

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

Environmental Assessment
DOI-BLM-NV-B010-2010-0110-EA
May 2013

Coral Resources, Inc.
Robertson Exploration Project

Location:
Lander County

Applicant/Address:
Coral Resources, Inc.
570 Granville Street, Suite 900
Vancouver, British Columbia
Canada V6C 3P1

U.S. Department of the Interior
Bureau of Land Management
Battle Mountain District
Mount Lewis Field Office
Phone: 775-635-4000



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Acronyms

AAQS	Ambient Air Quality Standards
Act	Bald and Golden Eagle Protection Act
amsl	above mean sea level
AUM	animal unit month
bgs	below ground surface
BLM	Bureau of Land Management
BMP	best management practice
CEQ	Council on Environmental Quality
CESA	cumulative effects study area
CFR	Code of Federal Regulations
Coral	Coral Resources, Inc.
EA	Environmental Assessment
EO	Executive Order
FONSI	Finding of No Significant Impact
FLPMA	Federal Land Policy Management Act
GHG	greenhouse gas
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
mph	miles per hour
NAC	Nevada Administrative Code
NDEP	Nevada Division of Environmental Protection
NDOW	Nevada Department of Wildlife
NDWR	Nevada Division of Water Resources
NEPA	National Environmental Policy Act
NNHP	Nevada Natural Heritage Program
NRHP	National Register of Historic Places
OHV	off-highway vehicle
Project	Robertson Project
PGH	Preliminary General Habitat
PPH	Preliminary Priority Habitat
PM	particulate matter
RC	reverse circulation
RFFA	reasonably foreseeable future actions
RMP	Shoshone-Eureka Resource Management Plan
ROW	right-of-way
SHPO	State Historic Preservation Office
USC	United States Code
USFWS	United States Fish and Wildlife Service
VRM	Visual Resource Management
WSA	Wilderness Study Area

CORAL GOLD RESOURCES ROBERTSON EXPLORATION PROJECT ENVIRONMENTAL ASSESSMENT

1 INTRODUCTION / PURPOSE OF AND NEED FOR ACTION

1.1 Introduction

The Robertson Project (Project) is located in Lander County, Nevada, approximately 58 miles southeast of Battle Mountain, and 70 miles southwest of Elko, as shown in Figure 1. The Project Area is located within portions of Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 20, and 21, Township 28 North, Range 47 East, Mount Diablo Base & Meridian.

The Project Area consists of approximately 5,169 acres, of which 169 acres are private lands, held as patented mining claims either owned or controlled by Coral Resources, Inc. (Coral) or others. The remaining 5,000 acres are public lands administered by the U.S. Bureau of Land Management (BLM) Mount Lewis Field Office. Coral controls approximately 440 unpatented lode and placer claims on these public lands. Figure 2 depicts land status in the Project Area.

The Project Area was first mined in 1905, and the town of Tenabo was founded as a result of gold discovery. Placer gold was discovered in 1907 and again in 1916, but significant production did not begin until 1931. Since that time, mining has been limited, and overall production has been small. Coral operated the Robertson Mine in Lander County, Nevada in 1988 and 1989. The site is in post-closure monitoring; however, exploration activities have continued. Reclamation activities associated with previous mining disturbance have been ongoing under reclamation permit number 0055 and as according to LR2000 (2012). Recent exploration disturbance has occurred within the Project Area under the Robertson Project, BLM casefile number NVN-067688, and the Try-View Project Notice, BLM casefile number NVN-087413. The site also has extensive mining-related disturbance by other parties.

Coral is currently authorized to create 191.3 acres of surface disturbance for the Robertson Project, BLM case file number NVN-067688 [approved under the determination of National Environmental Policy Act (NEPA) adequacy worksheet NV063-DNA08-054], which cited EA064-EA4-03 (approved February 17, 1994) and N66-EA7-01 (approved November 21, 1986). The total authorized disturbance area is 193.75 acres within the Project Area. A ground-truthing survey (SRK, 2009) identified an additional net 20.2 additional acres of existing disturbance that are not currently authorized, resulting in a Non-compliance Order being issued by the BLM. About 31.5 acres were released from surety.

