Fire Management	N	The Proposed Action would not have an impact on fire management in the region. No further analysis is required.
Social Values and Economics	N	The Proposed Action would have a negligible impact on social values and economics in the vicinity of the Project Area. No further analysis is required.
Paleontological Resources	N	There are no known paleontological resources in the Project Area. A protection measure is included in the Proposed Action for unanticipated discoveries. No further analysis is required.
Geology/Mineral Resources	N	The Project would not involve the removal of large volumes of earth that could potentially lead to structural instability. Minerals removed from exploration drill holes and trenches would be minimal. No further analysis is required.
Vegetative Resources	Y	See Section 3.3.7.

2 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

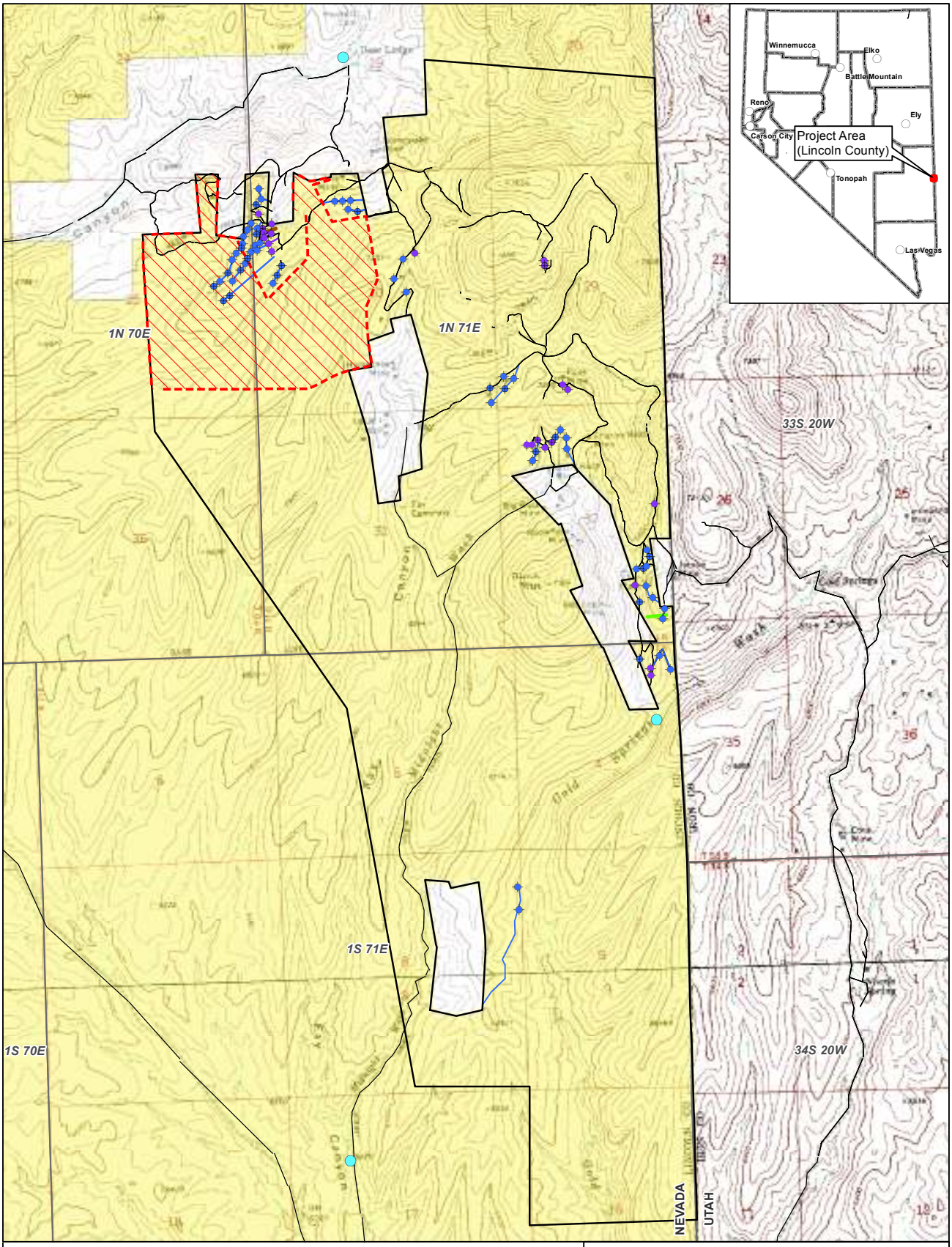
2.1 Introduction

The previous chapter presented the purpose and need of the proposed Project, as well as the relevant issues, (i.e., those elements that could be affected by the implementation of the proposed Project). In order to meet the purpose and need of the proposed Project in a way that resolves the issues, the BLM has developed a range of alternatives. These alternatives, as well as a no action alternative, are presented below. The potential environmental impacts, or consequences, resulting from the implementation of each action alternative are then analyzed in Chapter 3 for each of the identified issues.

2.2 Alternative A - Proposed Action

The Proposed Action consists of expanding existing Notice-level exploration activities on public land within the 4,187-acre Project Area. Expanded exploration activities would include the following: exploration drilling; construction of roads, drill pads and sumps; potential installation of ground water monitoring wells and a meteorological station; and utilization and maintenance, as necessary, of existing roads used to access the exploration sites. The Proposed Action would increase the existing Notice-level surface disturbance of approximately nine acres to a total of 100 acres. Figure 2.2.1 shows the as-built/acknowledged disturbance and proposed Phase I disturbance areas. The increased amount of disturbance would occur in phases over a ten-year period. Project activities would be located on lands administered by the BLM. Surface disturbance under subsequent phases cannot be specified at this time because the specific locations would be based on the results of Phase I activities. The as-built/acknowledged and proposed surface disturbance is outlined by type of activity in Table 2.2-1.

As outlined in Table 2.2-1, GSLLC has projected that the total as-built/acknowledged, proposed Phase I, and subsequent surface disturbance would total approximately 100 acres. By using a phased approach to drilling, GSLLC would assess the expansion needs of the Project based on current drill results. In order to provide the BLM with relevant information concerning the location and types of surface disturbance and to avoid sensitive resources under each phase, GSLLC would provide documentation (i.e., work plans and maps) for the areas of planned exploration prior to commencing the proposed exploration activities. The BLM would provide a review and approval of each submittal prior to the initiation of activities under each work plan. In addition, GSLLC would provide to the BLM and NDEP an annual report on, or before, April 15th of each year that documents surface disturbance locations, types of surface disturbance, and any completed concurrent reclamation.



Explanation

- Project Area
- Proposed Phase 1 Disturbance Area
- Project Water Sources
- Acknowledged Drill Site
- As-built Drill Site
- Acknowledged Road
- As-built Road
- Acknowledged Trench
- As-built Trench
- Existing Access Road

Land Status

- Bureau of Land Management
- Private

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As-built/Acknowledged Disturbance and Proposed Phase 1 Disturbance Area

Figure 2.2.1

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Table 2.2-1: Acreage of As-built/Acknowledged and Proposed Project Surface Disturbance

Disturbance Component	Surface Disturbance (acres)			
	As-built/ Acknowledged	Proposed Phase I	Subsequent Phases	Total
Constructed Roads	5.4	24.0	43.2	73.6
Constructed Drill Sites including Sumps and Spoil piles	3.3	6.6	10.2	21.1
Trenches and Bulk Sampling	0.3	0	0.5	0.8
Monitoring Well Sites	0	0	5.2	5.2
Production Water Well Sites	0	0	1.0	1.0
Meteorological Station	0	0	0.3	0.3
Total	**9.0**	**30.6**	**60.4**	**100.0**

2.2.1 Project Access

The Project is accessed by traveling approximately 14 miles north on U.S. Highway 93 (U.S. 93) from Caliente, Nevada, then turning right at Panaca, Nevada, on Nevada State Route (SR) 319 /Utah SR 56, and traveling approximately 25 miles. The Project is then accessed by Gold Springs Road at Mile Post 6.5 off SR 56, and is traveled approximately ten miles to the Project Area. Access within the Project Area is provided by existing dirt roads, existing Notice-level roads, and proposed new road construction. Figure 1.1.1 shows access to the Project from Caliente, Nevada.

2.2.2 Drill Sites and Drilling Procedures

Drill sites would have working areas that measure approximately 50 feet long by 30 feet wide. GSLLC proposes to construct drill sites with these surface disturbance dimensions in Phase I. Drill sites would be the minimum size necessary for safe access and to provide a safe working area for equipment and crews. A sump would be constructed within each drill site disturbance area with the approximate dimensions of ten feet long by six feet wide by ten feet deep to contain manage water and drill cuttings generated during drilling. The sumps would be built with an incline on one end so that entrapped animals could easily exit the sump.

GSLLC would conduct exploration drilling with up to four drill rigs in combinations of reverse circulation (RC) and core drill rigs. Drill holes would be vertical or angled and drilled primarily with RC rigs and possibly core drill rigs. Drill holes would have an

average depth of 400 feet. Once the drill rig has completed drilling the hole, the hole would be plugged. Up to four RC rigs would be used for Phase I activities. Drill holes would be plugged in accordance with Nevada Revised Statutes (NRS) 534, NAC 534.4369, and NAC 534.4371, or if ground water is encountered, plugged as a well pursuant to NAC 534.420. Based on previous drilling in the area, the depth to ground water is estimated at 400 feet below ground surface. If casing is set in a borehole, the borehole would be completed as a well pursuant to the provisions of Chapter 534 of the NAC. The borehole would be plugged pursuant to NAC 534, or the casing would be removed from the borehole when it is plugged. The upper portion of the borehole may be permanently cased if the annular space between the casing and the walls of the borehole is completely sealed from the bottom of the casing to the surface pursuant to NAC 534.380.

GSLLC would follow standard drilling procedures and require a company representative to be on site or on call throughout drilling activities. The company representative would monitor and coordinate the layout and construction of each drill site, the setup of the drill rig, drilling progress, demobilization, and cleanup of the drill site. A company geologist would also coordinate drilling activities, log each hole according to the geologic features encountered, determine the maximum depth of each hole, and advise the drill operator as needed. The company representative and geologist would travel to and from each drill site in separate four-wheel drive pickup trucks.

2.2.3 Road Construction

Due to the steep topography in the Project Area, overland travel would not be practical throughout most of the area; therefore, the Project Area would primarily be accessed via existing pre-1981 roads, existing roads constructed under Notice-level activities (Figure 2.2.1), and proposed constructed roads. Roads would be built with a 14-foot running surface including safety berms, as necessary.

Exploration roads that require earth-moving would be constructed using typical construction practices for temporary mineral exploration roads to minimize surface disturbance, erosion, and visual contrast, as well as to facilitate reclamation. Road construction would be implemented using a Caterpillar dozer, motor grader, excavator, backhoe, or equivalent equipment. Road grades would be no steeper than ten percent, except for short drill spurs, in order to be consistent with the BLM roads manual (BLM 2011).

Balanced cut and fill construction would be used to the extent practicable to minimize the exposed cut slopes and the volume of fill material. Since the depth of cut would be kept to a minimum, growth media removed during construction would be stockpiled as the fill slope or placed immediately above the cut to be used during reclamation. Trees removed during the construction of drill roads would be stockpiled and used during reclamation of the roads for slope stabilization and to act as waterbars. Road construction within drainages would be avoided whenever possible. When drainages must be crossed with a road, BMPs established by the NDEP and the Nevada Division of Conservation Districts through the State Environmental Commission (1994) would be followed to minimize the

surface disturbance and erosion potential. Culverts would generally not be installed on exploration roads. However, if a culvert is necessary, the placement and size would be approved by the BLM and BMRR. No culverts are required for Phase I drilling. It is not anticipated that blasting would be necessary to construct roadbeds. If blasting of exploration roads should become necessary, prior to blasting, the operator would submit an approved safety plan to the NDEP.

Maintenance of existing roads would include minor seasonal regrading and reestablishment of waterbars as necessary, as outlined in BLM Manual 9113. Erosion control would be monitored in the spring and fall, or after any heavy precipitation event. Maintenance of existing roads would not increase the surface disturbance within the Project Area and would consist of smoothing rutted surfaces and holes on existing access and drill roads. Maintenance of existing pre-1981 roads would be conducted only on an as-needed basis and would include minor seasonal regrading and maintenance of drainage features as necessary. If road gravel is necessary to improve some of the roads in the area, the gravel would be obtained from a location on private land, potentially located in Section 19, T1N, R71E, and Section 8, T1S, R71E. The gravel would be placed on the road by a dump truck and smoothed by a road grader.

2.2.4 Equipment

GSLLC anticipates that the following types of equipment would be used at the Project:

- Up to four drill rigs (RC and core);
- Up to four 5,000-gallon water trucks;
- Two Caterpillar D-8 bulldozers or equivalent;
- One backhoe;
- Two excavators;
- Up to four water tanks;
- Up to two water pumps on trailers;
- Up to four pipe trucks;
- Up to four rod trucks;
- Up to four casing trailers;
- Up to two mud trailers;
- Two office trailers;
- One storage trailer;
- Up to two auxiliary compressor trailers;
- Up to six portable light plant/generators;
- Up to two downhole survey trucks;
- Two service trucks; and
- Up to ten pickups or one-ton trucks.

Generally, earthwork would be completed with a Caterpillar motor grader, backhoe, or equivalent equipment, and revegetation would be completed with an all-terrain vehicle with a seed broadcaster, or comparable method. GSLLC would take steps to prevent fires

by ensuring that each field vehicle carries hand tools and a fire extinguisher. Water trucks at the Project Area would be used in the event of a fire. All portable equipment, including drill rigs, support vehicles, and drilling supplies, would be removed from the Project Area during extended periods of non-operation.

2.2.5 Work Force

Standard drill rig crews usually consist of one drill operator and one to two helpers. The helpers remove and box the recovered core samples, the cuttings from RC rigs, mix drilling fluids in the portable mud tank, operate the water truck, assist with drilling operations, and conduct maintenance as necessary. The crew would be transported to and from the drill site in up to three four-wheel drive vehicles per drill rig or a drilling company operated crew van. Over the life of the Project, up to four drill rigs (RC and core) are expected to be in operation at the Project site at any given time. Up to a total of 24 individuals would be working at the Project site at a given time, including geologists and supervisors employed by GSLLC, and up to 12 drill operators and helpers. Drilling activities would generally be limited to daylight hours but could continue up to 24 hours per day for some drill rigs.

2.2.6 Water Use and Management

Water would be used during drilling to cool the drill bit and remove drill cuttings. Water would be utilized with or without nontoxic drilling additives. Under written agreements, GSLLC would obtain water from three sources: a private well owned by Mr. Dan Maxwell; surface water rights owned by Ms. Lynette Taylor along Deer Lodge Creek; and from a windmill site also owned by Ms. Lynette Taylor. Only one site is located within the Project Area boundary (Figure 2.2.1). GSLLC would access the water sources by transporting water to the drill sites using up to four 5,000-gallon water trucks. GSLLC estimates that approximately 500 gallons of water per day would be utilized for core drilling and approximately 3,000 gallons per day would be utilized for RC drilling. The Project could potentially have as many as four drill rigs in a combination of RC and core rigs. Therefore, the daily drill water requirement could be as much as 12,000 gallons per day. Up to four 5,000-gallon water trucks would be utilized for water transport. This water use would only occur during active drilling. Drill fluids would be managed with the use of sumps at each drill site and all cuttings would be contained. BMPs for sediment control would be utilized during construction, operation, and reclamation to minimize sedimentation from disturbed areas. Proposed construction and drilling activities would avoid springs and seeps, if present. In order to facilitate proper drainage and prevent erosion, all bladed roads would have waterbars constructed, as needed, at BLM-recommended spacings.

Sediment control structures may include, but not be limited to, fabric or certified weed-free straw bale filter fences, siltation or filter berms, sumps, and downgradient drainage channels in order to prevent unnecessary or undue degradation to the environment. Sumps would be used to contain drill cuttings and manage water within the drill pad disturbance.

2.2.7 Surface Occupancy

Under 43 CFR 3710 Subpart 3715.0-5, occupancy means full or part-time residences on the public lands. Occupancy also means activities that involve residence; the construction, presence, or maintenance of temporary or permanent structures that may be used for such purposes; or the use of a watchman or caretaker for the purpose of monitoring activities. Residence or structures include, but are not limited to, barriers to access, fences, tents, motor homes, trailers, cabins, houses, buildings, and storage of equipment or supplies.

Surface occupancy activities under this Plan, including those activities covered under 43 CFR 3710 Subpart 3715.0-5, may include the following:

- The development of ground water monitoring wells, which would each have surface features including casing, well head cover, and protection posts as needed;
- The development of ground water piezometers, which would each have surface features including casing, electrical connections, and protection posts as needed;
- The development of ground water production wells, which would each have surface features including casing, well head covers, electrical connections, and protection posts as needed.

The development of a monitoring well system and exploration for potential water supplies are an integral aspect of evaluating the economic viability of any gold resources delineated during the exploration phase. The absence of water or poor water quality could negatively impact a future project.

The period of use would continue until either the exploration Project ends or the exploration Project is converted into a mine development project. If the Project ends unsuccessfully then the drill holes would be abandoned at that time in accordance with state and federal regulations. If the Project moves forward then the wells would continue to operate until the mining operation is closed, in which case their closure would be included in the mining plan of operations.

2.2.8 Water Monitoring Wells

Drilling of water monitoring wells would not be done under Phase I. Well sites are estimated to each require a disturbance area of approximately 50 feet long by 50 feet wide. Any monitoring wells would be plugged in accordance to NAC 534.420 once they are no longer needed.

2.2.9 Meteorological Station

GSLLC could install and operate a meteorological station under subsequent phases of the Project. The meteorological station would have the approximate dimensions of 50 feet long by 30 feet wide.

2.2.10 Solid and Hazardous Materials

All refuse generated by the Project would be disposed of at an authorized off-site landfill facility, consistent with applicable regulations. No refuse would be disposed of on site. Water or nontoxic drilling fluids, additives, gels, and abandonment materials would be utilized as necessary during drilling and would be stored within the Project Area.

Hazardous materials utilized at the Project Area would include diesel fuel, gasoline, and lubricating grease. Approximately 500 gallons of diesel fuel would be stored in fuel delivery systems on vehicles and drill rigs. Approximately 100 gallons of gasoline would be stored in fuel delivery systems for light vehicles. Approximately 100 pounds of lubricating grease would be stored on the drill rigs or transported by drill trucks. All containers of hazardous substances would be labeled, handled, and stored in accordance with the Nevada Department of Transportation and Mining Safety and Health Administration. In the event that a reportable quantity of hazardous or regulated materials, such as diesel fuel, is spilled, measures would be taken to control the spill, and the BLM, NDEP, and the Emergency Response Hotline would be notified, as required. If any oil, hazardous material, or chemicals are spilled during operations, they would be cleaned up in a timely manner. After clean up, the oil, toxic fluids, or chemicals and any contaminated material would be removed from the site and disposed of at an approved disposal facility.

2.2.11 Reclamation

Reclamation would be completed to the standards described in 43 CFR 3809.420 and NAC 519A. Reclamation would meet the reclamation objectives as outlined in the U.S. Department of Interior Solid Minerals Reclamation Handbook #H-3042-1 (BLM 1992), revegetation success standards per BLM/NDEP “Revised Guidelines for Successful Mining and Exploration Revegetation” (BLM 1999), and Surface Management Handbook H-3809-1 (BLM 2012). Existing roads would be utilized as much as possible, minimizing the need for road construction. All GSLLC drill sites, sumps, and road construction would be recontoured, decompacted through ripping, and seeded and harrowed, where appropriate. Concurrent reclamation would be conducted when feasible.

Reclamation would be designed to achieve post-exploration land uses consistent with the BLM's land use management plans for the area. Reclamation is intended to return disturbed land to a level of productivity comparable to pre-exploration levels. Post-exploration land use includes wildlife habitat, hunting, mining, and dispersed recreation. The post-exploration land use is expected to be the same as pre-exploration land use.

During exploration activities, reclamation would involve management of drilling activities to contain cuttings and manage drilling fluids, monitor road conditions, and keep sites clean and safe. During seasonal closure of the Project and periods of inactivity between drilling phases, reclamation would involve filling sumps, cleaning sites, and maintaining the overall safety of the Project Area. The BLM and BMRR would be notified prior to any periods of inactivity greater than 120 days.

Regrading and reshaping of all constructed drill sites and exploration roads would be completed to approximate the surrounding topography. Fill material would be pulled onto the roadbeds to fill the road cuts and restore the slope to natural contours. Roads and drill sites would be regraded and reshaped with an excavator.

Should any drainage be disturbed, it would be re-shaped to approximate the pre-construction contours. The resulting channels would be of the same capacity as up and downstream reaches and would be made to prevent erosion, and ultimately revegetated. Following completion of earthwork, all disturbed areas would be recontoured, decompacted through ripping, and seeded and harrowed, where appropriate.