Coral is proposing to disturb 80 additional acres as described in the *Robertson Project Amendment to the Exploration Plan of Operations (NVN-067688(10-1A)) and Reclamation Permit Application (#0055)*(SRK 2012), herein referred to as the Plan. Coral also proposed to add the previously unauthorized 20.2 acres to the Project and to combine the Try-View Notice and the Robertson Project disturbance areas under one Plan for a total proposed disturbance area of 293.95 acres. Proposed exploratory activities include:

- Drill road and drill site construction;
- Reverse circulation (RC), diamond core drilling, and metallurgical core drilling for mineral exploration and condemnation holes;
- RC, diamond core, and/or hollow-stem auger drilling for geotechnical/hydrogeological investigations;
- Monitor well installation; and
- Test pits for shallow geotechnical and metallurgical investigations.

1.2 Purpose of and Need for Action

The purpose of the Proposed Action is to provide Coral the opportunity to fully evaluate and characterize the mineral potential through exploration activities on its mining claims on public lands within the Project Area 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 Code of Federal Regulations (CFR) 3809, to respond to a mining and exploration plan of operations and to take any action necessary to prevent unnecessary or undue degradation of the public lands, as a result of actions taken to prospect, explore, assess, develop, and process locatable mineral resources on public lands.

1.2.1 Decision to Be Made

The decision the BLM would make based on this EA includes the following: (1) approval of the proposed Plan to authorize the mining and exploration activities without modifications or additional mitigation measures; (2) approval of the Plan with additional mitigation measures that are deemed necessary by BLM; or (3) deny approval of the Plan and not authorize the mining and 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.

1.3 Relationship to Planning

The BLM is responsible for administering access to mineral rights on certain public lands as authorized by the General Mining Laws. Under these laws, qualified prospectors are entitled to reasonable access to mineral deposits on public domain lands, which have not been withdrawn from mineral entry. The BLM is also responsible to review and approve exploration and mining activities on BLM-administered lands to protect surface resources pursuant to the FLPMA in the United States Code (43 USC 1701 et seq.) and the attendant regulations for surface management of lands on mining claims under the 43 CFR 3809. The surface management regulations require the BLM to comply with the NEPA of 1969, as amended (42 USC 4321 et seq.) and insure that the operator “conduct all operations in a manner that complies with all pertinent federal and state laws (43 CFR 3809.420) and would not cause undue and unnecessary degradation of the public lands”.

The BLM has prepared an EA for this project that is in conformance with the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 1500-1508) and the BLM NEPA Handbook H-1790-1. This EA:

- describes the Proposed Action, No Action Alternative, and the Affected Environment;
- analyzes the environmental consequences of implementing the Proposed and No Action Alternatives; and
- includes design features and/or mitigation to eliminate or reduce the expected consequences as necessary.

1.3.1 Resource Management Plan

The Proposed Action conforms to the *Shoshone-Eureka Resource Management Plan* (RMP) dated 1986 (BLM 1986), specifically page 29 in the RMP Record of Decision under the heading “Minerals” subtitled “Objectives” number 1:

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

Under “Management Decisions,” “Locatable Materials,” page 29, number 1:

“All public lands in the planning areas would be open for mining and prospecting unless withdrawn or restricted from mineral entry.”

Under “Management Decisions,” number 5, “Current Mineral Production Areas”:

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

1.3.2 Local Land Use Planning and Policy

The Proposed Action is consistent with Section XI of the Lander County Revised Policy Plan for Federally Administered Lands – July 2005 (Lander County 2005), which sets forth the policy to “promote the expansion of mining operations and areas.” This policy also states that mine site reclamation standards should be consistent with the best possible post-mine use for each specific area and that specific standards should be developed for each property.

1.4 Scoping and Issues

Internal scoping was conducted by an interdisciplinary team that analyzed the potential consequences of the Proposed Action on August 4, 2011. The following issues and concerns regarding the Proposed Action were identified by BLM personnel to be addressed in this EA:

- Air quality;
- Cultural resources;
- Human health and safety;
- Migratory birds;
- Native American religious concerns;
- Noxious weeds, invasive and non-native species;
- Special status species including threatened and endangered species;
- Solid and hazardous wastes;
- Water resources;
- Wildlife;
- Grazing management;
- Land use authorization;
- Geology and minerals;
- Recreation;
- Soils;
- Vegetation; and
- Visual resources.