After exploration activities are terminated, reclamation would involve regrading surface disturbances related to this Project to their approximate original contour and seeding using the approved reclamation seed mixture and application rates furnished by the BLM (Table 2.2-2). Yearly visits to the site would be conducted to monitor the success of the revegetation for a period of up to three years or until revegetation success has been achieved, based on the guidelines set forth in the Nevada Guidelines for Successful Revegetation for the Nevada Division of Environmental Protection, the Bureau of Land Management, and the U.S.D.A. Forest Service (NDEP 1998).

Table 2.2-2: Anticipated BLM Seed Mix

Species	Common Name	PLS (lbs/acre)
Poa fendleriana	Muttongrass	1.0
Pseudoroegneria spicata	Bluebunch wheatgrass	1.5
Achnatherum hymenoides	Indian ricegrass	2.0
Lupinus spp.	Lupine	2.0
Penstemon palmeri	Palmer's penstemon	0.5
Gilia spp.	Gilia	1.0
Sanguisorba minor	Small burnet	4.0
Total		**12.0**

To prevent and control the introduction and spread of noxious weeds within the Project Area during reclamation activities, GSLLC would implement the following prevention and control practices:

- Growth media (soil and alluvium) disturbance would be minimized to the extent practicable, consistent with Project objectives. Growth media would be stockpiled and used in reclamation.

- Disturbed sites would be revegetated when practicable after exploration work is completed. Revegetation may include topsoil replacement, planting, and seeding.

- The seed mixture would contain source identified certified pure live seed and be certified weed free. Straw bales used for erosion control would also be certified as weed free.

Exploration activities would occur over approximately ten years. All reclamation work, with the exception of revegetation monitoring, would be completed no later than two years after the completion of activities under this Project. GSLLC would conduct concurrent reclamation of disturbed areas once it is determined that the disturbance is no longer required for Project activities.

Table 2.2-3 outlines the anticipated reclamation schedule on a monthly basis, which would be followed to achieve the reclamation goals set forth above. Revegetation activities are limited by the time of year during which they could be effectively implemented. Site conditions or yearly climatic variations could require that this schedule be modified to achieve revegetation success.

Table 2.2-3: Anticipated Reclamation Schedule

Techniques	Quarter				Year(s)
	1st Jan – Mar	2nd April – June	3rd July – Sept	4th Oct - Dec	
Regrading					Within two years of Project completion
Seeding					Within two years of Project completion
Monitoring					Three years beyond grading and reseeding

2.2.12 Monitoring

Monitoring would include periodic visual inspections during road and drill site construction, drill operations, and reclamation. In order to facilitate drainage and prevent erosion, all bladed roads would have waterbars constructed as specified in the BLM roads manual (BLM 2011). BMPs for sediment and erosion control would be utilized to minimize sedimentation from disturbed areas. Sediment and erosion control structures would include, but not be limited to, fabric or weed-free straw bale filter fences, siltation or filter berms, mud sumps, and downgradient drainage channels in order to prevent unnecessary or undue degradation to the environment. Sumps would be constructed as necessary to ensure that the drill cuttings are contained and fluids are managed. Should the observed condition indicate that the sump containment is inadequate, additional sump capacity would be built and incorporated into the drilling fluid management system.

2.2.13 Environmental Protection Measures

GSLLC would commit to the following environmental protection measures to prevent unnecessary or undue degradation during construction, operation, and reclamation of the Project. The measures are derived from the general requirements established in BLM's Surface Management Regulations at 43 CFR 3809 and BMRR mining reclamation regulations, as well as other state and federal water and air quality regulations.

Air Quality

- Fugitive dust from disturbed surfaces would be minimized by utilizing appropriate control measures. Reduced speed limits on access roads are the current methods of dust control. A Surface Area Disturbance (SAD) Permit has been obtained for the Project because the proposed surface disturbance exceeds five acres. A Dust Control Plan has been included in the SAD Permit.

Cultural and Paleontological Resources

- Pursuant to 43 CFR 10.4(g), GSLLC would notify the BLM authorized officer, by telephone, and with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined in 43 CFR 10.2). Further pursuant to 43 CFR 10.4 (c) and (d), the operator would immediately stop all activities in the vicinity of the discovery, make a reasonable effort to protect the discovered objects, and not commence again until notified to proceed by the BLM authorized officer.

- If proposed exploration activities occur in areas not previously surveyed, cultural resource surveys would be completed, and the results submitted to the BLM and approved by the BLM prior to surface disturbing activities. If eligible sites are identified, they would be mitigated in accordance with the PA that was developed by the BLM, GSLLC, the State Historic Preservation Office (SHPO), and Advisory Council on Historic Preservation for the Project.

- GSLLC would inform all field personnel of the Archaeological Resources Protection Act of 1979 and the Native American Graves Protection and Repatriation Act (Public Law [P.L.] 101-601) responsibilities and their associated penalties.

- Pursuant to 43 CFR 3809.420(b)(8)(ii), GSLLC would notify the BLM authorized officer, by telephone, and with written confirmation, immediately upon the discovery of paleontological resources that are discovered as the result of surface disturbing activities. The item(s) or condition(s) would be left intact and immediately brought to the attention of the BLM. Further pursuant to 43 CFR 10.4 (c) and (d), the operator would immediately stop all activities in the vicinity of the discovery and not commence again for 30 days of when notified to proceed by the BLM authorized officer. If significant paleontological resources are found, avoidance, recordation, and data recovery would be required.

Fire Management

- All applicable state and federal fire laws and regulations would be complied with and all reasonable measures would be taken to prevent and suppress fires in the Project Area.

- In the event that a fire was started due to Project activities, GSLLC would be responsible for all the costs associated with the suppression. The following precautionary measures would be taken to prevent or report wildland fires:
    - All vehicles would carry fire extinguishers and a minimum of ten gallons of water;
    - Adequate firefighting equipment (i.e., shovel, Pulaski, extinguishers) and a minimum ten gallons of water would be kept at each drill site;
    - Vehicle catalytic converters would be inspected often and cleaned of brush and grass debris;
    - GSLLC would conduct welding operations in an area free from or mostly free from vegetation. A minimum of ten gallons of water and a shovel would be on hand to extinguish any fires created from the sparks. Extra personnel would be at the welding site to watch for fires created by welding sparks;
    - GSLLC would report wildland fires immediately to the BLM Ely Interagency Communications Center at (775) 289-1925; and
    - When conducting operations during the months between May and November, GSLLC would contact the Chief Fire Officer, Division of Fire and Aviation at (775) 726-8100 to inquire about any fire restrictions in place for the area of operation and to advise this office of approximate beginning and ending dates for the activities.

Hazardous or Solid Wastes

- Pursuant to 43 CFR 8365.1-1(b)(3), no sewage, petroleum products, or refuse would be dumped from any trailer or vehicle.
- Only nontoxic fluids would be used in the drilling process.
- Regulated wastes would be removed from the Project Area and disposed of in a state, federal, or local designated area.
- If a spill of a petroleum constituent is considered to meet the reportable quantity per the NDEP's guidelines (greater than 25 gallons or greater than three cubic yards of impacted material or any quantity if a water body is impacted) or a reportable quantity for hazardous waste is released based on the Federal Environmental Protection Agency guidelines established under Title III List of Lists (40 CFR Part 302), the NDEP would be notified within 24 hours, and the appropriate remedial actions and confirmation sampling would be conducted under direction of the NDEP.

Migratory Birds

- In order to avoid potential impacts to breeding migratory birds, a nest survey would be conducted by a BLM-approved biologist prior to any surface disturbance associated with exploration activities during the avian breeding season (March 1 through August 31). Pre-disturbance surveys for migratory birds are only valid for seven days. If the disturbance for the specific location does not occur within seven days of the survey, another survey would be needed, otherwise the exploration activities may continue within the surveyed area so long as there are no periods longer than seven days without any activity. If active nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nest material, transporting food) is observed, a protective buffer would be delineated, as identified in the procedures outlined in Appendix B for most avian species and 0.5 mile for raptors, and the buffer area avoided to prevent destruction or disturbance to nests or birds until young are fledged, capable of sustained flight, and have moved out of the natal area or the nest is abandoned (i.e., fails) (Great Basin Bird Observatory [GBBO] [no date]).

- In order to avoid potential impacts to northern goshawk nests that may be located within 0.5 mile of any proposed Project disturbance, broadcast call surveys would be conducted by a qualified biologist to identify any nests within 0.5 mile of the proposed disturbance. If a nest is located, then no surface disturbing activities could occur between March 1 and August 31 within the buffer area.

- Prior to the initiation of construction activities, all construction personnel would be instructed on the protection of migratory birds. To assist in this effort, the training would address the Migratory Bird Treaty Act of 1918 (MBTA) as amended, the Bald and Golden Eagle Protection Act of 1940 as amended, and all applicable state laws, field procedures, and prohibited activities.

Noxious Weeds, Invasive and Nonnative Species

- Noxious weeds would be controlled through implementation of the following BMPs: concurrent reclamation efforts; operator control; removal of noxious weeds, invasive, and nonnative species on reclaimed areas; and avoiding areas of known noxious weeds, invasive, and nonnative species, when the weeds could be spread by vehicles.

- To eliminate the transport of vehicle-borne noxious weed seeds, roots, or rhizomes, all vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities, for emergency fire suppression, or for authorized off-road driving within the Project Area, would be free of soil and debris capable of transporting weeds. All such vehicles and equipment would be cleaned with high power or high pressure equipment prior to entering the Project Area. Vehicles and equipment would not drive through known populations of noxious weeds or invasive species following the vehicle washing and prior to entering the Project Area. Cleaning efforts would

concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis would be applied to axles, frames, cross members, motor mounts, on and underneath the steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs would be swept out and refuse would be disposed of in waste receptacles. There would be no cleaning sites in the Project Area.

Public Safety

- Public safety would be maintained throughout the life of the Project. All equipment and other facilities would be maintained in a safe and orderly manner.

- All sumps and other small excavations that pose a hazard or nuisance to the public, wildlife, or livestock would be built with an incline on one end so that entrapped animals can easily exit the sump. Activities would be restricted to frozen or dry ground conditions where feasible. Operations would be curtailed when saturated and soft soil conditions exist. If any dead animals are found in sumps, additional mitigation measures would be taken.

- In the event that any existing roads are severely damaged as a result of GSLLC activities, GSLLC would return them to their original condition.

Special Status Species

- No exploration activity would occur within 200 feet of any underground mine feature known to be habitat for BLM sensitive bat species during winter hibernation (between the months of October to March). If construction activities have the potential to occur within 200 feet of an opening to an underground working, outside of the hibernation period (between the months of April to September), GSLLC would consult with the BLM to develop appropriate mitigation.

- In order to avoid or minimize impacts to the long-calyx eggvetch (*Astragalus oophorus* var. *lonchocalyx*), a BLM sensitive plant species, and its habitat, pre-disturbance surveys would be conducted for each phase of exploration activities by a qualified botanist during the time of the required migratory bird surveys. If no plants or habitat are found during the surveys, or if plants and/or habitat are found and complete avoidance is possible, then no further action is necessary. If individual plants or habitat are found during the surveys and complete avoidance is not possible, then the following stipulations would be employed: 1) the proponent may disturb up to 20 percent of the habitat of each identified subpopulation before off-site mitigation would be necessary; 2) topsoil would be salvaged by placement uphill of the disturbance to be used in reclamation; 3) long-calyx eggvetch seed would be collected from sources within the Project Area for restoration of long-calyx eggvetch habitat; and 4) if the removal or destruction of one or more individual plants would be necessary within the disturbed habitat area, measures including seed collection and plant salvage would be required. Nurseries would be set up on site for the salvaged plants.

Specific methods of seed collection, plant salvage, and nursery construction would be discussed with the BLM biologist prior to any surface disturbing activities. The BLM and GSLLC have agreed to consult on a case-by-case basis regarding the percentages of disturbed habitat, soil salvage, seed collection, plant salvage, and nursery locations and construction methods.

Survey Monuments

- Any survey monuments, witness corners, or reference monuments would be protected to the extent economically and technically feasible.

Water Quality

- Drill holes would be plugged in accordance with NRS 534, NAC 534.4369 and NAC 534.4371, or if ground water is encountered, plugged as a well pursuant to NAC 534.420. If casing is set in a borehole, the borehole would be completed as a well pursuant to the provisions of NAC Chapter 534. The borehole would be plugged pursuant to NAC 534.420, or the casing would be removed from the borehole when it is plugged. The upper portion of the borehole may be permanently cased pursuant to NAC 534.380 if the annular space between the casing and the walls of the borehole is completely sealed from the bottom of the casing to the surface.

- Storm water BMPs would be used at construction sites to minimize storm water erosion.

- GSLLC would follow the Spill Contingency Plan in Appendix D of the Plan.

- Drill cuttings would be contained and drill fluids would be managed on site utilizing sediment traps.

- Only nontoxic fluids would be used in the drilling process.

2.3 Alternative B - No Action Alternative

In accordance with BLM NEPA guidelines H-1790-1, Chapter V (BLM 2008b), this EA evaluates the No Action Alternative, which is a reasonable alternative to the Proposed Action. 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 from which the impacts of the Proposed Action can be measured.

Under the No Action Alternative, the Proposed Action would not be approved by the BLM; however, the area would remain available for other multiple use activities as approved by the BLM and BMRR. GSLLC would continue exploration in the Project Area on public land. Disturbance limits for the two Notices total approximately nine acres of surface disturbance on public land. This acreage could be reclaimed and released

by the BLM, based on compliance with the revegetation success release criteria, thereby allowing GSLLC to create sequential acreage of disturbance with BLM approval. Activities associated with this total of approximately nine acres of surface disturbance on public land include construction of exploration roads and drill pads and exploration trenches.

2.4 Alternatives Considered, but Eliminated from Further Analysis

2.4.1 Helicopter Drilling Alternative

This alternative would involve conducting exploration by using a helicopter to access the entire Project Area rather than construct roads. This would involve slinging or transporting a drill rig, fuel, supplies, laborers for pad construction, and drilling personnel via helicopter to all of the proposed drill sites. Water for drilling purposes would either need to be pumped to the site via water lines using diesel generators and pumps or by slinging water to the drill sites. All personnel would be ferried to the drill site from staging areas via helicopter or they would have to hike to the drill sites from the existing roads. All drill samples would have to be removed from the drill sites with the use of a helicopter. New surface disturbance would still result from this alternative from construction of all the drill sites and the exploration drilling that occurred on existing roads. The Helicopter Drilling Alternative for the entire Project Area was considered but eliminated from full analysis for several reasons. First, helicopter drilling for the entire Project Area would not meet the purpose and need of the Proposed Action because at the present time, helicopters typically only support core rigs. Some of the activities under the Proposed Action would need to be conducted by high-production RC drill rigs, which are not helicopter supported. In addition, helicopter drilling would take substantially longer to obtain the same geologic data and could also require more drill holes, resulting in more disturbance and potential impacts to natural resources. Helicopter drilling is also more expensive to conduct than accessing the drill sites from the ground. Many of the proposed drill sites have existing road access. Additionally, a number of roads within the Project Area have already been constructed under Notice-level activities. Therefore, helicopter drilling for all the drill sites throughout the Project Area would not provide any environmental benefit over the Proposed Action. This alternative would also be economically and technically infeasible.

2.4.2 Use Only Existing Roads Alternative

Under this alternative, all exploration activities would use only existing roads and no new roads would be constructed. Utilization of existing roads only would eliminate portions of the exploration area. Exploration for lithologically controlled deposits in this area is difficult and requires numerous drill holes in locations that are not on the existing roads in order to evaluate the geologic and mineral potential. An alternative that eliminates access to portions of the exploration area would deny the claimant the opportunity to fully evaluate and characterize the mineral potential. This alternative is technically infeasible.

3 AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area.

3.2 General Setting

The Project is located on the western flank of the Paradise Mountains at elevations ranging between 6,230 feet amsl to 7,600 feet amsl, and extends westward toward Pioche, Nevada. The Project Area contains steeply sloping mountain terrain that is vegetated with piñon-juniper woodlands with big sagebrush in the valley bottoms. Several ephemeral drainages, shown as blue-line streams on the USGS topographic maps, traverse the Project Area in a west-east trend. Surface water runoff from the Project Area flows southwest.

According to the Western Regional Climate Center (WRCC), the average maximum temperature at Ursine, located approximately five miles west of the Project Area, is 88.2 degrees Fahrenheit (°F) in July, and the average minimum temperature is 16.7 °F in December. The average annual precipitation is approximately 11.4 inches and tends to peak in February in the form of snow (WRCC 2012).

Vegetation communities in the vicinity of the Project Area are indicative of higher elevation desert environments, and include Piñon-Juniper Woodland, Xeric Mixed Sagebrush Shrubland, Montane Sagebrush Steppe, and Mountain Mahogany Woodland and Shrubland. Wildlife species in the area are those generally found in the Great Basin.

Dispersed recreation activities occur within the vicinity of the Project Area and are dominated primarily by camping, hunting, rock collecting, hiking, mountain biking, horseback riding, and off-highway vehicle riding. There are no designated wilderness areas or wilderness study areas in the vicinity of the Project Area.

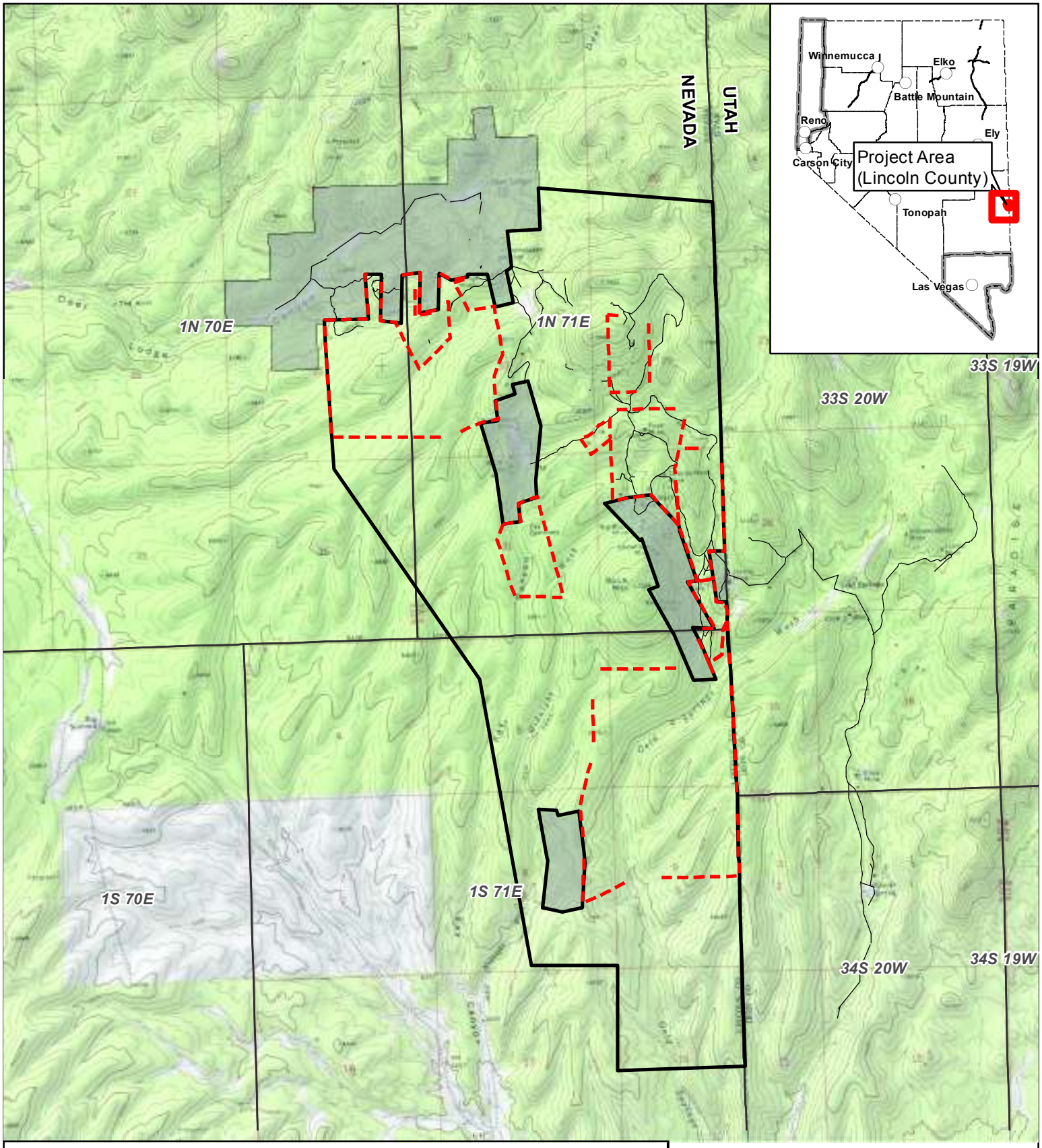
3.3 Resources/Concerns Analyzed

3.3.1 Cultural Resources

The analysis area for cultural resources includes the Phase I disturbance area and additional proposed disturbance areas (Figure 3.3.1).