2 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 Location and Access

The Project is located in Lander County, Nevada, approximately 58 miles southeast of Battle Mountain, and 70 miles southwest of Elko, as shown in Figure 1. From Battle Mountain, the Project is reached by Interstate Highway 80 and State Highway 306. The Project Area is located within portions of Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 20, and 21, Township 28 North, Range 47 East, Mount Diablo Base & Meridian. Figure 2 illustrates access routes for the Project.

2.2 Proposed Action

Coral is currently authorized to create 191.3 acres of surface disturbance under the plan for the Robertson Project and 2.45 acres of surface disturbance under the Notice for the Try-View Project, for a total of 193.75 acres of authorized disturbance. A ground-truthing survey accepted in 2009 (SRK, 2009) identified 20.2 acres of existing disturbance which are not currently authorized; 31.5 acres were released from surety. Coral proposes to create an additional 80 acres of surface disturbance for a total disturbance area of 293.95 acres as described in the Plan. Coral also proposes to combine the Try-View Notice and the Robertson Project disturbance areas under one plan and reclamation permit. Authorized and proposed disturbance areas are listed in Table 1 and authorized and existing disturbance areas are shown on Figure 3. Proposed exploration activities include:

- Drill road and drill site construction;
- RC, diamond core drilling, and metallurgical core drilling for mineral exploration and condemnation holes;
- RC, diamond core, and/or hollow-stem auger drilling for geotechnical/hydrogeological investigations;
- Monitor well installation; and
- Test pits for shallow geotechnical and metallurgical investigations.

Table 1: Authorized, Existing, and Proposed Disturbance Areas

Disturbance Type	Authorized (acres)			Existing (acres)			Proposed (acres)			Total (acres)		
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
Pits	19.0	0.0	19.0	19.9	0.0	19.9			0.0	19.9	0.0	19.9
Waste Rock Dumps	32.1	0.0	32.1	31.5	0.0	31.5	0.0	0.0	0.0	31.5	0.0	31.5
Placer Gravel Dump	3.3	0.0	3.3	3.3	0.0	3.3	0.0	0.0	0.0	3.3	0.0	3.3
Sub-total Dumps	35.4	0.0	35.4	34.8	0.0	34.8	0.0	0.0	0.0	34.8	0.0	34.8
Heap Leach Pads	0.3	0.0	0.3	2.7	0.0	2.7	0.0	0.0	0.0	2.7	0.0	2.7
Plant Yard and Ponds	12.3	0.0	12.3	13.6	0.0	13.6	0.0	0.0	0.0	13.6	0.0	13.6
Reservoir	1.9	0.0	1.9	1.9	0.0	1.9	0.0	0.0	0.0	1.9	0.0	1.9
Triplet Gulch Pad Excavation	20.5	0.0	20.5	20.5	0.0	20.5	0.0	0.0	0.0	20.5	0.0	20.5
Sub-total Process	35.0	0.0	35.0	38.7	0.0	38.7	0.0	0.0	0.0	38.7	0.0	38.7
General Disturbance	63.0	7.5	70.5	57.7	6.0	63.7	0.0	0.0	0.0	57.7	6.0	63.7
Surface Disturbance A-D	4.2	0.0	4.2	4.2	0.0	4.2	0.0	0.0	0.0	4.2	0.0	4.2
Sub-total General Disturbance	67.2	7.5	74.7	61.9	6.0	67.9	0.0	0.0	0.0	61.9	6.0	67.9
Roads, General	13.4	2.2	15.6	37.8	2.8	40.6	0.0	0.0	0.0	37.8	2.8	40.6
Roads <30% slope	0.0	0.0	0.0	0.0	0.0	0.0	14.0	1.5	15.5	14.0	1.5	15.5