3.3.1.1 Affected Environment

In 2013, Cardno ENTRIX performed a Class III cultural resources inventory for approximately 1,103 acres within the 4,187-acre Project Area (Cardno ENTRIX 2013). The inventory resulted in 59 isolated finds, 77 newly recorded sites, and four previously



Explanation

- Project Area
- Cultural Resources Field Survey Areas
- Private Lands
- Existing Roads

ELY DISTRICT OFFICE
Caliente Field Office
US Hwy 93, Bldg. #1, P.O. Box 237
Caliente, Nevada 89008

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

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BUREAU OF LAND MANAGEMENT

GOLD SPRINGS EXPLORATION PROJECT

Cultural Survey Areas

Figure 3.3.1

01/16/2014

recorded sites that were updated during the field surveys. Out of the 59 isolated finds, there were 30 isolated artifacts and 29 isolated features. Based on the State Protocol Agreement between the BLM and the Nevada SHPO (BLM and SHPO 2012), isolated artifacts and isolated features are categorically not eligible for listing on the National Register of Historic Places (NRHP).

The 77 newly recorded sites included 36 prehistoric sites, 17 historic sites, and 24 multi-component sites. The 36 prehistoric sites were primarily lithic and artifact scatters, with the exception of three sites, which also contain rock rings. The 17 historic sites consisted primarily of mining-related sites with associated refuse scatters, four roads, one historic fence line, and one charcoal production site. The 24 newly recorded multi-component sites primarily consisted of prehistoric lithic and artifact scatters with historic mining-related components.

Twenty-one of the 77 newly recorded sites were recommended as eligible for inclusion in the NRHP and included the following: five prehistoric sites; five historic sites; five multi-component sites with eligible prehistoric components and non-eligible historic components; and three multi-component sites with non-eligible prehistoric components and eligible historic components. The remaining 56 newly recorded sites were recommended not eligible for inclusion in the NRHP.

The four previously recorded sites updated during the 2013 inventory included three multi-component sites containing prehistoric lithic and artifact scatters and historic mining-related components and one prehistoric lithic and artifact scatter. Two of the multi-component sites contained non-eligible prehistoric components with historic components that have been recommended as eligible for inclusion into the NRHP. The third multi-component site had prehistoric and historic components recommended as eligible for inclusion into the NRHP.

For the remainder of the Project Area, a PA has been developed that identifies measures on how to implement Section 106 of the National Historic Preservation Act of 1966 (NHPA) for sites eligible for listing in the NRHP and unevaluated sites that may be eligible for listing. Stipulations are included in the PA for the following: roles and responsibilities; definitions; compliance; notices to proceed; duration; unanticipated discovery situations; monitoring; dispute resolution; amendments; termination; and execution.

3.3.1.2 Impact Analysis

Proposed Action

Based on the results of the Class III cultural resource inventory conducted by Cardno ENTRIX, both eligible and non-eligible cultural resources have been identified within the proposed disturbance areas. Any eligible or unevaluated site would be avoided or mitigated through the measures outlined in the PA.

No Action Alternative

Under the No Action Alternative, approximately nine acres would be disturbed within the Project Area under currently acknowledged Notice-level exploration. Potential impacts to cultural resources under the No Action Alternative would be similar but less than impacts associated with the Proposed Action, as there would be approximately 91 fewer acres proposed for disturbance under the No Action Alternative.

3.3.2 Invasive and Nonnative Species

The analysis area for invasive and nonnative species is the Project Area.

3.3.2.1 Affected Environment

The BLM defines "noxious weed" as “any plant growing where it is not wanted. Legally, a noxious weed is any plant designated by a federal, state or county government as injurious to public health, agriculture, recreation, wildlife or property.” A noxious weed is also commonly defined as a plant that grows out of place and is “competitive, persistent, and pernicious.” The BLM’s primary focus is “providing adequate capability to detect and treat smaller weed infestations in high-risk areas before they have a chance to spread.” Noxious weed control would be based on a program of "....prevention, early detection, and rapid response" (BLM 2013a).

Animal and plant species designated as pests are generally species that are injurious to agricultural and nursery interests or vectors of diseases, which may be transmissible and injurious to humans.

An "invasive species" is defined as a species that is nonnative 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). Invasive, nonnative species are species that are highly competitive, highly aggressive, and spread easily. They include plants designated as noxious and animals designated as pests by federal or state law.

The Nevada Department of Agriculture maintains a Nevada Noxious Weed List which identifies types of noxious weeds in Nevada.

The following invasive and Nevada noxious weeds have been documented within the Ely BLM District:

- black henbane (*Hyoscyamus niger*);
- bull thistle (*Cirsium vulgare*);
- Canada thistle (*Cirsium arvense*);
- Dalmatian toadflax (*Linaria dalmatica*);
- diffuse knapweed (*Centaurea diffusa*);
- Dyer’s woad (*Isatis tinctoria*);
- hoary cress (*Lepidum draba*);

- Johnson grass (*Sorghum halepense*);
- leafy spurge (*Euphorbia esula*);
- musk thistle (*Carduus nutans*);
- puncturevine (*Tribulus terrestris*);
- poison hemlock (*Conium maculatum*);
- Russian knapweed (*Acrptilon repens*);
- Sahara mustard (*Brassica tournefortii*);
- salt cedar (*Tamarix spp*.);
- Scotch thistle (*Onopordum acanthium*);
- spotted knapweed (*Centaurea stoebe*);
- squarrose knapweed (*Centaurea squarrosa*);
- tall whitetop (*Lepidium latifolium*);
- tree of heaven (*Ailanthus altissima*);
- water hemlock (*Cicuta maculate*); and
- yellow toadflax (*Linaria vulgaris*) (BLM 2009).

The following nonnative, invasive weeds are known to occur within the Ely District:

- bur buttercup (*Ceratocephala testiculata*);
- cheatgrass (*Bromus tectorum*);
- common burdock (*Arctium minus*);
- common mullein (*Verbascum thapsus*);
- field bindweed (*Convolvulus arvensis*);
- filaree (*Erodium circutarium*);
- halogeton (*Halogeton glomeratus*);
- horehound (*Marrubium vulgare*);
- kochia (*Kochia scoparia*);
- red brome (*Bromus rubens*);
- ripgut brome (*Bromus diandrus*);
- Russian olive (*Elaeagnus angustifolia*);
- Russian thistle (*Salsola kali*);
- Siberian elm (*Ulmus pumila*);
- tumble mustard (*Sysimbrium altissimum*); and
- yellow salsify (*Tragopogon dubius*) (BLM 2009).

Noxious weed species were not detected in the Project Area during 2012 field surveys (Enviroscientists 2013). Nonnative, invasive species observed in the Project Area included smooth brome (*Bromus inermis*), white clover (*Trifolium repens*), and cheatgrass. These species were primarily observed in previously disturbed areas intermixed with native species, and no large monocultures were observed in the Project Area (Enviroscientists 2013).

3.3.2.2 Impact Analysis

Proposed Action

New surface disturbance from the Proposed Action would increase the potential for and promote the spread and establishment of noxious weeds, invasive, and nonnative species. These impacts would be reduced based on BLM's current strategy for noxious weed management and implementation of the environmental protection measures outlined in Section 2.2.13.

No Action Alternative

Under the No Action Alternative, there would be approximately nine acres of surface disturbance within the Project Area under currently acknowledged Notice-level exploration. The impacts associated with the No Action Alternative could result from establishment of noxious weeds, invasive, and nonnative species. Reclamation of surface disturbance, including reseeding, would gradually decrease potential impacts from noxious weeds, invasive, and nonnative species. Impacts from noxious weeds, invasive, and nonnative species as a result of the No Action Alternative would be similar, but proportionally less than the Proposed Action (approximately nine acres of surface disturbing activities versus approximately 100 acres).

3.3.3 Lands with Wilderness Characteristics

The analysis area for lands with wilderness characteristics (LWC) is the Project Area.

3.3.3.1 Affected Environment

In 2011, the Secretary of the Department of the Interior issued a memorandum to the BLM Director that in part affirms BLM's obligations relating to wilderness characteristics under Sections 201 and 202 of the FLPMA. The BLM released Manuals 6310 and 6320 in 2012, which provided direction on how to conduct and maintain wilderness characteristics inventories and provided guidance on how to consider whether to update a wilderness characteristics inventory.

The primary function of an inventory is to determine the presence or absence of wilderness characteristics. An area having wilderness characteristics is defined by the following:

- Size – at least 5,000 acres of contiguous, roadless federal land;
- Naturalness – the degree to which an area generally appears to have been affected primarily by the forces of nature with the imprint of people's work substantially noticeable; and
- Outstanding opportunities for solitude or primitive and unconfined types of recreation.

- The area may also contain supplemental values (i.e., ecological, geological, or other features of scientific, educational, scenic, or historical values).

The Nevada BLM completed the original wilderness review in 1979, and issued an initial wilderness inventory decision in 1980. Two units which overlapped the Project Area were intensively surveyed, but neither was found to possess wilderness characteristics.

In 2011, the BLM Ely District began updating the LWC inventory on a project-by-project basis until there was a land use plan revision. The Project Area overlaps three inventory units, with one possessing wilderness characteristics (Table 3.3-1). Unit 205-1-2013 lies in the northeastern corner of the Project Area, and extends 13 miles to the north. The portion of this unit within the Project Area is located between two unnatural sections which contain previous disturbance from mineral exploration and mining activities.

Table 3.3-1: Lands with Wilderness Characteristics within Project Area

Area Unique Identifier	NV-040-205-1-2013
Sufficient Size? Yes/No (acres)	Yes; 63,674
Naturalness? Yes/No	Yes
Outstanding Solitude? Yes/No	Yes
Outstanding Primitive and Unconfined Recreation? Yes/No	Yes
Supplemental Values? Yes/No	No
Does the Unit Possess LWC?	Yes

3.3.3.2 Impact Analysis

Proposed Action

Existing roads were used as boundaries for the creation of the LWC inventory units by the BLM. Utilization of these existing roads within the Project Area by GSLLC for access to Project activities would not affect the LWC unit. The proposed Phase I disturbance area is also outside LWC inventory unit 205-1-2013; therefore, the planned Phase I disturbance would not affect the LWC inventory unit. However, if the Project extends into LWC inventory unit 205-1-2013, up to 400 acres of the unit could be lost, leaving about 63,200 acres of the unit remaining.

No Action Alternative

Under the No Action Alternative, there would be approximately nine acres of surface disturbance within the Project Area under currently acknowledged Notice-level exploration. As shown on Figure 2.2.1, these areas are not located within the northeastern portion of the Project Area. Therefore, there would be no impacts to LWC under the No Action Alternative.

3.3.4 Migratory Birds, including Bald and Golden Eagles

The analysis area for migratory birds, other than raptors, is the Project Area while the analysis area for raptors, other than bald and golden eagles, is the Project Area out to a distance of 0.5 mile from the Project Area. The analysis area for bald and golden eagles is the Project Area out to a distance of four miles from the Project Area.

3.3.4.1 Affected Environment

"Migratory bird" means any bird listed in 50 CFR 10.13. All native birds commonly found in the U.S., with the exception of native resident game birds, are protected under the MBTA. The MBTA prohibits the taking of migratory birds, their parts, nests, eggs, and nestlings without a permit. EO 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices.

Bald and Golden Eagles

Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are protected by the MBTA (as amended) and the Bald and Golden Eagle Protection Act of 1940 (as amended), both of which prohibit the take of migratory birds, their parts, nests, eggs, and nestlings without a permit.

The Nevada Department of Wildlife (NDOW) identified thirteen golden eagle nests within ten miles of the Project Area (NDOW 2012); however, those nests are located more than four miles away from the Project Area. The entire Project Area would be suitable foraging habitat for golden eagles. All rock outcrops in the Project Area were searched for active and inactive nests. No nests were observed during surveys (Enviroscientists 2013).

Migratory Birds

The Project Area is dominated by piñon-juniper vegetation. According to the GBBO, migratory bird species associated with areas characterized by piñon-juniper include the following: ferruginous hawk (*Buteo regalis*); common poorwill (*Phalaenoptilus nuttallii*); gray flycatcher (*Empidonax wrightii*); gray vireo (*Vireo vicinior*); pinyon jay (*Gymnorhinus cyanocephalu*s); Virginia's warbler (*Oreothylpus virginiae*); green-tailed towhee (*Pipilo chlorurus*); and black-chinned sparrow (*Spizella atrogularis*). Additionally, the juniper titmouse (*Baelophus ridgewayi*) and the black-throated gray warbler (*Dendroica nigrescens*) serve as indicator species for the piñon-juniper vegetation community (GBBO 2010).

During April and June 2012 wildlife field surveys, the following migratory bird species were detected in the Project Area: American robin (*Turdus migratorius*); ash-throated flycatcher (*Myiarchus cinerascens*); black-throated gray warbler; blue-grey gnatcatcher (*Polioptila caerulea*); chipping sparrow (*Spizella passerina*); common raven (*Corvus*

corax); hairy woodpecker (*Picoides villosus*); Juniper titmouse; Mountain bluebird (*Sialia currucoides*); Mountain chickadee (*Poecile gambeli*); mourning dove (*Zenaida macroura*); Northern flicker (*Colaptes auratus*); pygmy nuthatch (*Sitta pygmaea*); scrub jay (*Aphelocoma californica*); turkey vulture (*Cathartes aura*); and western tanager (*Piranga ludoviciana*) (Enviroscientists 2013). One chipping sparrow nest was observed within the Project Area (Figure 3.3.4). BLM sensitive species northern goshawk (*Accipiter gentilis*) and pinyon jay were also observed during the 2012 field surveys. Northern goshawk is also identified as an NDOW species of special concern.

BLM Sensitive Species

Northern goshawk

Northern goshawks typically inhabit late seral or old growth forests that have closed canopies (greater than 40 percent) and a relatively open understory (Reynolds et al. 1992). In central Nevada, goshawks use a wide variety of habitats for foraging; however, goshawks are primarily found nesting in trembling aspen (*Populus tremuloides*) stands (Herron et al. 1985, Younk and Bechard 1994). Goshawks prey on a variety of small mammals and birds (Squires and Reynolds 1997). Stick nests are often built in trees on north or northwest facing slopes of less than 30 percent slope and near water (Reynolds et al. 1992). Northern goshawk home range components include the nest area, the post-fledging family area, and the foraging area. The nest area ranges from approximately 20 acres to 30 acres. The post-fledging family area ranges in size from approximately 300 acres to 600 acres, and the foraging area ranges in size from approximately 4,950 acres to 5,930 acres (Graham et al. 1994). An immature northern goshawk was observed 0.5 mile east of the Project Area in a stand of piñon-juniper but flew off when observed. No nests were observed in the stand where the goshawk was identified.

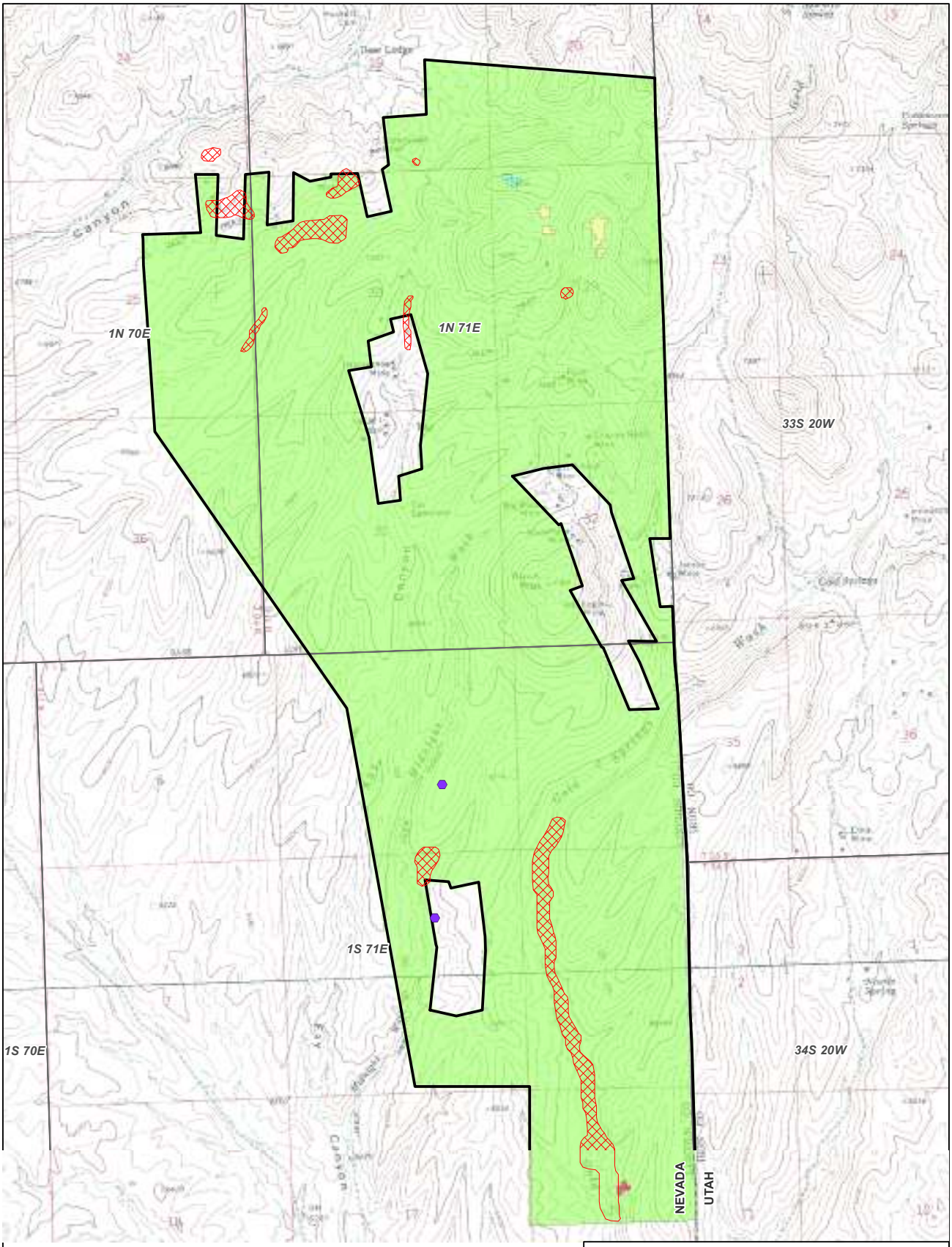
Pinyon jay

Pinyon jays tend to inhabit piñon-juniper woodlands as well as sagebrush areas in non-breeding season. Nesting habitat occurs in the interiors of mature pines or junipers near trunks, often on south-facing slopes. Pinyon jays usually feed on piñon pine seeds, with arthropods and other seeds during nesting (GBBO 2010). A pinyon jay was observed in the Project Area during 2012 field surveys (Enviroscientists 2013).

3.3.4.2 Impact Analysis

Proposed Action

The Proposed Action would create surface disturbance and associated removal of vegetation by the construction of drill sites and roads, which could potentially result in the destruction of active nests or disturb the breeding behavior of migratory bird species. Migratory birds foraging in the Project Area during exploration activities would likely leave the immediate area and may result in a spatial redistribution of individuals or habitat-use patterns during the life of the Project.



Explanation

- Project Area
- Chipping Sparrow Nest
- Long-calyx eggvetch *(Astragalus oophorus var. lonchocalyx)*
- Montane Sagebrush Steppe
- Mountain Mahogany Woodland and Shrubland
- Piñon-Juniper Woodland
- Xeric Mixed Sagebrush Shrubland

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GOLD SPRINGS EXPLORATION PROJECT

Biological Survey Results

Figure 3.3.4

01/09/2014

No direct impacts to nesting birds would be expected since nesting surveys would be conducted for any disturbance activities starting during the nesting season March 1st through August 31st, and appropriate protection measures implemented for any nests found. Potential indirect impacts would occur as a result of vegetation removal and activities associated with the Proposed Action. Migratory birds present during construction activities would experience temporary displacement, resulting in a temporary spatial redistribution of individuals or habitat-use patterns within the Project Area. Such redistribution would not have a long-term effect because undisturbed and suitable habitat exists in the vicinity of the Project Area. In addition, no long-term impacts are likely to occur because reclamation and reestablishment of vegetation would start approximately two years after Project completion.

No Action Alternative

Under the No Action Alternative, approximately nine acres of surface disturbance would continue within the Project Area under currently acknowledged Notice-level exploration. The No Action Alternative could result in the temporary loss of approximately nine acres of migratory bird nesting or foraging habitat. Reclamation of surface disturbance would gradually eliminate potential impacts to migratory birds. Impacts to migratory birds as a result of the No Action Alternative would be similar, but proportionally less than the Proposed Action (approximately nine acres of surface disturbing activities versus approximately 100 acres).

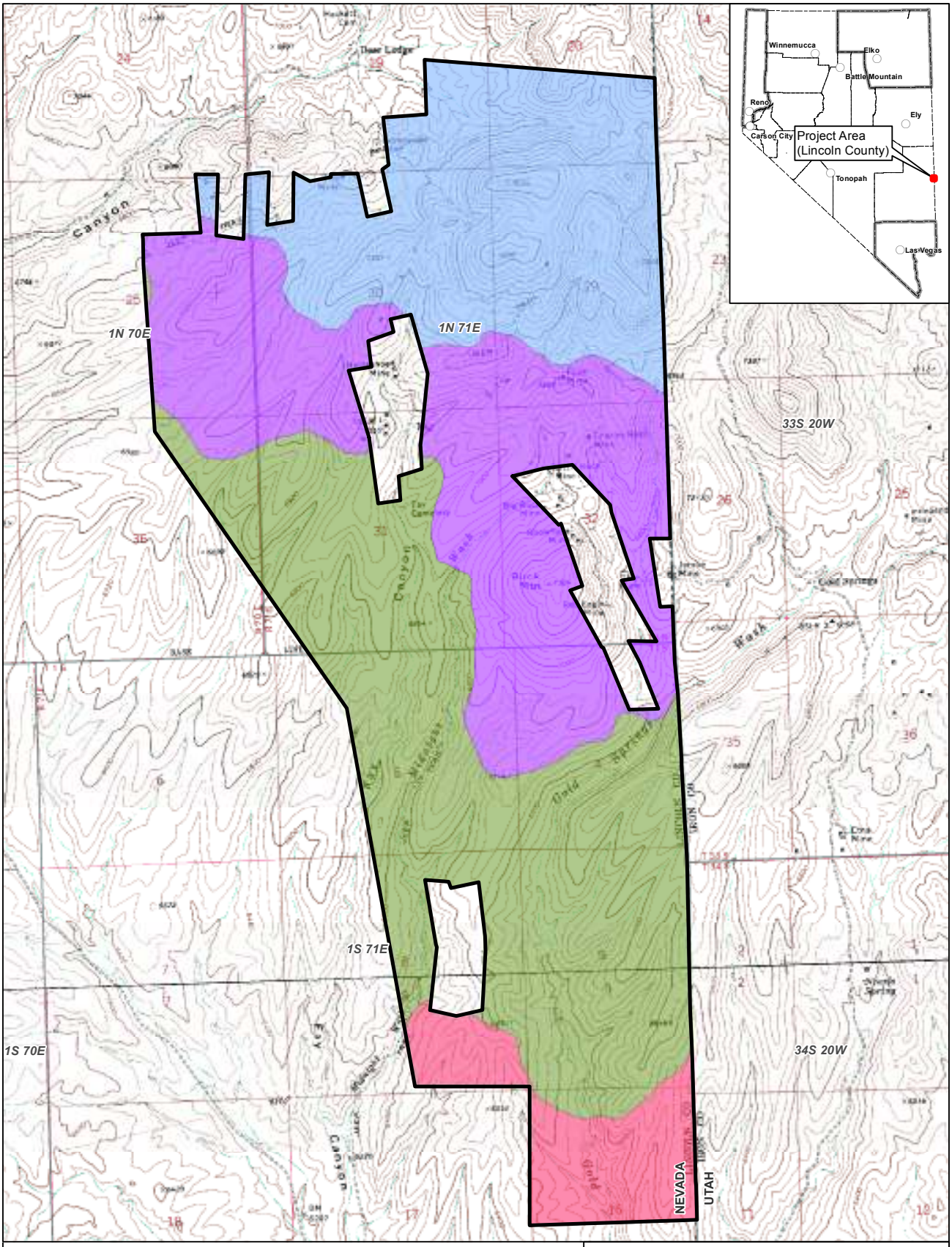
3.3.5 Soils

The analysis area for soils is the Project Area.

3.3.5.1 Affected Environment

Information regarding soils within the Project Area was obtained from the United States Department of Agriculture National Resources Conservation Service (NRCS). The soils within the Project Area consist of the following associations: Decan-Uana association (1201); Slockey-Hamtah-Schoolmarm association (3892); Schoolmarm-Starflyer-rock outcrop association (1886); and Aned-Newvil-Decan association (1025) (Figure 3.3.5 and Table 3.3-1).

The Decan-Uana association is comprised of 70 percent Decan gravelly clay loam, 20 percent Uana loam, and ten percent other minor components. This association occurs in approximately 1,632 acres of the Project Area. The Decan series consists of moderately deep well-drained soils over an indurated duripan that formed in alluvium derived from welded tuff and/or mixed lacustrine deposits. The Uana series consists of moderately deep well-drained soils over a duripan that formed in alluvium derived from welded tuff and/or reworked lacustrine deposits (NRCS 2013).



Explanation

- Project Area
- 1025 Aned-Newvil-Decan association
- 1201 Decan-Uana association
- 1886 Schoolmarm-Starflyer-Rock outcrop association
- 3892 Slockey-Hamtah-Schoolmarm association

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Soil Types within the Project Area

Figure 3.3.5

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Table 3.3-1: Summary of Soil Mapping Units and Characteristics

Association	Soil Series	Range in Depth to Restrictive Surface	Landscape position/ % Slope	Permeability	Erosion Hazard by Water	Erosion Hazard by Wind
Decan-Uana association (1201)	Decan	20 to 39 inches (duripan)	Backslope of eroded fan remnants; 2 to 15%	Slow	Low	Slight
	Uana	20 to 30 inches (duripan)	Fan remnants; 2 to 15%	Slow	Low	Slight to moderate
Slockey-Hamtah-Schoolmarm association (3892)	Slockey	20 to 39 inches (bedrock)	Backslope of hills; 15 to 50%	Moderately Slow	Low	Slight to moderate
	Hamtah	More than 80 inches	Backslope of mountains; 15 to 50%	Moderately slow	Low	Slight to moderate
	Schoolmarm	10 to 14 inches (bedrock)	Summit, shoulder of hills; 4 to 15%	Slow	Low	Moderate
Schoolmarm-Starflyer-Rock outcrop association (1886)	Schoolmarm	10 to 14 inches (bedrock)	Summit, shoulder of hills; 4 to 15%	Slow	Low	Moderate
	Starflyer	10 to 20 inches (bedrock)	Backslope of mountains; 15 to 30%	Slow	Low	Moderate
	Rock outcrop	N/A	N/A	Slow	Low	Slight
Aned-Newvil-Decan association (1025)	Aned	14 to 22 inches (duripan)	Shoulder of eroded fan remnants, summit; 0 to 8%	Slow	Low	Moderate
	Newvil	14 to 20 inches (duripan)	Shoulder of eroded fan remnants, summit; 2 to 8%	Slow	Low	Moderate

Association	Soil Series	Range in Depth to Restrictive Surface	Landscape position/ % Slope	Permeability	Erosion Hazard by Water	Erosion Hazard by Wind
	Decan	20 to 39 inches (duripan)	Backslope of eroded fan remnants; 2 to 15%	Slow	Low	Slight

N/A = not available
Source: NRCS 2013

The Slockey-Hamtah-Schoolmarm association is comprised of 40 percent Slockey very gravelly ashy sandy clay loam, 30 percent Hamtah very stony ashy sandy clay loam, 15 percent Schoolmarm gravelly ashy coarse sandy loam, and 15 percent of other minor components. This association occurs in approximately 1,243 acres of the Project Area. The Slockey series consists of moderately deep, well-drained soils that formed in colluvium and residuum derived from welded tuff. The Hamtah series consists of very deep, well-drained soils formed in colluvium and/or residuum weathered from welded tuff and/or volcanic rock. The Schoolmarm series consists of shallow, well-drained soils that formed in colluvium and residuum derived from welded tuff (NRCS 2013).

The Schoolmarm-Starflyer-rock outcrop association is comprised of 40 percent Schoolmarm gravelly ashy sandy loam, 25 percent Starflyer very gravelly ashy coarse sandy loam, 20 percent rock outcrop, and 15 percent other minor components. This association occurs in approximately 1,002 acres of the Project Area. The Schoolmarm series consists of shallow, well-drained soils that formed in colluvium and residuum derived from welded tuff. The Starflyer series consists of shallow, well-drained soils that formed in residuum and colluvium derived from welded tuff (NRCS 2013).

The Aned-Newvil-Decan association is comprised of 40 percent Aned sandy loam, 30 percent Newvil gravelly sandy loam, 15 percent Decan gravelly clay loam, and 15 percent other minor components. This association occurs in approximately 310 acres of the Project Area. The Aned series consists of shallow to a duripan, well-drained soils that formed in alluvium derived from welded tuff and mixed lacustrine deposits. The Newvil series consists of shallow to a duripan, well-drained soils that formed in alluvium derived from welded tuff and reworked lacustrine sediments. The Decan series consists of moderately deep well-drained soils over an indurated duripan that formed in alluvium derived from welded tuff and mixed lacustrine deposits (NRCS 2013).

Wind erosion hazard ranges from slight to severe for the soil classifications occurring within the Project Area. Erosion hazard from water ranges from low to moderate (Table 3.3-1).

3.3.5.2 Impact Analysis

Proposed Action

The total surface disturbance associated with implementation of the Proposed Action would impact up to 100 acres of soils, or approximately 2.3 percent of the entire Project Area. According to Figure 3.3.5, it is anticipated that the majority of the surface disturbance associated with Phase I activities would occur primarily on the Slockey-Hamtah-Schoolmark association. The specific locations of proposed disturbance under subsequent phases are currently unknown; therefore, the specific soil types that may be disturbed are also unknown.

The potential impacts to soils would be reduced by measures incorporated into the Project design including the use of BMPs to limit erosion and to reduce sediment runoff from the disturbed areas, and the concurrent reclamation of drill pads, sumps, and drill roads no longer needed for access. BMPs would include the use of one or all of the following: sediment traps or sumps located at drill sites; straw bales (certified weed free); silt fences; and the distribution of clarified water from sediment traps through solid pipes in order to minimize erosion caused by channeling. In addition, GSLLC would apply gravel to constructed roads, as necessary, to help reduce erosion and soil compaction. Soils or alluvium capable of serving as growth media would be salvaged and stockpiled as part of the fill slope of the newly constructed roads. Following successful reclamation, which would include regrading, ripping, and revegetation of the disturbed areas, soil loss due to the surface disturbing activities associated with implementation of the Proposed Action would be temporary and minimal.

No Action Alternative

Under the No Action Alternative, approximately nine acres would be disturbed within the Project Area under currently acknowledged Notice-level exploration. The potential for wind and water erosion of disturbed soils would be similar but less than the Proposed Action, since the No Action Alternative would be disturbing approximately 91 acres less than the Proposed Action.

3.3.6 Special Status Species

The analysis area for special status species is the Project Area, as identified in the 2013 biological survey conducted for the Project (Enviroscientists 2013).

3.3.6.1 Affected Environment

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 2008c); and

- State of Nevada Listed Species: State-protected animals that have been determined to meet BLM's Manual 6840 policy definition.

The USFWS, the Nevada Natural Heritage Program (NNHP), and the NDOW were contacted to obtain a list of threatened and endangered and sensitive species that have the potential to occur within the Project Area (USFWS 2012; NNHP 2012; NDOW 2012). In addition, the BLM Sensitive Species List, which includes threatened and endangered species, was evaluated for the potential of species on those lists to occur in the Project Area. Information from the NNHP, the NDOW, and the USFWS indicate that no federally threatened or endangered plant or animal species have the potential to occur within the Project Area.

Botanical surveys were conducted for the Project Area June 11 through 14 and 29 and 30, 2012, by Enviroscientists. Wildlife field surveys were conducted by qualified Enviroscientists biologists in the survey area April 25, June 11 through 14 and 29 and 30, 2012. The surveys included the following: a vegetation community assessment and species inventory; a general wildlife habitat assessment and species inventory; a sensitive plant survey; and a migratory bird and raptor survey including an assessment of potential golden eagle or bald eagle habitat (Enviroscientists 2013).

<u>BLM Sensitive Plant Species</u>

The NNHP identified potential habitat for Deer Lodge buckwheat (*Eriogonum pharnaceoides* var. *cervinum*), scarlet buckwheat (*Eriogonum microthecum* var. *phoeniceum*), and long-calyx eggvetch or pink egg milkvetch, all BLM sensitive species, throughout the Project Area. Known habitat affiliations for scarlet buckwheat include

white tuffaceous knolls, bluffs, and rocky flats, and openings in piñon and juniper woodland (NNHP 2001). Known habitat affiliations for Deer Lodge buckwheat include sagebrush and mountain mahogany communities, and oak, piñon-juniper, and montane conifer woodlands (Reveal 1974). There were no observations of scarlet buckwheat or Deer Lodge buckwheat in the Project Area during the 2012 field surveys. Known habitat affiliations for long-calyx eggvetch include piñon-juniper, sagebrush, and mixed desert shrub communities at elevations between 5,800 amsl to 7,550 feet amsl (Utah Native Plant Society [UNPS] 2013). Eight subpopulations of long-calyx eggvetch were observed in the piñon-juniper community throughout the northwestern portion of the Project Area and two subpopulations were identified in the southern portion of the Project Area. The long-calyx eggvetch survey was conducted during the appropriate time of year that the species would be visible and identifiable, and was observed on hilltops, sideslopes, flats, and in drainages.

Based on the results of the biological survey and habitat assessment, there were no BLM sensitive or special status wildlife species identified that had the potential to utilize the Project Area. In addition, no BLM sensitive wildlife species were observed in the Project Area during the 2012 field surveys. However, the BLM and NDOW have identified potential habitat for special status bat species throughout the Project Area. Migratory birds, including special status bird species and bald and golden eagles, are discussed in Section 3.3.4.

BLM Sensitive Wildlife Species

BLM sensitive species are taxa that are not already included as BLM special status species under the following: 1) federally listed, proposed, or candidate species; or 2) State of Nevada listed species. BLM policy is to provide these species with the same level of protection as is provided to candidate species as described in BLM Manual 6840.06.2C.

Bats

The following BLM sensitive bat species have been known to occur within the Ely District: pallid bat (*Antrozous pallidus*); Townsend's big-eared bat (*Corynorhinus townsendii*); big brown bat (*Eptesicus fuscus*); spotted bat (*Euderma maculatum*); greater western mastiff bat (*Eumops perotis californicus*); silver-haired bat (*Lasionycteris noctivagans*); western red bat (*Lasiurus blossevillii*); hoary bat (*Lasiurus cinereus*); California myotis (*Myotis californicus*); western small-footed myotis (*Myotis ciliolabrum*); long-eared myotis (*Myotis evotis*); little brown myotis (*Myotis lucifugus*); fringed myotis (*Myotis thysanodes*); long-legged myotis (*Myotis volans*); Yuma myotis (*Myotis yumanensis*); western pipistrelle (*Pipistrellus hesperus*); and Brazilian free-tailed bat (*Tadarida brasiliensis*). Specific to Lincoln County, Nevada, are bats that tend to utilize subterranean habitat and include the following: Townsend's big-eared bat; western small-footed myotis; long-eared myotis; California myotis; little brown myotis; big brown bat; long-legged myotis; Yuma myotis; pallid bat; and Brazilian free-tailed bat (Sherwin 2008).

Based on a biological evaluation in Lincoln County, Nevada, by Richard Sherwin of Holistic Wildlife Services NM, LLC (Sherwin 2008), the Townsend's big-eared bat was the only bat species found in one abandoned mine working that was surveyed in the Project Area. Three other abandoned mine workings were surveyed on BLM-administered land within the Project Area located near the historic Pope, Charley Ross, and Little Buck mine sites. One site contained bat habitat, while at the other two sites no evidence of bats or bat habitat was found.

3.3.6.2 Impact Analysis

Proposed Action

Sensitive Plants

The BLM sensitive plant long-calyx eggvetch was identified in the Project Area during 2012 field surveys. Individual plants may be impacted by exploration activities; however, no existing population or subpopulation would be eradicated from Project activities. Therefore, no long-term impacts to the long-calyx eggvetch are anticipated to occur as a result of surface disturbing activities associated with implementation of the Proposed Action.

Sensitive Wildlife

There are two additional mine workings located on and adjacent to BLM-administered land within the Project Area that were not surveyed during the Sherwin study. A protection measure is included in Section 2.2.13 that states that a 200-foot buffer would be established from any underground abandoned mine feature known to be habitat for BLM sensitive bat species during winter hibernation periods. This measure would apply to mine workings located on BLM-administered land or private land where the 200-foot buffer would overlap BLM-administered land. This would reduce any potential impacts to BLM sensitive bat species until the abandoned mine working is closed.

No Action Alternative

Under the No Action Alternative, approximately nine acres of surface disturbance would continue within the Project Area under currently acknowledged Notice-level exploration. Under the No Action Alternative, impacts would be similar to but less than the Proposed Action (approximately nine acres of surface disturbing activities versus approximately 100 acres).

3.3.7 Vegetation

The analysis area for vegetation is the Project Area, as identified in the 2013 biological survey conducted for the Project (Enviroscientists 2013).

3.3.7.1 Affected Environment

The Project is located within the Intermountain Region, Great Basin Division, Central Great Basin Section floristic zone. This region is characterized by elevated valleys and mountains consisting of sandstone, siltstone, and shale. The Central Great Basin Section floristic zone is large and diverse, covering approximately 30,250 square miles (Cronquist et al 1972). Vegetation located within the Project Area consists of piñon-juniper woodland, xeric mixed sagebrush shrubland, montane sagebrush steppe, and mountain mahogany woodland and shrubland communities (Figure 3.3.4).

Piñon-Juniper Woodland

The piñon-juniper community occupies approximately 4,177 acres of the Project Area and is also the dominant plant community. The dominant species observed in this community was single-leaf piñon pine (*Pinus monophylla*) and Utah juniper (*Juniperus osteosperma*). Shrubs observed in this community included the following:

- Wyoming big sagebrush (*Artemesia tridentata* spp. *wyomingensis*);
- Utah serviceberry (*Amalanchier utahensis*);
- Curl-leaf mountain mahogany (*Cercocarpus ledifolius*);
- Yellow rabbitbrush (*Chrysothamnus viscidiflorus*);
- Stansbury cliffrose (*Purshia stansburiana*);
- Bitterbrush (*Purshia tridentata*);
- Wood's rose (*Rosa woodsii*);
- Coyote willow (*Salix exigua*); and
- Western snowberry (*Symphorocarpus occidentalis*).

Forbs were interspersed with the shrubs and included the following:

- Woolly milkvetch (*Astralagus purshii*);
- Holboell's rockcress (*Boechera holboelli*);
- Dusty maiden (*Chaenactis douglasii*);
- Long-leaf hawksbeard (*Crepis acuminata*);
- Rayless tansy aster (*Erigeron aphanactis*);
- Cushion buckwheat (*Eriogonum caespitosum*);
- Umbrella desert buckwheat (*Eriogonum umbellatum*);
- Scarlet gilia (*Ipomopsis aggregata*);
- Creeping barberry (*Mahonia repens*);
- Firecracker penstemon (*Penstemon eatonii*);
- Spiny phlox (*Phlox hoodii*);
- Chambers' twinpod (*Physaria chambersii*); and
- White clover.

Grasses observed in this community included the following: Sandberg bluegrass (*Poa secunda*); Indian ricegrass (*Achnatherum hymenoides*); smooth brome; and bottlebrush squirreltail (*Elymus elymoides*). Succulents observed in this community included prickly

pear (*Opuntia polyacantha*), Whipple cholla (*Cylindropuntia whipplei*), and Mojave mound cactus (*Echinocereus triglochidiatus*) (Enviroscientists 2013).

Montane Sagebrush Steppe

The montane sagebrush steppe community occupies approximately eight acres of the Project Area, and is located on convex hilltops in clearings of piñon-juniper. The dominant species observed in this community were low sagebrush (*Artemisia arbuscula*), Utah serviceberry, and Wyoming big sagebrush. Forbs were interspersed with the shrubs and included the following: woolly milkvetch; rayless tansy aster; spiny phlox; umbrella desert buckwheat; and large fruited desert parsley (*Lomatium macrocarpum*). Grasses observed in this community included western wheatgrass (*Agropyron smithii*), june grass (*Koeleria macrantha*), and Sandberg bluegrass.

Xeric Mixed Sagebrush Shrubland

The xeric mixed sagebrush shrubland community covers approximately one acre of the Project Area and is located in a drainage in the southern portion of the Project Area. The dominant species observed in this community were Wyoming big sagebrush, rubber rabbitbrush (*Ericameria nauseosus*), and Sandberg bluegrass. Forbs were interspersed with the shrubs and included the following: yarrow (*Achilea millefolium*); flatbud pricklypoppy (*Argemone munita*); matted Indian paintbrush (*Castilleja angustifolia*); dusty maiden; and groundsel (*Senecio* spp.). Grasses observed in this community include bottlebrush squirreltail and Indian ricegrass.

Mountain Mahogany Woodland and Shrubland

The mountain mahogany woodland and shrubland community covers approximately one acre of the Project Area and is located on sideslopes in the northern part of the Project Area. The dominant species observed in this community were curl-leaf mountain mahogany, Wyoming big sagebrush, single-leaf piñon pine, Utah juniper, and Sandberg bluegrass. Forbs were interspersed with the trees and shrubs and included the following: sego lily (*Calochortus nutallii*); long-leaf hawksbeard; matted Indian paintbrush; spiny phlox; common larkspur (*Delphinium nutallianum*); and umbrella desert buckwheat. Grasses observed within this community included june grass and western wheatgrass.