Disturbance Type	Authorized (acres)			Existing (acres)			Proposed (acres)			Total (acres)		
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
Roads >30% slope	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.3	7.9	7.6	0.3	7.9
Cross-Country Travel	1.5	0.0	1.5	1.5	0.0	1.5	0.0	0.0	0.0	1.5	0.0	1.5
Drill Sites and Sumps	6.7	0.5	7.2	6.7	0.5	7.2	51.4	3.6	55.0	58.1	4.1	5.0
Sub-total Roads	21.6	2.7	24.3	46.0	3.3	49.3	73.0	5.4	78.4	119	8.7	127.7
Exploration	2.0	0.9	2.9	0.8	0.1	0.9	0.0	0.0	0.0	0.8	0.1	0.9
Test Pits	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.2	1.6	1.4	0.2	1.6
SUB-TOTAL	180.2	11.1	191.3	202.1	9.4	211.5	74.4	5.6	80.0	276.5	15.0	291.5
Try-View Notice	2.45	0.0	2.45	2.45	0	2.45	0.0	0.0	0.0	2.45	0.0	2.45
Totals	182.65	11.1	193.75	204.55	9.4	213.95	74.4	5.6	80.0	278.95	15.0	293.95

For the purposes of this EA, the total disturbance includes the authorized disturbance areas, the existing unauthorized disturbance areas, and the disturbance associated with the Proposed Action. The authorized disturbance areas cover approximately 191.3 acres or 3.7 percent of the Project Area. The existing unauthorized disturbance area covers 20.2 acres of the Project Area or less than one percent of the Project Area. The Proposed Action would increase the Project Area disturbance by up to 80 acres or approximately 1.5 percent of the Project Area for a total of 293.95 acres or approximately 5.7 percent of the Project Area.

Coral proposes a “block” permitting approach that will allow maximum flexibility for drilling operations. Exploration road construction, drilling, and test pit/trenching activities may take place anywhere within the Project boundaries subject to proposed surface disturbance limitations. The need for flexibility for road and drill site placement during the life of the Project is of paramount importance and warranted by the very nature of exploration drilling. The exact location of surface disturbance will depend entirely on data acquired as exploration drilling progresses.

2.2.1 Equipment and Vehicles

Drilling would be conducted by one or more truck-mounted RC drill rigs and one or more truck- and/or skid-mounted diamond core drill rigs. Hollow-stem auger drilling would be by one or more truck- and/or track-mounted hollow-stem auger rigs. Drilling operations would include support vehicles and other support equipment such as rubber-tired 4x4 trucks, rod trucks, water trucks, trailers, mud tanks, air compressors, and portable light plants/generators.

Construction of roads, drill pads, and mud sumps would be by one or more CAT D-7 to D-9 or similar bulldozers and/or CAT 325C or similar track-mounted excavators. Test pits would be excavated and backfilled with one or more CAT 420D rubber-tired or similar backhoes and/or CAT 325C or similar track-mounted excavators. Equipment maintenance and repairs may be conducted on-site. A service truck may be used to service and/or repair the equipment.

2.2.2 Road and Drill Site Construction and Maintenance

Drill sites would be accessed using an existing network of roads and tracks which would be augmented by the construction of new roads. Approximately 45,000 feet of new drill roads would be constructed on slopes of less than 30 percent, and approximately 15,000 feet of new drill roads would be built on slopes of greater than 30 percent. Roads constructed on cross slopes of less than 30 percent would have an average disturbance width of approximately 15 feet, and roads built on cross slopes of greater than 30 percent would have an average disturbance width of approximately 23 feet.

Existing roads and drill sites will be utilized whenever possible. New drill sites and drill roads will be constructed in order to keep pace with the drilling activities. Drill sites and drill roads will not be constructed until needed, and areas without economic resources potential will be reclaimed once Coral determines if the area has potential use for future potential mining facilities such as waste rock dumps. New surface disturbance will be kept to the minimum that is required to provide safe equipment access and crew working areas to and at each drill site.

Roads would be constructed for single lane travel with travel lane widths of approximately 12 feet. The disturbance width of roads is estimated to average 15 to 23 feet, depending upon underlying topography. Balanced cut and fill construction would be used to the extent practicable to minimize the exposed cut slopes and the volume of fill material. In areas with rock outcrops, a hydraulic hammer drill mounted on an excavator may be needed for road construction. A water truck would be utilized to provide dust control, as necessary. Growth media, where present, would be stockpiled adjacent to the road or drill site for reclamation purposes where it is practical to do so.