3.3.7.2 Impact Analysis

Proposed Action

The total surface disturbance associated with implementation of the Proposed Action would impact up to 100 acres of vegetation, or approximately 2.3 percent of the entire Project Area. As shown on Figure 3.3.4, surface disturbance associated with Phase I activities would occur in the piñon-juniper vegetation community. The specific locations of proposed disturbance under subsequent phases are currently unknown; therefore, the specific vegetation types that may be disturbed are also unknown. The proponent would

avoid the xeric mixed sagebrush shrubland and mountain mahogany woodland and shrubland communities as much as possible, as they only encompass approximately 0.05 percent of the entire Project Area.

The surface disturbance associated with Project activities would be reclaimed and reseeded concurrently whenever feasible using the BLM-approved seed mixture shown in Table 2.2-2. Monitoring activities are included in the Proposed Action, which would ensure that the revegetation meets reclamation standards and success criteria.

No Action Alternative

Under the No Action Alternative, approximately nine acres would be disturbed within the Project Area under currently acknowledged Notice-level exploration. Reclamation of surface disturbance, including reseeding, associated with Notice-level exploration activities, would minimize impacts to vegetation. Under the No Action Alternative, impacts would be similar to but less than the Proposed Action (approximately nine acres of surface disturbing activities versus approximately 100 acres).

3.3.8 Wildlife

The analysis area for wildlife species is the Project Area, as identified in the 2013 biological survey conducted for the Project (Enviroscientists 2013).

3.3.8.1 Affected Environment

General Wildlife

Terrestrial wildlife resources in the Project Area are typical of the southern Great Basin. A wide variety of wildlife species common to the Great Basin ecosystem have the potential to utilize the Project Area.

General wildlife species observed or detected during 2012 field surveys in the Project Area included the following: sagebrush lizard (*Sceloporus gracious*); western fence lizard (*Sceloporus occidentalis)*; black-tailed jackrabbit (*Lepus californicus*); coyote (*Canis latrans*); deer mouse (*Peromyscus maniculatus*); least chipmunk (*Tamias minimus*); mountain cottontail (*Sylvilagus nuttallii*); and woodrat (*Neotoma* spp.).

Big Game Species

Three big game species, elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), and pronghorn antelope (*Antilocapra americana*), were detected in the Project Area. Mule deer scat, tracks, and beds were observed throughout the Project Area. Pronghorn antelope scat and tracks were noted in the lower elevation portions of the Project Area. Elk scat was observed in the higher elevation portions of the northern half of the Project Area.

Game Birds

The only game bird detected during the 2012 field surveys was mourning dove (*Zenaida macroura*).

3.3.8.2 Impact Analysis

Proposed Action

Direct impacts to wildlife would consist of temporary habitat loss and disturbance from human activity and noise. Approximately 100 acres would be disturbed over the ten-year Project life as a result of surface disturbing activities associated with implementation of the Proposed Action. Surface exploration disturbance would be created incrementally and would be dispersed throughout the Project Area. No long-term impacts to wildlife habitat are likely to occur since reclamation would start within two years after Project completion and reestablishment of vegetation would likely occur within three years. Reclamation activities would occur concurrently with Project activities when feasible.

Construction of drill sites and roads could disturb wildlife due to the presence of humans and by creating noise and dust. Wildlife foraging activities within the Project Area could continue since the proposed surface disturbance activities only cover approximately 2.4 percent of the entire Project Area (100 acres out of a total of 4,187 acres); therefore, the Project is not anticipated to result in substantial direct impacts to wildlife species.

Smooth brome, white clover, and cheatgrass have been observed within the Project Area. These invasive species reduce the quality of habitat for wildlife. Project-related activities increase the potential for the spread of these species, in addition to the spread of other noxious weeds and invasive species; thus further reducing the quality of wildlife habitat. GSLLC would implement the environmental protection measures outlined in Section 2.2.13, which would mitigate or reduce the impact of noxious weeds and invasive species to wildlife habitat.

Although long-term improvement of habitat could occur in the Project Area as surface disturbance is reclaimed and revegetated and a greater amount of forb species becomes available for wildlife foraging, minimal direct impacts to wildlife would occur in phases throughout the life of Project as a result of surface disturbing activities. Impacts to specific wildlife groups are discussed in more detail below.

Small mammals

Due to ground disturbing activities, there would be a potential of direct mortality to small mammals (e.g., being crushed by vehicles or equipment). Ground disturbing activities would also impact small mammal habitat by removing vegetation and rocks and disturbing burrows. These impacts would be short-term, and habitat could be restored during reclamation.

Large mammals

Large mammals, such as mule deer, pronghorn antelope, and elk, may avoid the Project Area due to noise generated by the Project. Other large mammals, such as coyotes, could adapt to the noise and disturbance from the Project. These impacts would temporarily reduce the available habitat area for large mammals. Additionally, fences would be constructed around sumps and other small excavations that would restrict wildlife access.

Amphibians and Reptiles

Amphibians are not present within the Project Area. Reptiles would be impacted by surface disturbing activities, which would remove vegetation and disturb soil. Surface disturbance would remove potential areas for the sagebrush lizard and western fence lizard to lay their eggs or could destroy eggs laid within disturbance areas. Loss of vegetative cover and burrows could result in greater mortality due to predators. Temporary disturbance would reduce the forage area. Impacts would be temporary, and vegetation would be restored subsequent to reclamation.

No Action Alternative

Under the No Action Alternative, approximately nine acres would be disturbed within the Project Area under currently acknowledged Notice-level exploration. Reclamation of existing surface disturbance would gradually eliminate impacts to wildlife. Impacts to wildlife as a result of the No Action Alternative would be similar, but proportionally less than the Proposed Action (approximately nine acres of surface disturbing activities versus approximately 100 acres).

4 CUMULATIVE IMPACTS

4.1 Introduction

As required under the NEPA and the regulations implementing the NEPA, this section analyzes potential cumulative impacts from past, present, and reasonably foreseeable future actions (RFFAs), combined with the Proposed Action, specific to the resources for which cumulative impacts may be anticipated. A cumulative impact is defined as "the impact which results from the incremental impact of the action, decision, or project 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 individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7).

This chapter addresses those cumulative effects on the environmental resources in the Cumulative Effects Study Area (CESA), which could result from the implementation of the Proposed Action and No Action Alternative. The extent of the CESA would vary with each resource, based on the geographic or biologic limits of that resource. As a result, the types of projects causing impacts under the cumulative analysis may vary according to the resource being considered. In addition, the length of time for cumulative effects analysis would vary according to the duration of impacts from the Proposed Action on the particular resource.

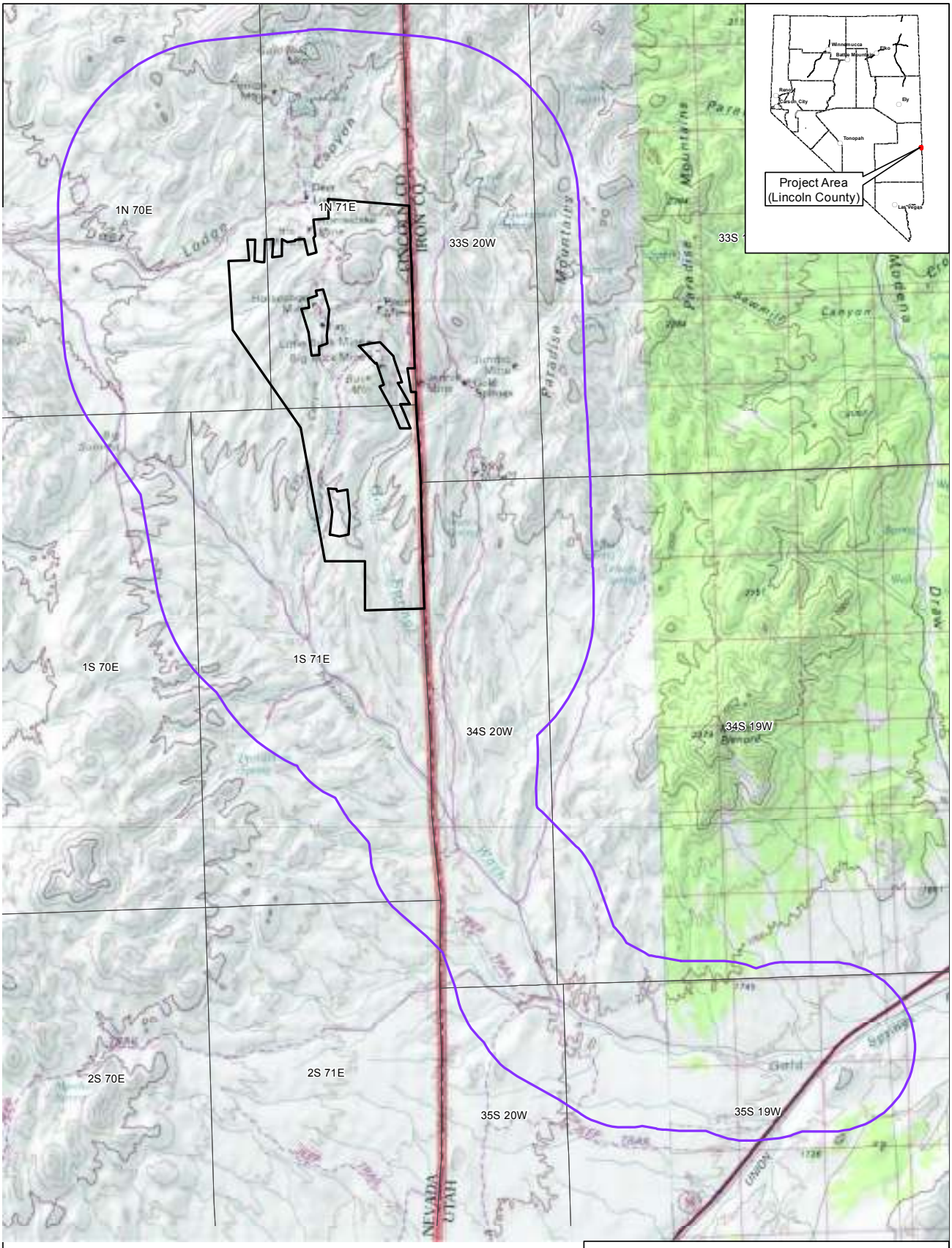
4.2 Analysis Areas

The geographic area considered for the analysis of cumulative effects reflects each evaluated environmental resource and the potential area of impact. A two-mile buffer around the Project Area and a one-mile buffer around the main access road has been defined as the CESA by the BLM for cultural resources (Figure 4.2.1). A combination of the Mahogany Peak Grazing Allotment in Nevada and the Gold Spring Grazing Allotment in Utah (defined as the Wildlife CESA) is used to analyze the cumulative impacts associated with invasive and nonnative species, migratory birds, soils, special status species, vegetation, and wildlife (Figure 4.2.2). LWC inventory unit 205-1-2013 has been used for the LWC CESA (Figure 4.2.3).

4.3 Past, Present, and Reasonably Foreseeable Future Actions

4.3.1 Past and Present Actions

The primary past and present actions that would have affected and currently affect the resources analyzed in the CESAs include the following: wildlife and game habitat management; livestock grazing; wildland fires; dispersed recreation; right-of-way (ROW) construction and management; mineral exploration; and mining.



Explanation

- Project Area
- Cultural Resources CESA

ELY DISTRICT OFFICE
Caliente Field Office
US Hwy 93, Bldg. #1, P.O. Box 237
Caliente, Nevada 89008

0 1 2 Miles

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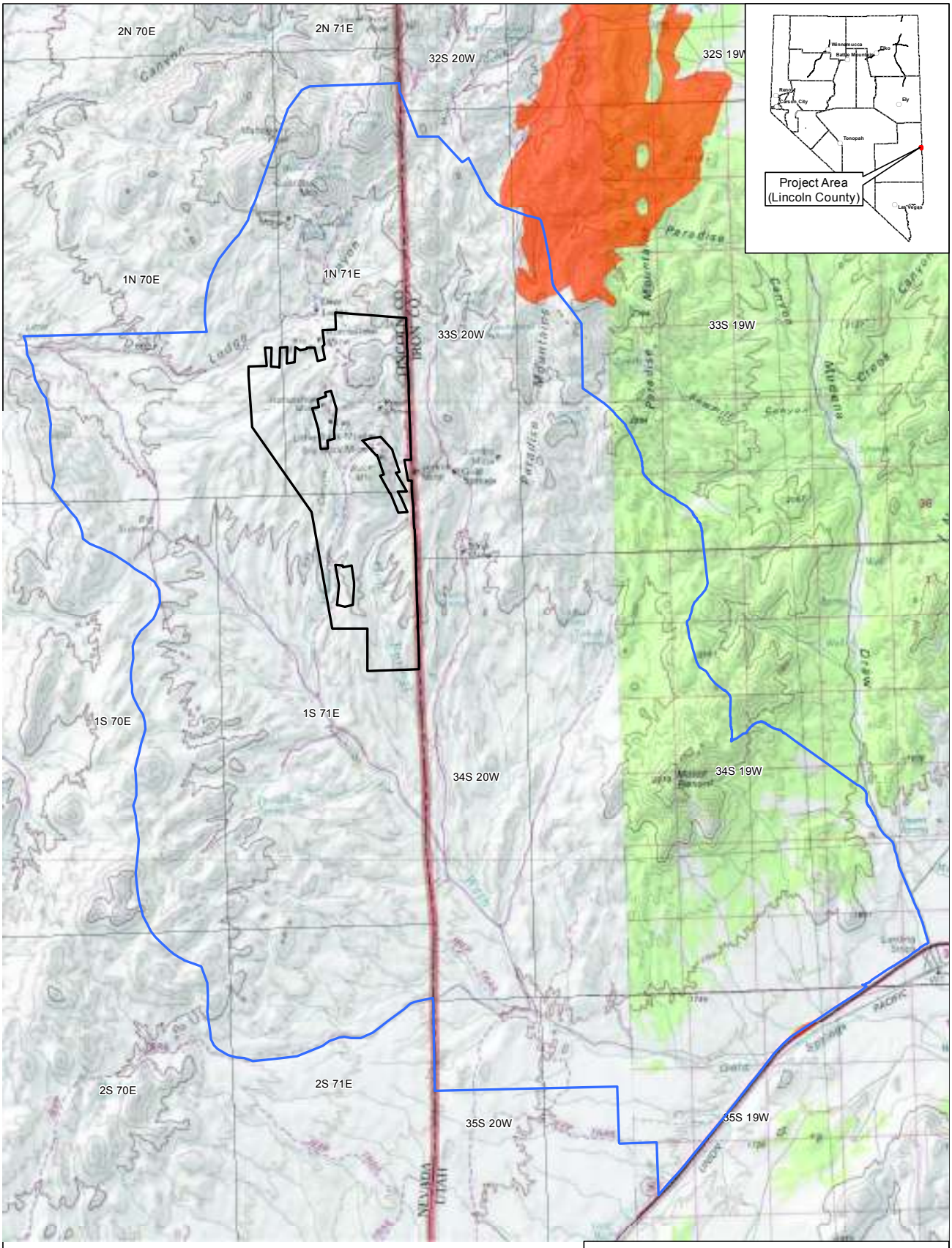
BUREAU OF LAND MANAGEMENT

GOLD SPRINGS EXPLORATION PROJECT

Cultural Resources CESA

Figure 4.2.1

01/09/2014



Explanation

- Project Area
- Wildlife CESA
- Fire History 2000-2012

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Caliente, Nevada 89008

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GOLD SPRINGS EXPLORATION PROJECT

Wildlife CESA and Fire History

Figure 4.2.2

01/09/2014

0 1 2 Miles

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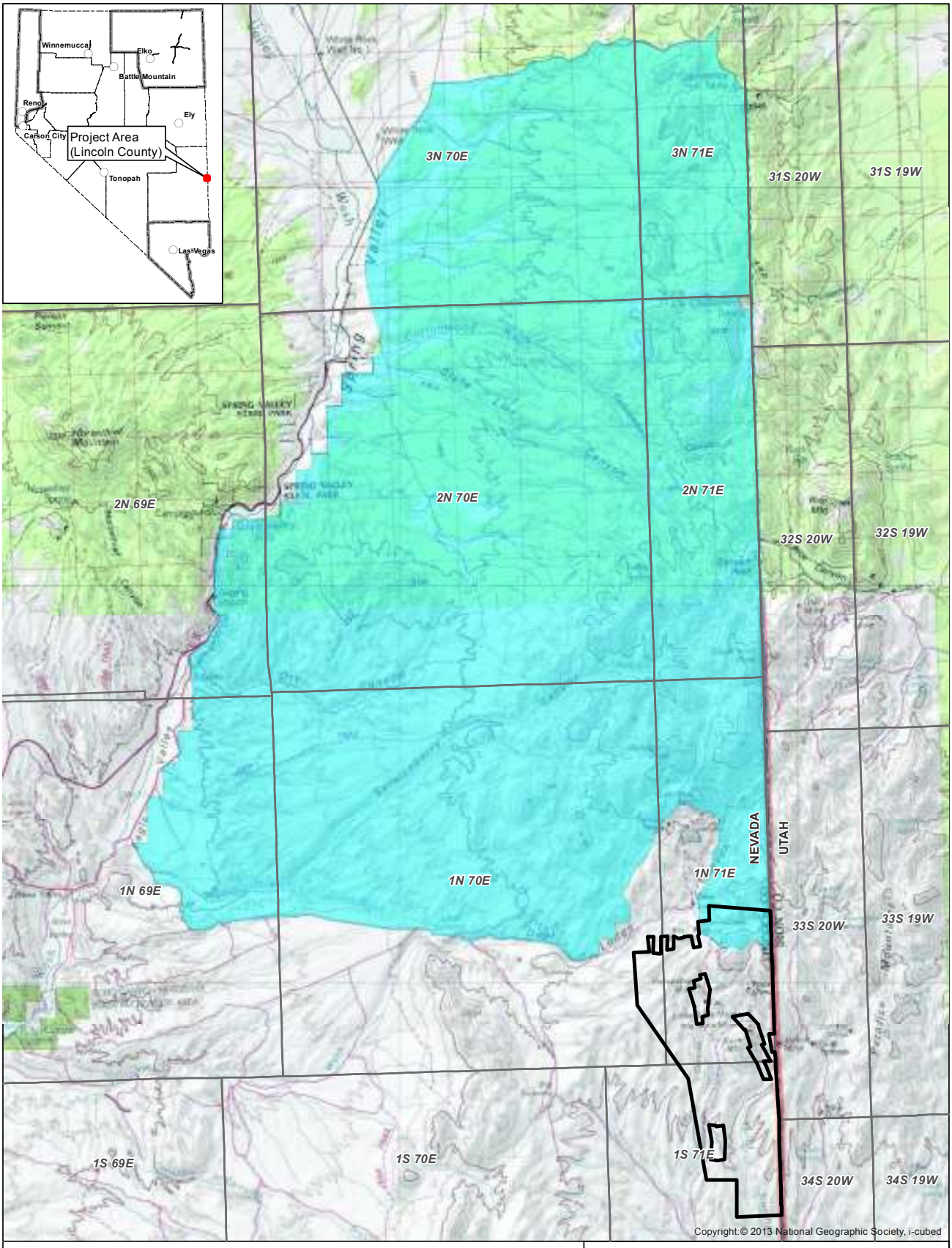

Explanation

Project Area

Lands with Wilderness Characteristics CESA

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Caliente, Nevada 89008

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GOLD SPRINGS EXPLORATION PROJECT

Lands with Wilderness Characteristics CESA

Figure 4.2.3

01/10/2014

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4.3.1.1 Wildlife and Game Habitat Management

Research and management of big game and wildlife in the Wildlife CESA are undertaken by the NDOW, BLM, and Utah Division of Wildlife Resources (UDWR), and may include modification to existing habitat and rangeland improvements. The Wildlife CESA includes NDOW Hunt Unit 231, and a portion of the UDWR Southwest Desert hunt boundary, which may be impacted by wildlife and game habitat management activities.

4.3.1.2 Livestock Grazing and Rangeland Improvements

The Wildlife CESA is comprised of the entire Mahogany Peak Grazing Allotment in Nevada and the entire Gold Spring Grazing Allotment in Utah. Rangeland improvements within the Wildlife CESA include the following: approximately 15 miles of fences on the Nevada side; approximately 21 miles of fences and seven miles of pipelines on the Utah side; and one windmill, four troughs, four springs, one dam/reservoir, and one corral on the Utah side of the CESA.

4.3.1.3 Wildland Fires and Vegetation Treatments

Although there are no recorded wildland fires within the Project Area, there has been wildland fire disturbance within the Wildlife CESA. The wildland fire disturbance in the Wildlife CESA is shown on Figure 4.2.2. Between 2000 and 2012, there were approximately 261 acres of wildland fire disturbance in the Wildlife CESA.

Vegetation treatments within the Wildlife CESA include the following: approximately 2,059 acres of seeding projects in the Nevada side of the CESA, including the Hackett juniper seeding, the Hackett reseeding, and the Taylor chaining and reseeding projects; and approximately 426 acres of seeding projects in the Utah side of the CESA, specifically the Paradise and Gold Springs seeding projects.

4.3.1.4 Dispersed Recreation

Dispersed recreation, such as hunting, hiking, mountain biking, horseback riding, camping, off-highway vehicle travel, outdoor photography, wildlife viewing, and rock collecting occurs throughout the CESAs.

4.3.1.5 Rights-of-Way

The BLM's Land & Mineral Legacy Rehost 2000 System (LR2000) database was used to query the various types of ROWs that have been authorized or constructed within the CESAs by section, township, and range, and includes the following: roads and highways; railroads; telecommunication facilities; power transmission facilities; and water facilities (BLM 2013b). The acreage of surface disturbance associated with these ROWs cannot be precisely 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 21, 2013, for the Wildlife CESA, and on October 18, 2013, for the Cultural Resources CESA; therefore, any newly approved ROWs that have been added to the LR2000 database after September 21, 2013, and October 18, 2013, respectively, are not included in the analysis. The approximate acreage of each ROW within each CESA is listed in Table 4.3-1.

Table 4.3-1: Past and Present ROW Acreages in the CESAs

ROW Type	Cultural Resources CESA (acres)	Wildlife CESA (acres)	LWC CESA (acres)
Roads and Highways	439	1,517	607
Railroad Facilities	2,247	2,247	0
Telecommunications	114	114	17
Power Transmission	8,769	8,831	7
Communication Sites	0	0	1
Water Facilities	1	13	41
Other	0	0	10
Total	**11,570**	**12,722**	**683**

4.3.1.6 Mineral Exploration and Mining

The LR2000 database was used to query the past and present mineral exploration or mining activities that have been issued within the CESAs by section, township, and range and include the following: closed and authorized plans of operation, closed and acknowledged Notices, community pits, and mineral material disposal sites (BLM 2013b). The LR2000 database was queried on September 21, 2013, for the Wildlife CESA, and on October 18, 2013, for the Cultural Resources CESA; therefore, any newly approved mineral exploration or mining plans or Notices that have been added to the LR2000 database after September 21, 2013, and October 18, 2013, respectively, are not included in the analysis. The approximate acreage of each mineral exploration or mining activity within each CESA is listed in Table 4.3-2.

Table 4.3-2: Past and Present Mineral Disturbance Acreages in the CESAs

Disturbance Type	Cultural Resources CESA (acres)	Wildlife CESA (acres)	LWC CESA (acres)
Acknowledged Notices	10	10	2
Closed Notices	13	14	10
Authorized Plans	0	0	0
Closed Plans	0	0	4
Community Pits	5	5	0
Mineral Material Disposal Sites	40	40	80
Total	**68**	**69**	**96**

In addition to the past and present mineral disturbance acreages identified in LR2000, there are numerous historic mining sites located throughout the CESAs. They can be identified on the USGS quadrangle maps for the Project Area and vicinity.

4.3.2 Reasonably Foreseeable Future Actions

Activities/events that would continue to occur in the CESAs include the following: wildlife and game habitat management; livestock grazing; dispersed recreation; and wildland fires. RFFAs in the CESAs include approximately three acres of a pending road project, and approximately 100 acres of pending mineral exploration activities, which is the proposed Project.

4.4 Cumulative Impact Analysis

4.4.1 Cultural Resources

The CESA for cultural resources is approximately 38,927 acres in size and is shown on Figure 4.2.1.

Past and present actions: Most past actions did not consider potential effects to cultural resources. Projects and development disturbances conducted prior to 1966 (i.e, prior to the NHPA) or those activities without a federal or state nexus generally did not identify or quantify cultural resource sites or impacts to them. Modern human activity tends to exacerbate the damage and consequently, cultural resources are being damaged and disappearing at an increasing rate. Many of the cultural resources in the Cultural Resources CESA exhibit impacts resulting from modern use of the land.

Given that eligibility determinations are based primarily on sites' surface characteristics, there is room for error given that surface manifestations do not always accurately reflect the nature and density of subsurface deposits. Other factors at play are the differences of opinion among professional archaeologists as to what research (and therefore archaeological sites) is important, and the evolving nature of archaeological research. In some cases, sites now thought to be lacking the ability to answer important questions may become important as archaeological method and theory progress but may not be preserved. The courts have determined that cultural resource management standards such as those employed for the current Project meet the objectives of the NHPA and other pertinent statutes, but this does not necessarily imply that there are not project-specific or cumulative losses of cultural resources or information important to understanding the past.

Past and present actions within the Cultural Resources CESA that have the potential to create surface disturbance and contribute to the degradation of cultural artifacts could have included and may currently include the following: wildlife and game habitat management; livestock grazing; wildland fires; dispersed recreation; ROW construction and maintenance; and mineral exploration. Specific cultural resources within the CESA include the following: prehistoric lithic scatters; historic mine workings; the Gold Springs historic district; and the NRHP-eligible Panaca Summit Archaeological District.

RFFAs: ROW construction and maintenance, mineral exploration, including reclamation, dispersed recreation, livestock grazing, and wildland fires, are likely to continue within the Cultural Resources CESA.

4.4.1.1 Proposed Action

Any potential impacts to cultural resources from the Proposed Action would be localized to the Project Area and minimized through the Environmental Protection Measures outlined in Section 2.1.13. Any previously unknown eligible properties that may be discovered during construction activities would be mitigated in accordance with the PA. Therefore, no mitigation or monitoring is recommended outside of the indirect and direct effect area, that is, outside of the proposed Project Area boundary. Therefore, cumulative impacts important to cultural resources are expected to be minimal.

4.4.1.2 No Action Alternative

All known eligible and unevaluated properties identified within the CESA would be mitigated in accordance with the regulations in the NHPA. Therefore, cumulative impacts important to cultural resources are expected to be minimal as a result of the No Action Alternative.

4.4.2 Invasive, Nonnative Species

The CESA for invasive, nonnative species is the Wildlife CESA, and is approximately 62,639 acres in size and is shown on Figure 4.2.2.

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

Historic fires (2000 – 2012) have burned approximately 261 acres in the Wildlife CESA (approximately 0.4 percent of the CESA). Authorized or closed mineral exploration and mining Notices or plans of operation, as well as mineral material disposal sites total approximately 69 acres (approximately 0.1 percent of the Wildlife CESA) of surface disturbance. ROWs, including roads and highways, total approximately 12,722 acres within the Wildlife CESA that had the potential to introduce invasive and nonnative species. Livestock grazing and associated management could have also contributed to the spread of invasive and nonnative species. The past and present actions that are quantifiable have disturbed approximately 13,052 acres or approximately 21 percent of the Wildlife CESA.

RFFAs: Potential impacts from invasive and nonnative species as a result of livestock grazing, dispersed recreation, mineral exploration, ROW construction and maintenance, or loss of native vegetation associated with potential wildland fires are expected to continue. There are no specific data to quantify impacts from invasive and nonnative species as a result of livestock grazing, dispersed recreation, or wildland fires. There are approximately three acres of a pending road project, and approximately 100 acres of pending mineral exploration activities in the Wildlife CESA, which is the proposed Project.

4.4.2.1 Proposed Action

The Proposed Action (approximately 100 acres) would impact approximately 0.2 percent of the Wildlife CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. Based on the above analysis and findings, incremental impacts from noxious weeds, invasive and nonnative 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.

4.4.2.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. This alternative (approximately nine acres) would incrementally add surface disturbance to approximately 0.01 percent of this Wildlife CESA. Impacts from noxious weeds, invasive and nonnative species from this alternative, in combination with past and present actions and RFFAs disturbance, would be minimal.

4.4.3 Lands with Wilderness Characteristics

The CESA for lands with wilderness characteristics is the LWC CESA, and is approximately 63,674 acres in size and is shown on Figure 4.2.3.

Past and Present Actions: Past and present actions that could have impacted and may be currently impacting lands with wilderness characteristics include dispersed recreation, utility and other ROW construction and maintenance, and mineral exploration. These human-driven actions could have reduced the viability of the land within the CESA by decreasing the remote, natural character.

Authorized or closed mineral exploration and mining Notices or plans of operation, and mineral material disposal sites total approximately 96 acres (approximately 0.1 percent of the LWC CESA) of surface disturbance. ROWs, including roads and highways, total approximately 683 acres within the LWC CESA that had the potential to decrease the natural character of the land.

RFFAs: Potential impacts from dispersed recreation, utility and other ROW construction and maintenance, and mineral exploration are expected to continue. There are no specific data to quantify impacts from dispersed recreation. There are approximately 100 acres of pending mineral exploration activities in the LWC CESA, which is the proposed Project.

4.4.3.1 Proposed Action

The Proposed Action (approximately 100 acres) would impact approximately 0.1 percent of the LWC CESA. Quantifiable past and present actions and RFFA disturbance in the LWC CESA is approximately 879 acres, which is an impact to approximately one percent of the LWC CESA. Based on the above analysis and findings, incremental impacts to LWC 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.

4.4.3.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the LWC CESA is approximately 879 acres, which is an impact to approximately one percent of the LWC CESA. This alternative (approximately nine acres) would incrementally add surface disturbance to approximately 0.01 percent of the LWC CESA. Impacts to LWC from this alternative, in combination with past and present actions and RFFAs disturbance, would be minimal.

4.4.4 Migratory Birds

The CESA for migratory birds is the Wildlife CESA, and is approximately 62,639 acres in size and is shown on Figure 4.2.2.

Past and Present Actions: Past and present actions that could have impacted and may be currently impacting migratory birds and their habitat include livestock grazing, wildlife and game habitat management, wildland fires, dispersed recreation, utility and other ROW construction and maintenance, and mineral exploration. Impacts to migratory birds and their habitat have resulted from the following: 1) direct and indirect impacts from the destruction of habitat associated with building roads and clearing vegetation; 2) indirect impacts from the disruption from human presence or noise from drill rigs, water trucks and four-wheel drive pickups; and 3) direct impacts or harm to migratory birds that result from the removal of trees and shrubs containing viable nests or ground nests destroyed by construction or ranching equipment. There are no specific data that quantify impacts to migratory birds and their habitat as a result of livestock grazing or recreation. However, impacts to migratory birds and their habitat from grazing include trampling of vegetation or nesting areas near streams, springs, or riparian areas within the Wildlife CESA. Impacts to migratory birds and their habitat from recreation activities include destruction of native vegetation or nesting areas from off-road vehicles that traveled off of established roadways.

Historic fires (2000 – 2012) have burned approximately 261 acres in the Wildlife CESA (approximately 0.4 percent of the Wildlife CESA). Authorized or closed mineral exploration and mining Notices or plans of operation, community pits, and mineral material disposal sites total approximately 69 acres (approximately 0.1 percent of the Wildlife CESA) of surface disturbance. ROWs, including roads and highways, total approximately 12,722 acres within the Wildlife CESA that had the potential to create surface disturbance and disturb migratory bird habitat and vegetation. The Wildlife CESA is also comprised of the NDOW Hunt Unit 231, and a portion of the UDWR Southwest Desert hunt boundary, which had the potential to create noise and disturbance to migratory birds, or remove or alter habitat. Livestock grazing and associated management could have contributed to the spread of noxious weeds, invasive and nonnative species, which could have had an indirect effect on migratory birds. The past and present actions that are quantifiable have disturbed approximately 13,052 acres or approximately 21 percent of the Wildlife CESA.

RFFAs: Potential impacts to migratory birds and their habitat from livestock grazing, wildlife and game habitat management, dispersed recreation, mineral exploration, ROW construction and maintenance, or loss of native vegetation associated with potential wildland fires could occur. There are no specific data to quantify impacts to migratory birds or their habitat as a result of livestock grazing, wildlife and game habitat management, dispersed recreation, or potential wildland fires within the Wildlife CESA. There are approximately three acres of a pending road project, and approximately 100 acres of pending mineral exploration activities in the Wildlife CESA, which is the proposed Project. These pending projects are all required to incorporate protection measures for migratory birds and therefore, are not expected to directly harm migratory birds, but may result in habitat removal or alteration.

4.4.4.1 Proposed Action

The Proposed Action (approximately 100 acres) would impact approximately 0.2 percent of the Wildlife CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. However, based on the above analysis and findings, incremental impacts to migratory birds and their habitat 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.

4.4.4.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. This alternative (approximately nine acres) would incrementally add surface disturbance to approximately 0.01 percent of this Wildlife CESA. Impacts to migratory birds and their habitat from this alternative, in combination with past and present actions and RFFAs disturbance, would be minimal.

4.4.5 Soils

The CESA for soils is the Wildlife CESA, and is approximately 62,639 acres in size and is shown on Figure 4.2.2.

Past and Present Actions: Past and present actions that have impacted and are currently impacting soils include livestock grazing, dispersed recreation, utility and other ROW construction and maintenance, mineral exploration, and soil compaction due to travel by heavy equipment on unpaved roads. These actions may have directly disturbed or impacted soils, or increased erosion or sedimentation potential. 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. There are no specific data to quantify impacts to soils from livestock grazing or dispersed recreation in the Wildlife CESA.

Historic fires (2000 – 2012) have burned approximately 261 acres in the Wildlife CESA (approximately 0.4 percent of the Wildlife CESA). Authorized or closed mineral exploration and mining Notices or plans of operation, as well as mineral material disposal sites total approximately 69 acres (approximately 0.1 percent of the Wildlife CESA) of surface disturbance. ROWs, including roads and highways, total approximately 12,722 acres within the Wildlife CESA that had the potential to impact soils. The past and present actions that are quantifiable have disturbed approximately 13,052 acres or approximately 21 percent of the Wildlife CESA.

RFFAs: Livestock grazing, dispersed recreation, mineral exploration, mining, ROW construction and maintenance, soil compaction due to travel by heavy equipment on unpaved roads, or loss of native vegetation associated with potential wildland fires are expected to continue. There are no specific data to quantify impacts from livestock grazing, dispersed recreation, or wildland fires. There are approximately three acres of a pending road project, and approximately 100 acres of pending mineral exploration activities in the Wildlife CESA, which is the proposed Project.

4.4.5.1 Proposed Action

The Proposed Action (approximately 100 acres) would impact approximately 0.2 percent of the Wildlife CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. 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, would be minimal.

4.4.5.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. This alternative (approximately nine acres) would incrementally add surface disturbance to approximately 0.01 percent of this Wildlife

CESA. Impacts to soils from this alternative, in combination with past and present actions and RFFAs disturbance, would be minimal.

4.4.6 Special Status Species

The CESA for special status species is the Wildlife CESA, and is approximately 62,639 acres in size and is shown on Figure 4.2.2.

Past and present actions: Past and present actions that have impacted and are currently impacting special status species include livestock grazing, wildland fires, dispersed recreation, utility and other ROW construction and maintenance, and mineral exploration. Noise and surface disturbance have also impacted special status wildlife species. Impacts to special status species from these activities include loss of forage, cover, and habitat as well as disturbance of mating and brood rearing practices. There are no specific data to quantify impacts to special status species from livestock grazing or dispersed recreation.

Historic fires (2000 – 2012) have burned approximately 261 acres in the Wildlife CESA (approximately 0.4 percent of the Wildlife CESA). Authorized or closed mineral exploration and mining Notices or plans of operation, as well as mineral material disposal sites total approximately 69 acres (approximately 0.1 percent of the Wildlife CESA) of surface disturbance. ROWs, including roads and highways, total approximately 12,722 acres within the Wildlife CESA that had the potential to create surface disturbance and disturb special status species habitat and vegetation. The past and present actions that are quantifiable have disturbed approximately 13,052 acres or approximately 21 percent of the Wildlife CESA.

RFFAs: Potential impacts to special status species from livestock grazing, dispersed recreation, mineral exploration, ROW construction and maintenance, or loss of native vegetation associated with potential wildland fires are expected to continue. There are no specific data to quantify impacts to special status species or their habitat as a result of livestock grazing, dispersed recreation, or potential wildland fires within the Wildlife CESA. There are approximately three acres of a pending road project, and approximately 100 acres of pending mineral exploration activities in the Wildlife CESA, which is the proposed Project. These pending projects are all required to incorporate protection measures for special status species and therefore, are not expected to directly harm special status species, but may result in habitat removal or alteration which would be restored during reclamation.

4.4.6.1 Proposed Action

The Proposed Action (approximately 100 acres) would impact approximately 0.2 percent of the Wildlife CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. However, based on the above analysis and findings, incremental impacts to special status species and their habitat as a result of the Proposed

Action, when combined with the impacts from the past and present actions and RFFAs, would be minimal.

4.4.6.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. This alternative (approximately nine acres) would incrementally add surface disturbance to approximately 0.01 percent of this Wildlife CESA. Impacts to special status species and their habitat from this alternative, in combination with past and present actions and RFFA disturbance, would be minimal.

4.4.7 Vegetation

The CESA for vegetation is the Wildlife CESA, and is approximately 62,639 acres in size and is shown on Figure 4.2.2.

Past and Present Actions: Past and present actions that have impacted and are currently impacting vegetation include wild horse foraging, livestock grazing, dispersed recreation, utility and other ROW construction and maintenance, wildland fires, and vegetation treatments that altered the structure, composition, and ecology of plant communities, mineral exploration, and mining. There are no specific data to quantify impacts to vegetation from livestock grazing or dispersed recreation. Impacts caused by activities such as hunting and associated off-road vehicle travel include the introduction of noxious weeds, invasive or nonnative species, and trampled vegetation.

Historic fires (2000 – 2012) have burned approximately 261 acres in the Wildlife CESA (approximately 0.4 percent of the Wildlife CESA). Authorized or closed mineral exploration and mining Notices or plans of operation, as well as mineral material disposal sites total approximately 69 acres (approximately 0.1 percent of the Wildlife CESA) of surface disturbance. ROWs, including roads and highways, total approximately 12,722 acres within the Wildlife CESA that had the potential to create surface disturbance and disturb vegetation. The past and present actions that are quantifiable have disturbed approximately 13,052 acres or approximately 21 percent of the Wildlife CESA.

RFFAs: Potential impacts to vegetation from livestock grazing, dispersed recreation, mineral exploration, mining, ROW construction and maintenance, or loss of native vegetation associated with potential wildland fires are expected to continue. There are no specific data to quantify impacts from dispersed recreation or wildland fires. There are approximately three acres of a pending road project, and approximately 100 acres of pending mineral exploration activities in the Wildlife CESA, which is the proposed Project.

4.4.7.1 Proposed Action

The Proposed Action (approximately 100 acres) would impact approximately 0.2 percent of the Wildlife CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately

21 percent of the Wildlife CESA. 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, would be minimal.

4.4.7.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. This alternative (approximately nine acres) would incrementally add surface disturbance to approximately 0.01 percent of this Wildlife CESA. Impacts to vegetation from this alternative, in combination with past and present actions and RFFAs disturbance, would be minimal.

4.4.8 Wildlife (General)

The CESA for wildlife is the Wildlife CESA, and is approximately 62,639 acres in size and is shown on Figure 4.2.2.

Past and present actions: Past and present actions that have impacted and are currently impacting wildlife include livestock grazing, wildland fires, dispersed recreation, utility and other ROW construction and maintenance, and mineral exploration. Impacts to wildlife from these activities include loss of forage, cover, and habitat as well as disturbance of mating and brood rearing practices. There are no specific data to quantify impacts to wildlife from livestock grazing or dispersed recreation.

Historic fires (2000 – 2012) have burned approximately 261 acres in the Wildlife CESA (approximately 0.4 percent of the Wildlife CESA). Authorized or closed mineral exploration and mining Notices or plans of operation, as well as mineral material disposal sites total approximately 69 acres (approximately 0.1 percent of the Wildlife CESA) of surface disturbance. ROWs, including roads and highways, total approximately 12,722 acres within the Wildlife CESA that had the potential to create surface disturbance and disturb wildlife habitat and vegetation. The past and present actions that are quantifiable have disturbed approximately 13,052 acres or approximately 21 percent of the Wildlife CESA.

RFFAs: Potential impacts to wildlife from livestock grazing, dispersed recreation, mineral exploration, ROW construction and maintenance, or loss of native vegetation associated with potential wildland fires and invasive species are expected to continue. There are no specific data to quantify impacts to wildlife or their habitat as a result of dispersed recreation or potential wildland fires within the Wildlife CESA. There are approximately three acres of a pending road project, and approximately 100 acres of pending mineral exploration activities in the Wildlife CESA, which is the proposed Project.

4.4.8.1 Proposed Action

The Proposed Action (approximately 100 acres) would impact approximately 0.2 percent of the Wildlife CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. However, based on the above analysis and findings, incremental impacts to wildlife and their habitat as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, would be minimal.

4.4.8.2 No Action Alternative

A total of the quantifiable past and present actions and RFFA disturbance within the Wildlife CESA is approximately 13,155 acres, which is an impact to approximately 21 percent of the Wildlife CESA. This alternative (approximately nine acres) would incrementally add surface disturbance to approximately 0.01 percent of this Wildlife CESA. Impacts to wildlife and their habitat from this alternative, in combination with past and present actions and RFFA disturbance, would be minimal.

5 CONSULTATION AND COORDINATION

5.1 Introduction

The issue identification section of Chapter 1 provides the rationale for issues that were considered but not analyzed further and identifies those issues analyzed in detail in Chapter 3. The issues were identified through the public and agency involvement process described in sections 5.2 and 5.3 below.

5.2 Persons, Groups and Agencies Consulted

Name	Purpose & Authority for Consultation or Coordination	Findings and Conclusions
Nevada SHPO	Consultation for undertakings as required by the National Historic Preservation Act (P.L. 89-665; U.S.C. 470 et seq.)	The cultural survey report was sent to SHPO on Monday, January 6, 2014. Consultation results are pending at this time.

The BLM Ely District Office sent formal consultation letters on November 7, 2013, to the following tribes and tribal councils informing them of the proposed Project and EA and inviting comments and concerns:

- Battle Mountain Band Council
- Confederated Tribes of the Goshute Reservation, Nevada-Utah
- Duckwater Shoshone Tribe
- Elko Band Council
- Ely Shoshone Tribe of Nevada
- Kaibab Band of Paiute Indians of the Kaibab Indian Reservation
- Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony
- Moapa Band of Paiute Indians
- Paiute Indian Tribe of Utah
- Paiute Indian Tribe of Utah, Cedar Band of Paiutes
- Paiute Indian Tribe of Utah, Shivwits Band of Paiutes
- Paiute Indian Tribe of Utah, Kanosh Band of Paiutes
- Paiute Indian Tribe of Utah, Koosharem Band of Paiutes
- Paiute Indian Tribe of Utah, Indian Peaks Band of Paiutes
- South Fork Band Council
- Te-Moak Tribe of the Western Shoshone Indians of Nevada
- Wells Band Council
- Yomba Shoshone Tribe of the Yomba Reservation Nevada

5.3 Summary of Public Participation

During preparation of the EA, the public was notified of the Proposed Action by posting on the BLM's National NEPA Register in January 2014. Any pertinent comments would be incorporated into the text of the Final EA.

5.4 List of Preparers

5.4.1 BLM

Name	Title	Responsible for the Following Section(s) of this Document
Victoria Barr	Field Office Manager	Overall project schedule
Shirley Johnson	Assistant Field Manager	Overall project schedule
Miles Kreidler	Geologist	Project Lead; Geology and Minerals
Nick Pay	Archaeologist; Planning and Environmental Coordinator	Cultural Resources; Paleontological Resources; NEPA Compliance
Alicia Styles	Wildlife Biologist	General Wildlife, Migratory Birds, Special Status Species
Todd Trapp	Wildlife Biologist	General Wildlife, Migratory Birds, Special Status Species
Cameron Boyce	Rangeland Management Specialist	Invasive, Nonnative Species; Vegetation
Domenic Bolagnani	Rangeland Management Specialist	Livestock Grazing, Rangeland Management
Daniel Condie	Rangeland Management Specialist	Livestock Grazing, Rangeland Management
Clint Wertz	Supervisory Resource Management Specialist	Air Quality, Water Quality, Soils
Elvis Wall	Native American Coordinator	Native American Religious and Other Concerns
Elizabeth Domina	Outdoor Recreation Planner	Recreation, Visual Resources
Kyle Teel	Fire Ecologist	Forest Health, Fire Management
Emily Simpson	Wilderness Planner	Wilderness, Lands with Wilderness Characteristics
Ben Noyes	Wild Horse Specialist	Wild Horses

5.4.2 Non-BLM Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Catherine Lee	Senior Specialist/Project Manager	Overall project management; preparation of all chapters and sections
Opal Adams	Principal Specialist	Technical Review, Editing
Gail Liebler	GIS Specialist	GIS Data Management and Figure Production
Ryan Galligan	Environmental Specialist	Soils

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6.2 Acronyms

° - degrees
Amsl - above mean sea level
AUM - Animal Unit Month
BLM - Bureau of Land Management
BMRR - Bureau of Mining Regulation and Reclamation
BMPs - best management practices
CESA - Cumulative Effects Study Area
CFR - Code of Federal Regulations
EA - Environmental Assessment
EIS - Environmental Impact Statement
EO - Executive Order
ESA - Endangered Species Act of 1973
F - Fahrenheit
FEIS - Final Environmental Impact Statement
FLPMA - Federal Land Policy and Management Act of 1976
FONSI - Finding of No Significant Impact
GBBO - Great Basin Bird Observatory
GSLLC - Gold Springs, LLC
HMA - Herd Management Area
LR2000 - Land & Mineral Legacy Rehost 2000 System
LWC – Lands with Wilderness Characteristics
MBTA - Migratory Bird Treaty Act of 1918
MDB&M - Mount Diablo Base & Meridian
Mining Law - General Mining Law of 1872
NAC - Nevada Administrative Code
NDEP - Nevada Division of Environmental Protection
NDOW - Nevada Department of Wildlife
NEPA - National Environmental Policy Act of 1969
NHPA - National Historic Preservation Act of 1966
NNHP - Nevada Natural Heritage Program
NRCS - National Resources Conservation Service
NRHP - National Register of Historic Places
NRS - Nevada Revised Statutes
P.L. - Public Law
PA - Programmatic Agreement
Plan - Plan of Operations #NVN–092216/Nevada Reclamation Permit application
Project - Gold Springs Exploration Project
RC - reverse circulation
RFFA - reasonably foreseeable future action
RMP - Resource Management Plan
ROD - Record of Decision
ROW - right-of-way
SAD - Surface Area Disturbance
SHPO - State Historic Preservation Office

SR - State Route
UDWR - Utah Division of Wildlife Resources
UNPS - Utah Native Plant Society
U.S. 93 - United States Highway 93
USFS - United States Forest Service
USFWS - United States Fish and Wildlife Service
USGS - United States Geological Survey
WRCC - Western Regional Climate Center

Appendix A

Programmatic Agreement between the Bureau of Land Management, Caliente Field Office and the Nevada State Historic Preservation Officer regarding the Gold Springs Exploration Project Lincoln County, Nevada

Programmatic Agreement

between

The Bureau of Land Management, Caliente Field Office

and the

Nevada State Historic Preservation Officer

regarding

The Gold Springs Exploration Project

Lincoln County, Nevada

WHEREAS, Gold Springs, LLC (Applicant) has submitted the Plan of Operations for the Gold Springs Exploration Project (Project). The Project is located approximately 25 miles northeast of Caliente, Nevada, at elevations ranging from 6,230 to 7,660 feet above mean sea level. The Applicant plans to conduct phased mineral exploration activities consisting of the following activities within the area outlined on the maps in Appendix I: exploration drilling; road construction; drill site and sump construction; installation of a monitoring well(s); installation and operation of a production water well; trenching and bulk sampling; installation of a meteorological station; and disturbance area reclamation. Customary and reasonable technology and practices will be utilized to avoid unnecessary or undue environmental impacts. The activities associated with this Project are outlined in the attached Plan of Operations (Plan) located in Appendix II. Henceforth, all activities included in the Plan are referred to collectively as the Undertaking; and

WHEREAS, the Bureau of Land Management (BLM), Caliente Field Office (CFO) is considering plans to permit the Undertaking pursuant to the BLM Surface Management Regulations, at 36 Code of Federal Regulations (CFR) 3809, as amended; and

WHEREAS, the CFO, in consultation with the Nevada State Historic Preservation Officer (SHPO), determined that the Project is an Undertaking as defined in the National Historic Preservation Act of 1966, as amended (NHPA) because it takes place on lands managed by the BLM and is an activity that is permitted and approved by the CFO. Therefore, the CFO is responsible for ensuring that the Undertaking is in compliance with Section 106 of the NHPA, 16 U.S.C. § 470f, and its implementing regulations, 36 C.F.R. § 800; and

WHEREAS, the CFO has determined that the Undertaking has the potential to affect historic properties both directly and indirectly and has identified the Undertaking's area of potential effect (APE) as shown on Map 1 in Appendix I in accordance with 36 C.F.R. § 800.16(d); and

WHEREAS, the Applicant has provided BLM with an overview of previous inventories to identify historic properties are outlined in the Literature Review and Background Research Report (appendix IV; hereinafter called the Literature Review); and

WHEREAS, the CFO determined that due to the phased nature of the Undertaking, the effects to historic properties cannot be fully determined prior to signing a decision document for the National Environmental Policy Act (NEPA) analysis of the Undertaking; and

WHEREAS, in accord with section II.B.2 of the *State Protocol Agreement between the Bureau of Land Management, Nevada and the Nevada State Historic Preservation Office for Implementing the National Historic Preservation Act, Finalized February 3, 2012* (State Protocol) the BLM will develop programmatic agreements for undertakings that are phased if the BLM wishes to defer the final identification and National Register of Historic Places (NRHP) evaluation of resources or the application of the criteria of adverse effect; and

WHEREAS, the CFO is responsible for conducting Native American tribal consultation on a government-to-government level and ensuring that it complies with the BLM manual 8120 and BLM Handbook, H-8120-1, guidelines for conducting tribal consultation. Therefore, the CFO sent certified letters (appendix III) dated 4 November 2013 wherein the BLM invited the following Tribes to consult on this Undertaking:

Battle Mountain Band Council,
Confederated Tribes of the Goshute Reservation, Nevada-Utah,
Duckwater Shoshone Tribe,
Elko Band Council,
Ely Shoshone Tribe of Nevada,
Kaibab Band of Paiute Indians of the Kaibab Indian Reservation,
Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony,
Moapa Band of Paiute Indians,
Paiute Indian Tribe of Utah,
Paiute Indian Tribe of Utah: Cedar Band of Paiutes,
Paiute Indian Tribe of Utah: Indian Peaks Band of Paiutes,
Paiute Indian Tribe of Utah: Kanosh Band of Paiutes,
Paiute Indian Tribe of Utah: Koosharem Band of Paiutes,
Paiute Indian Tribe of Utah: Shivwits Band of Paiutes,
South Fork Band (Te-Moak Tribes of the Western Shoshone Indians of Nevada),
Te-Moak Tribes of the Western Shoshone Indians of Nevada,
Wells Indian Colony Band Council,
Yomba Shoshone Tribe; and

WHEREAS, the CFO is consulting with the Duckwater Shoshone Tribe to identify historic properties that may have religious and cultural significance to this tribe; and

WHEREAS, the CFO has involved the public through the use of the National Environmental Policy Act (NEPA) public participation procedures, wherein the public were invited to participate in the NEPA scoping process and were encourage to provide information regarding the location of potential historic properties that may be affected by the Undertaking to the CFO archaeologist; and

WHEREAS, the BLM has invited the Advisory Council on Historic Preservation (ACHP), pursuant to 36 CFR §800.14(b), to develop and execute this PA and the ACHP has not elected to formally enter consultation on the development of this PA; and

WHEREAS, this PA covers all aspects of the planning, development, and implementation of the Undertaking; and

WHEREAS, the Applicant has been invited to sign this PA as an invited signatory as they will have certain obligations outlined in the stipulations; and

NOW, THEREFORE, the signatories and invited signatories to this PA agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the Undertaking on historic properties, and to comply with Section 106 of the NHPA for this Undertaking.

STIPULATIONS

I. Roles and Responsibilities

a. The signatories and invited signatories agree that all projects or project phases identified as part of this Undertaking shall be subject to the processes outlined herein.

b. The signatories and invited signatories agree that the State Protocol, except as amended here, shall be utilized for this PA. The State Protocol is incorporated by reference.

c. The Applicant is responsible for obtaining a contractor qualified to obtain a Cultural Resources Use Permit (CRUP) through the Nevada State Office (NSO) of the BLM and ensuring that they are funded to carry out the requirements of this PA.

d. The Applicant's contractor shall obtain and keep current a CRUP from the NSO and shall work directly with the BLM Cultural Resources Staff to carry out the provisions of this PA.

e. The CFO is responsible for the administration of this PA. This includes but is not limited to ensuring that signatories and invited signatories carry out their responsibilities; overseeing cultural resource work; reviewing draft and final reports; dissemination of reports to the necessary parties; and for seeking SHPO concurrence with agency decisions.

f. The CFO shall ensure that ethnographic, historic, architectural, and archaeological work conducted pursuant to this PA is carried out by or under the direct supervision of persons meeting qualifications set forth in the *Secretary of the Interior's Professional Qualifications Standards* (currently available at http://www.nps.gov/history/local-law/arch_stnds_9.htm) and that those who require permits for such work by the BLM Nevada have them.

II. Definitions

Terms not defined here and used in this PA are defined in the ACHP's regulations at 36 CFR 800.16 and the State Protocol.

III. The Compliance Process

a. Defining the Area of Potential Effect (APE)

i. After the Applicant identifies a new project phase to be accomplished within the APE, the Applicant shall submit the details of that phase to the CFO. The CFO Cultural Resource Specialist (CRS) shall determine the phase-specific APE for direct effects to historic properties in accordance with 36 CFR 800.16(d) and the State Protocol. The phase-specific APE for assessing indirect effects on known historic properties will be the area of the phase of work plus two miles outward in all directions from the perimeter, which would include some areas outside the Undertaking area.

b. Identification of Historic Properties

i. BLM shall ensure the identification of historic properties shall be carried out in compliance with the current *Guidelines and Standards for Archaeological Inventory (January 2012 – Fifth Edition)* (Guidelines) as published on the BLM Nevada Cultural webpage. http://www.blm.gov/nv/st/en/prog/more_programs/cultural_resources.html

ii. Tribal involvement

1. The BLM shall ensure that tribal involvement regarding the identification of historic properties occurs by inviting the Tribes, during government-to-government consultation efforts, to identify areas of traditional religious and/or cultural significance within the direct and indirect APEs. The BLM shall ensure that any properties identified through tribal consultation efforts are provided to the Applicant's contractor.

iii. Public involvement

1. The BLM shall ensure public involvement regarding the identification of historic properties by inviting interested parties to identify properties that may be affected within the direct and indirect APEs using the NEPA Public Notification process. The BLM shall ensure that any properties identified through public involvement efforts are provided to the Applicant's contractor.

iv. Literature Review and Background Research

1. Prior to conducting an inventory of a project phase the Applicant's contractor shall contact the Caliente (and Cedar City if necessary) BLM Field Office to ensure that all recent inventories within the APE as defined in stipulation III.a of this agreement, are considered.

v. Inventory for Historic Properties

1. BLM shall ensure that the Applicant's contractor inventories the entire direct effect APE for each phase as identified by the BLM according to Class III standards outlined in the Guidelines and State Protocol prior to the BLM authorizing any ground disturbance for the specific project phase. The BLM shall also ensure that appropriate reports are prepared in accordance with the Protocol and Guidelines.
2. The Applicant's contractor shall determine boundaries for all previously recorded and newly discovered cultural resources identified during the inventory described in Stipulation III.b.iv.1.
3. All previously recorded and newly discovered archaeological resources shall be documented on the BLM Nevada Intermountain Antiquities Computer System (IMACS) Form according to the Guidelines.
4. All previously recorded and newly discovered architectural resources shall be documented on the appropriate BLM inventory form according to the Guidelines.

c. Evaluation of Historic Properties

i. BLM, in consultation with the SHPO and other consulting parties as appropriate, shall make determinations of NRHP eligibility for all previously recorded and newly discovered cultural resources identified during the inventory.

ii. If, during the course of tribal consultation, a Tribe identifies an area (or areas) of concern the BLM shall consult with the Tribes regarding eligibility of resources within that area of concern. Based on information shared with the BLM, the BLM would determine the NRHP eligibility of identified properties, and consult on these determinations with SHPO and the Tribes.

iii. If, during the course of consultation, an individual or group identifies an area (or areas) of concern the BLM shall consult with the appropriate party regarding eligibility of resources within that area of concern.

d. Determining Project Effects to Historic Properties

i. The Applicant's contractor shall assess the direct and indirect effects of each project phase of the Undertaking to all historic properties within the direct effects APE in accordance with the Guidelines. The BLM shall review and approve all key observation points (KOPs) established to assess indirect effects to historic properties.

ii. BLM, in consultation with the SHPO, shall take into account information obtained through tribal and public consultation and make a determination of project phase effect in accordance with 36 CFR 800.5.

e. Resolution of Adverse Effects

i. Avoidance: BLM, in consultation with SHPO, Tribes and other consulting parties as appropriate, shall ensure that the Applicant avoids adverse effects to historic properties through project design or redesign, relocation of facilities, or by other means in a manner consistent with this PA. BLM Manual 8140.06C states that first choice shall be to avoid historic properties that would otherwise be affected by a proposed land use, if it is reasonable and feasible to do so.

a. Project phases shall be redesigned where reasonable and feasible to avoid historic properties.

b. BLM shall apply a standard buffer of 30 meters to all historic property boundaries to ensure protection of these resources during ground disturbing activities of the Undertaking. Where architectural resources are present, the buffer shall be extended to 50 meters.

c. BLM shall ensure that flagging is placed to minimize the potential for looting and vandalism during implementation of the phase of Undertaking and removed as soon as possible after the project phase is completed.

2. The BLM shall ensure that the avoidance measures are implemented after project phase approval and prior to initiating this ground-disturbing activities associated with the project phase.

ii. Where avoidance in not reasonable or feasible:

1. The Applicant's contractor shall draft a Historic Properties Treatment Plan (HPTP) to propose treatments to address the adverse effects of the project phase of the Undertaking on historic properties identified within both the direct and indirect effects APEs.

2. The BLM, in consultation with the SHPO, Tribes and other consulting parties as appropriate, shall determine, to the extent possible, if the proposed treatments are appropriate and adequate to minimize or mitigate adverse effects to historic properties through the development and execution of the HPTP.

3. The BLM shall consult with the Tribes, or identified affected tribal members, to evaluate effects to properties of traditional religious and cultural importance. Based on information shared with the BLM, the BLM shall determine the appropriate treatment to avoid or to minimize adverse effects, and consult on these determinations with SHPO and the Tribes.

4. For properties eligible under Secretary's criteria (a) through (c), mitigation other than data recovery may be considered in the treatment plan (e.g., Historic American Buildings Survey/Historic American Engineering Record recording, oral history, historic markers, exhibits, interpretive brochures or publications, etc.). Where appropriate, treatment plans may include provisions (content and number of copies) for a publication for the general public.
5. The BLM, in consultation with the SHPO, shall ensure that the fieldwork portion of the HPTP shall be carried out prior to any ground disturbance within 100 meters of the affected historic property within the area covered by the plan.
6. The BLM shall execute this HPTP after project phase approval and prior to initiating a project phase under this PA.

f. Reporting

i. All reports of identification, recordation, evaluation, treatment or other mitigation activities associated with this PA shall use the BLM Cultural Resources Report Number 8111-NV-040-[FY]-2056. CRS will assign the appropriate two-digit Fiscal Year code as well as a unique letter for each report as part of the authorization for the project phase.

ii. The Applicant's contractor shall not provide any information regarding the identification, recordation, evaluation, treatment or other mitigation activities associated with this PA to any party without prior authorization by the BLM.

iii. The initial cultural resource inventory report for the Undertaking shall contain all report sections outlined in the Guidelines, as well as incorporate the Literature Review.

iv. Subsequent reports prepared by the Applicant's contractor under this PA shall only contain the following sections completed in accordance with the Guidelines:

1. Administrative Summary; and
2. Project phase Description (for the current phase); and
3. Reference the historic overview, historic context, environmental background and expectations contained in the initial cultural resources inventory report; and
4. Field Methods; and
5. Results of the Inventory; and
6. NRHP Eligibility Recommendations; and
7. Recommendations of Project phase effect; and
8. Conclusions; and
9. Bibliography; and
10. Appendices.

v. A draft report of any activity carried out under this PA shall be due to the BLM from the Applicant's contractor within three (3) months after the completion of the fieldwork associated with the activity, unless otherwise negotiated.

vi. The BLM shall review and comment on any report submitted by the Applicant's contractor within 30 calendar days of receipt, unless otherwise negotiated.

vii. The Applicant's contractor shall then have 30 calendar days to respond to all comments by the BLM.

viii. The Applicant's contractor shall provide four (4) copies (two (2) bound and two (2) unbound) of amended draft reports to the BLM for dissemination to the following parties.

1. The Applicant – Bound Copy
2. BLM CFO – Bound Copy
3. BLM Ely Archive – Unbound Copy
4. SHPO – Unbound Copy

ix. The BLM shall submit the results of identification, recordation, evaluation and treatment efforts, including discovery situations, and treatment plans to the SHPO for a 30-calendar day review period.

x. If the SHPO fails to respond to the BLM within 30 calendar days of the certified receipt of a submission, the BLM shall presume concurrence with the findings and recommendations as detailed in the submission and proceed accordingly.

xi. The BLM shall ensure that all final archaeological reports resulting from actions pursuant to this PA shall be provided to the SHPO. All such reports shall be consistent with contemporary professional standards and the Department of Interior's formal standards for final reports of data recovery programs (48 Federal Register 44716-44740).

g. Information Sharing and Confidentiality

i. The BLM shall ensure the security of confidential information provided by Tribes or Consulting Parties.

ii. The BLM will provide the Applicant a copy of all final reports prepared for this project and the locational information for Historic Properties and Traditional Cultural Properties within the APEs, and updates of this information as it becomes available.

iii. The Applicant agrees to maintain the confidentiality of any locational or other Cultural Resource and Traditional Cultural Property information received under this Agreement, and to design procedures to ensure that such information is only made available to personnel with a need to know this information in order to design project facilities or conduct operations in a manner to avoid effects to Historic Properties, Traditional Cultural Properties, or known archeological resources. Operator shall keep such information in a secure location with access limited to necessary Applicant representatives. The Cultural Resource and Traditional Cultural Property information obtained by the Applicant under this Agreement will not be used for any purpose other than consultation with the BLM and the SHPO or conduct of Applicant operations in compliance with this Agreement and applicable laws.

iv. Precise Historic Property location data will be omitted or redacted from reports and site forms provided to Consulting Parties, with whom the BLM does not have a signed information sharing agreement, pursuant to Section 304 of the NHPA that release of such data could jeopardize Historic Properties.

v. Should the Project or Agreement be terminated, the Applicant agrees to gather and securely store all confidential information, including electronic files until closure and reclamation is complete and such information is no longer needed, after which the Applicant shall destroy through shredding or erasure the confidential files and information, and provide written notification to the BLM upon the completion of this task. The Applicant agrees not to share any such records beyond what is authorized in this Stipulation (III.g) without the written approval of the BLM."

IV. Notices to Proceed (NTP)

a. The BLM, in consultation with SHPO, may issue an NTP for individual project phases, under the following conditions:

i. The BLM, in consultation with the SHPO, has determined that:

1. There are no historic properties present within the APE; and
2. In consultation with the Tribes, no properties of traditional religious or cultural importance that are eligible for the NRHP were identified within the APE for the project phase.

ii. The BLM has taken steps outlined in Stipulation I.e. (ii) to avoid effects to historic properties; or

iii. The BLM, in consultation with the SHPO and, in the case of properties of traditional religious or cultural importance that are eligible for the NRHP, with the Tribes, has developed and implemented an adequate treatment plan for the project phase; and

1. The fieldwork phase of the HPTP has been completed; and
2. The BLM has prepared or accepted a summary description of the fieldwork performed and a schedule for reporting that work; and
3. The BLM has provided a copy of the summary to the SHPO; and
4. The SHPO has reviewed the summary and if the SHPO concurs or does not respond within two working days of receipt, the BLM shall assume concurrence and issue the NTP; and
5. No ground disturbing activities within 100 meters of the boundaries of any historic property shall proceed until a NTP is issued for the property; and
6. A partial NTP may be issued for portions of the APE that are outside of the area that may affect historic properties and beyond the 100-meter boundary identified in Stipulation III.e.ii.5 above.

V. Duration

This PA shall remain in effect for ten (10) years from the date of its execution. Prior to such time, BLM may consult with the other signatories and invited signatories to reconsider the terms of the PA and amend it in accordance with Stipulation VIII below. If the Undertaking has not been initiated within five years of the date of its execution, this PA will automatically terminate.

VI. Unanticipated Discovery Situations

Stipulations of this PA and the State Protocol are intended to identify and treat cultural resources that are eligible for inclusion in the NRHP. Unexpected discoveries of buried cultural resources are not anticipated. In the case of an unexpected discovery, the BLM shall ensure that provisions in the State Protocol (Section VI.B) are met.

VII. Monitoring

Any signatory or invited signatory may monitor actions carried out pursuant to this PA, subject to operative health and safety standards in effect. To the extent practicable, monitoring activities shall minimize the number of monitors involved in the Undertaking.

VIII. Dispute Resolution

a. If any signatory or invited signatory to this PA, or other consulting party, objects to any activities pursuant to the terms of this PA, that party shall submit in writing the dispute and a proposed resolution to each of the signatories and invited signatories.

b. The CFO Manager shall consult with the objecting party and the signatories and invited signatories to resolve the issue. If the CFO Manager determines that the objection cannot be resolved, they shall request the assistance of the BLM Nevada Deputy Preservation Officer and the Ely District Manager to resolve the objection. The BLM Ely District Manager's decision shall be considered final.

c. BLM shall send a final decision to all signatories, invited signatories and consulting parties regarding the resolution of the dispute.

d. The signatories and invited signatories may continue all actions under this PA that are not in dispute.

IX. Amendments

This PA may be amended when such an amendment is agreed to in writing by all signatories and invited signatories. The amendment shall be effective on the date an amendment signed by all of the signatories and invited signatories is received by the ACHP.

X. Termination

a. If any signatory or invited signatory to this PA determines that its terms shall not (or cannot) be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation IX, above. If within thirty (30) days an amendment cannot be reached, any signatory or invited signatory may terminate the PA upon written notification to the other signatories.

b. Once the PA is terminated, and prior to work continuing on the Undertaking, BLM must either (a) execute an PA pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7 . BLM shall notify the signatories and invited signatories as to the course of action it shall pursue.

XI. Execution

a. Execution of this PA by the BLM and SHPO and implementation of its terms evidence that BLM has taken into account the effects of this Undertaking on historic properties and afforded the ACHP an opportunity to comment.

SIGNATORIES:

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

Date: 1/9/14

Shirley Johnson,

Field Manager, Caliente Field Office

Nevada ~~State~~ Historic Preservation Office

Date: 1/13/14

Rebecca L. Palmer,

Nevada State Historic Preservation Officer

INVITED SIGNATORIES:

Bureau of Land Management
RECEIVED
JAN 13 2014
Caliente Field Office

Gold Springs LLC

Randall L Moore Date: 1/9/14

Randall Moore,

Executive VP of Exploration

On behalf of Nevada High Desert Gold, LLC

Managing Member of Gold Springs, LLC

Appendix I: MAPS

1. Project Location
2. Project Area 1:48,000
3. Project Area 1:24,000 North Project Area
4. Project Area 1:24,000 South Project Area

Appendix II: Plan of Operations

Appendix III: Tribal Consultation Invitation Letter and Mailing List

Appendix IV: Literature Review and Background Research Report

Appendix B

BLM Ely District Recommended Bird Nest Buffer Sizes

Appendix B
BLM Ely District Recommended Bird Nest Buffer Sizes

Nest Buffer Sizes
The following buffer sizes for nests are recommended by the BLM Ely District. The type of disturbance, current life cycle of the birds (i.e. just started nest construction, incubating, chicks in nest, chicks ready to fledge), and habitat in the area (i.e. riparian area) may warrant adjustments to these recommended buffer sizes. With certain species, an increase in monitoring of the response of the nesting birds and their young to the disturbance may be allowed to reduce buffer sizes. Nests **will not** be marked with bright-colored flagging or anything that could attract predators to the nest. Nests **will not** be checked more than one time per week so as to not alert predators to nest locations.

The following process will be employed once nesting activity has been observed for this project area:
1) Activity will cease in the area until the chick(s) fledge, if this is not possible, see number 2 below.
2) The buffer specified in the table below will be adhered to until the chick(s) fledge, if this is not possible, see number 3 below.
3) The biological monitors will document the following information and submit it to the CICs. The information will then go to the BLM biologists and managers for approval:
a) Give a detailed description of the nest, nesting activity, vegetation, pre-existing disturbances to the nest (i.e. proximity to roads, power poles, substations, etc.), monitoring information, and include a photo of the area.
b) What action is proposed in an area smaller than the standard buffer? Be sure to include types of equipment, frequency, duration, and number of people.
c) Is there a potential for screening the action from the birds, either auditory or visual (i.e. due to terrain, dense vegetation)?
Once the information is received, BLM biologists will make a recommendation to management to either approve or deny the request as presented.

Habitat	**Common name**	**Scientific name**	**Buffer Size**	**time from eggs to fledging**
sagebrush/salt desert scrub	Greater sage grouse	*Centrocercus urophasianus*	600 ft	25-27-days (eggs only)
open/grasslands	killdeer	*Charadrius vociferous*	300 ft	24-26 days (eggs only)
open/grasslands	long-billed curlew	*Numenius americanus*	300 ft	27-28 days (eggs only)
desert scrub	Gambel's quail	*Callipepla gambelii*	200 ft	31-34 days (eggs only)
generalist	Mourning dove	*Zenaida macroura*	200 ft	25-28 days
generalist	White-winged dove	*Zenaida asiatica*	200 ft	26-30 days
open/grasslands	common nighthawk	*Chordieles minor*	300 ft	39 days
woodlands	hummingbirds	*Many spp.*	200 ft	35-41 days
woodlands/cavity	Lewis's woodpecker	*Melanerpes lewis*	100 ft	43-45 days
woodlands/cavity	red-naped sapsucker	*Sphyrapicus nuchalis*	100 ft	39-40 days

woodlands/cavity	Williamson's sapsucker	*Sphyrapicus thyroideus*	100 ft	44 days
woodlands/cavity	hairy woodpecker	*Picoides villosus*	100 ft	39-45 days
woodlands/cavity	Ladder-backed woodpecker	*Picoides scalaris*	100 ft	34-39 days
woodlands/cavity	northern flicker	*Colaptes arcticus*	100 ft	28-31 days
P/J or sagebrush	gray flycatcher	*Empidonax wrightii*	200 ft	30 days
cliffs	black phoebe	*Sayornis nigricans*	200 ft	32-39 days
cliffs	Say's phoebe	*Sayornis saya*	200 ft	26-30 days
woodlands	vermilion flycatcher	*Pyrocephalus rubinus*	200 ft	28-31 days
open/trees	western kingbird	*Tyrannus verticalis*	200 ft	28-31 days
open/cavity/trees	Ash-throated flycatcher	*Myiarchus cinerascens*	100 ft	31-32 days
tree/scrub	Phainopepla	*Phainopepla nitens*	200 ft	32-34 days
cliff/tree/cavity	Violet-green swallow	*Tachycineta thalassina*	100 ft	33-40 days
tree/cavity	Tree swallow	*Tachycineta bicolor*	100 ft	29-40 days
burrows	Northern rough-winged swallow	*Stelgidopteryx serripennis*	100 ft	32-37 days
woodlands	Blue-gray gnatcatcher	*Polioptila caerulea*	200 ft	27-28 days
woodlands	Black-tailed gnatcatcher	*Polioptila melanura*	200 ft	23-29 days
woodlands/yucca	Scott's oriole	*Icterus parisorum*	200 ft	28 days
open woodlands	Bullock's oriole	*Icterus bullockii*	200 ft	28 days
open/scrub	horned lark	*Eremophila alpestris*	300 ft	22-31 days
woodlands	western scrub-jay	*Aphelocoma californica*	200 ft	33-35 days
woodlands	pinyon jay	*Gymnorhinus cyanocephalus*	200 ft	38 days
woodlands	Clark's nutcracker	*Nucifraga Columbiana*	200 ft	38-40 days
scrub woods	black-billed magpie	*Pica pica*	200 ft	39-50 days
woods	American crow	*Corvus brachyrhynchos*	200 ft	30-40 days
cliffs/trees	common raven	*Corvus corax*	200 ft*	55-63 days
tree/cavity	juniper titmouse	*Parus inornatus ridgwayi*	100 ft	31-33 days
scrub	verdin	*Auriparus flaviceps*	300 ft	35 days
woodlands	bushtit	*Psaltriparus minimus*	200 ft	26-28 days
scrub	cactus wren	*Campylorhynchus brunneicapillus*	300 ft	36-39 days
rock outcrops	rock wren	*Salpinctes obsoletus*	300 ft	26-30 days
rock outcrops	canyon wren	*Catherpes mexicanus*	300 ft	27-33 days
woodlands/cavity	Bewick's wren	*Thryomanes bewickii*	200 ft	28 days

woodlands/cavity	mountain bluebird	*Sialia currucoides*	100 ft	31-35 days
woodlands/cavity	Townsend's solitaire	*Myadestes townsendii*	100 ft	25 days
woodlands	northern mockingbird	*Mimus polyglottos*	200 ft	23-28 days
sagebrush	sage thrasher	*Oreoscoptes montanus*	300 ft	26-29 days
scrub	Bendire's thrasher	*Toxostoma bendirei*	300 ft	28 days
scrub	Crissal thrasher	*Toxostoma crissale*	300 ft	25-26 days
tree in scrub	loggerhead shrike	*Lanius ludovicianus*	300 ft	31-37 days
woodlands	gray vireo	*Vireo vicinior*	200 ft	26-28 days
Ground	Virginia's warbler	*Vermivora virginae*	300 ft	23-26 days
woodlands/cavity sensitive	Lucy's warbler	*Vermivora luciae*	300 ft	23 days
woodlands	yellow-rumped warbler	*Dendroica coronate auduboni*	200 ft	24-27 days
Scrub	MacGillivray's warbler	*Opornis tolmei*	300 ft	19-23 days
Ground	Wilson's warbler	*Wilsonia pusilla*	300 ft	21-24 days
Scrub	yellow-breasted chat	*Cteria virens*	300 ft	19-23 days
woodlands	western tanager	*Piranga ludoviciana*	200 ft	23-24 days
Scrub	pyrrhuloxia	*Cardinalis sinuatus*	200 ft	24 days
Scrub	lazuli bunting	*Passerina amoena*	300 ft	22-27 days
Scrub	green-tailed towhee	*Pipilo chlorus*	300 ft	23-24 days
Scrub	spotted towhee	*Pipila maculatus*	300 ft	21-22?days
Scrub	Abert's towhee	*Pipila aberti*	300 ft	25-27 days
woodlands	chipping sparrow	*Spizella passerine*	200 ft	20-26 days
sagebrush	Brewer's sparrow	*Spizella breweri*	300 ft	19-22 days
sagebrush	black-chinned sparrow	*Spizella atrogularis*	300 ft	23 days
sagebrush	vesper sparrow	*Pooecetes gramineus*	300 ft	31-35 days
Scrub	lark sparrow	*Chondestes grammacus*	300 ft	20-33 days
sagebrush	black-throated sparrow	*Amphispiza bilineata*	300 ft	22 days
sagebrush	sage sparrow	*Amphispiza belli*	300 ft	22-26 days
sagebrush	western meadowlark	*Sturnella neglecta*	300 ft	37-41 days
woodlands	Brewer's blackbird	*Euphagus cyanocephalus*	200 ft	25-26 days
Alpine	black rosy-finch	*Leucosticte atratus*	200 ft	32-34 days
woodlands	Cassin's finch	*Carpodacus cassinii*	200 ft	26-28 days
woodlands	red crossbill	*Loxia curvirostra*	200 ft	30-38 days
woodlands	lesser goldfinch	*Cardeulis psaltria*	200 ft	33 days
woodlands	evening grosbeak	*Coccothraustes vespertinus*	200 ft	25-28 days
ledge or cavity	House finch	*Carpodacus mexicanus*	100 ft	23-33 days

* = nest may be removed with FWS depredation permit

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Appendix C

Noxious and Invasive Weeds Risk Assessment

APPENDIX C
GOLD SPRINGS EXPLORATION PROJECT
NOXIOUS AND INVASIVE WEEDS RISK ASSESSMENT

October 2013

Gold Springs, LLC (GSLLC) proposes to conduct mineral exploration activities within a 4,187-acre Project boundary that would include the following: exploration drilling; construction of roads, drill pads and sumps; potential installation of ground water monitoring wells and a meteorological station; and utilization and maintenance, as necessary, of existing roads used to access the exploration sites. The Project boundary encompasses all or portions of sections 24, 25, and 36, Township 1 North, Range 70 East (T1N, R70E), sections 19, 20, and 29 through 32, T1N, R71E, and sections 4, 5, 8, 9, 16, and 17, T1S, R71E, Mount Diablo Base and Meridian in Lincoln County, Nevada (Project Area).

Phase I surface disturbance would include approximately 24 acres of new road construction, approximately 6.6 acres of drill pad and sumps construction. Phase I surface disturbance would total approximately 30.6 acres.

Based on the Ely District Weed Inventory, no noxious weeds are documented in the Project Area.

Based on the Ely District and Cedar City District weed inventories, the following weeds are documented along roads and drainages leading to the Project Area:

- Saltcedar (*Tamarix ramosissima*); and
- Scotch thistle (*Onopordum acantheum*).

Cheatgrass (*Bromus tectorum*), smooth brome (*Bromus inermis*), and white clover (*Trifolium repens*) are also scattered throughout the Project Area, but mainly along Project access roads. No monocultures of these species are present in the Project Area. All of these species are present in small populations with less than one percent ground cover. The Project Area was last inventoried for noxious weeds in 2011.

Table 1: Risk Assessment Factor 1

Likelihood of Noxious Weeds Spreading to Project Area	
None (0)	Noxious/invasive weed species are not located within or adjacent to the Project Area. Project activity is not likely to result in the establishment of noxious/invasive weed species in the Project Area.
Low (1)	Noxious/invasive weed species are present in the areas adjacent to but not within the Project Area. Project activities can be implemented and prevent the spread of noxious/invasive weeds into the Project Area.
Moderate (5)	Noxious/invasive weed species located immediately adjacent to or within the Project Area. Project activities are likely to result in some areas becoming infested with noxious/invasive weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious/invasive weeds within the Project Area.

Likelihood of Noxious Weeds Spreading to Project Area	
High (10)	Heavy infestations of noxious/invasive weeds are located within or immediately adjacent to the Project Area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious/invasive weeds on disturbed sites throughout much of the Project Area.

Source: BLM 1992

For this project, the Factor 1 risk assessment rates as Low (1) at the present time. With the types of equipment being used, the types of surface disturbing activities occurring for the Project, and the weed species in the area, it is not likely that the Project Area would become infested. The only noxious weeds known in the vicinity of the Project Area are saltcedar, located in Deer Lodge Canyon west of the Project Area, and scotch thistle located along Gold Springs Road, the access road to the Project Area through Utah. Habitat for saltcedar is not present in the Project Area and GSLLC is not using Deer Lodge Canyon to access the Project Area; therefore, it is not likely that the Project Area would become infested with saltcedar. Habitat is present in the Project Area for scotch thistle. Mitigation measures would limit the establishment of noxious weeds within the Project Area.

Table 2: Risk Assessment Factor 2

Consequence of Noxious Weed Establishment in Project Area	
Low to Nonexistent (1)	None. No cumulative effects expected.
Moderate (5)	Possible adverse effects on site and possible expansion of infestation within the Project Area. Cumulative effects on native plant communities are likely but limited.
High (10)	Obvious adverse effects within the Project Area and probable expansion of noxious/invasive weed infestations to areas outside the Project Area. Adverse cumulative effects on native plant communities are probable.

The Factor 2 risk assessment for this project rates as Moderate (5) at the present time. Currently, the Project Area contains no noxious weeds, and access routes contain limited noxious weeds, so adverse cumulative effects on the nearby native plant community are not expected.

Table 3: Risk Rating

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious/invasive weed populations that get established in the area.
Moderate (25)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious/invasive weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.

High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious/invasive weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.

For this project, the Risk Rating is Low (5). This indicates that the project can proceed as planned as long as the following stipulations are followed:

- Continue to use integrated weed management to treat weed infestations and use principles of integrated pest management to meet management objectives and to reestablish resistant and resilient native vegetation communities;

- Develop weed management plans that address weed vectors, minimize the movement of weeds within public lands, consider disturbance regimes, and address existing weed infestations;

- When manual weed control is conducted, remove the cut weeds and weed parts and dispose of them in a manner designed to kill seeds and weed parts;

- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office;

- Where appropriate, inspect source sites such as borrow pits, fill sources, or gravel pits used to supply inorganic materials used for construction, maintenance, or reclamation to ensure they are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office. Inspections will be conducted by a weed scientist of qualified biologist;

- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules. Vehicles and equipment will be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Vehicles used for emergency fire suppression will be cleaned as a part of check-in and demobilization procedures. Cleaning efforts will concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis will be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles. Cleaning sites will be recorded using global positioning systems or other mutually acceptable equipment and provided to the Ely District Office Weed Coordinator or designated contact person;

- To minimize the transport of soil-borne noxious weed seeds, roots, or rhizomes, infested soils or materials will not be moved and redistributed on weed-free or relatively

weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden must be moved, these materials will be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures will be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials will be returned to the area from which they were stripped;

- Determine seed mixes on a site specific basis dependant on the probability of successful establishment. Use native and adapted species that compete with annual invasive species or meet other objectives;

- For soil disturbing actions which will require reclamation, salvage and stockpile all available growth medium prior to surface disturbances. Seed stockpiles if they are to be left for more than one growing season. Re-contour all disturbance areas to blend as nearly as possible with the natural topography prior to re-vegetation. Rip all compacted portions of the disturbance to an appropriate depth based on site characteristics. Establish an adequate seed bed to provide good seed-to-soil contact;

- Conduct mixing of herbicides and rinsing of herbicide containers and spray equipment only in areas that are a safe distance from environmentally sensitive areas and points of entry to bodies of water (storm drains, irrigation ditches, streams, lakes, or wells);

- Keep removal and disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.);

- Certify that all interim and final seed mixes, hay, straw, and hay/straw products are free of plant species listed on the Nevada noxious weed list;

- Respread weed-free vegetation removed from the disturbance areas to provide protection, nutrient recycling, and seed source;

- When maintaining unpaved roads on BLM-administered lands, avoid the unnecessary disturbance of adjacent native vegetation and spread of weeds. Grade roads shoulders or barrow ditches only when necessary to provide for adequate drainage. Minimize the width of grading operations. The BLM Authorized Officer will meet with equipment operators to ensure that they understand this objective;

- All applications of approved pesticides will be conducted only be certified pesticide applicators or by personnel under the direct supervision of a certified applicator;

- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled;

- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation of the project. The importance

of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained; and

- Whenever possible, hand spraying of herbicides is preferred over other methods at heavily used recreation sites (i.e. campgrounds, trailheads, etc.).