Water diversion structures would be installed at the time of road construction, as appropriate and may include breaks in grade, rolling dips, water bars, and culverts. The installation of culverts would require the authorization of the BLM prior to installation. Drainage structures would be constructed or installed

where necessary to prevent or to minimize erosion. Typical drainage structures may consist of water bars, borrow ditches, contour furrows, and culverts sized to handle maximum seasonal water flows.

Erosion control measures would be constructed and added in incremental stages as road construction proceeds. Temporary erosion control measures would be maintained in working condition until the Project, including reclamation, is complete. Maintenance may include the cleaning, repair, and replacement, of erosion control measures as necessary.

Coral would maintain exploration roads and drill sites for safe access, adequate drainage, and to minimize damage to soil, water, and other resource values to the extent reasonable and practicable. Coral would actively manage ongoing road and drill site maintenance as well as reclamation responsibilities necessary for those roads that Coral keeps in use. Drill roads no longer needed for future exploration would be reclaimed at the earliest practical schedule consistent with the general principles and goals of concurrent reclamation. Maintenance of exploration roads and drill sites would include the following activities, as appropriate:

- Site roads would be graded to allow travel by mobile equipment;
- Site roads would be watered by truck, as needed, for dust control; and
- Water diversion and sediment control structures, such as rolling dips, water bars, breaks in grade, culverts, straw bales, silt fences, or other approved structures, would be maintained, as appropriate, to minimize soil erosion and sediment transport.

In order to verify that the surface disturbance due to project roads and other features remains within the authorized total surface disturbance, Coral would conduct mapping at the end of every field season and submit the resulting disturbance calculations in conjunction with the annual reclamation report that would be provided to NDEP and BLM by April 15 of each year. As part of this annual report, Coral would also submit a map showing the locations for the planned exploration drill roads and sites for the upcoming year. This map would allow BLM to verify that the planned activities would avoid known resource sites. Coral would not initiate new surface disturbance until it has received concurrence from the BLM for the proposed locations of that disturbance.

2.2.3 Exploration

Coral anticipates between one and eight drill rigs operating on-site at one time, so a maximum of eight drill holes may be open at one time. RC and diamond core drill holes would have average diameters of 5.8 inches and 2.8 inches, respectively, and an average depth of 1,000 feet. Hollow-stem auger drill holes would have an average diameter of 10.3 inches and an average depth of 100 feet.

Drill sites would consist of a pad measuring an average of 50 feet wide by 80 feet long. Drill pads constructed on slopes of less than 30 percent would have an average disturbance width of approximately 64 feet; drill pads constructed on slopes greater than 30 percent would have an average disturbance width of approximately 94 feet. A mud sump would also be constructed at each site measuring 12 feet wide by 20 feet long by 6 feet deep. One end of each sump would be sloped to provide egress for animals that might enter the sumps. Total average disturbance for each drill site is estimated to be 0.12 acres where slopes are less than 30% and 0.17 acres where slopes are greater than 30%. Wherever possible, drilling would occur on existing drill sites and utilize existing access routes. Approximately 419 drill sites and sumps would be constructed.

Test pits would be approximately 40 feet wide by 40 feet long (approximately 0.04 acres each) and 15 feet deep. The test pits would be sloped on one end for wildlife and cattle egress, and would be backfilled after geological/geotechnical logging and metallurgical/geotechnical sample collection and evaluation are completed. Up to 1,000 tons of material may be removed from site for metallurgical/geotechnical testing purposes. Approximately 50 test pits would be excavated and backfilled. A maximum of ten test pits would be open at a time.

2.2.4 Groundwater Monitoring Wells

If the drilling results indicate the potential for mineable gold reserves, Coral would initiate a hydrological baseline program to define the groundwater conditions within the Project Area. This program would utilize the proposed monitoring wells to collect information related to groundwater depth and quality. Monitoring wells may be constructed in selected drill holes and would be installed with an average depth of 400 feet. Approximately 20 four-inch diameter monitoring wells are anticipated. Average depth to groundwater for the proposed drill holes is estimated at 350 feet below ground surface (bgs). Coral would notify the BLM with the monitoring wells locations prior to their construction. The wells would be constructed and closed in accordance with Nevada Division of Water Resources (NDWR) stipulations.

2.2.5 Water Supply

Water usage for the Project is estimated to be approximately 14 acre-feet annually, of which approximately three acre-feet annually would be used for dust suppression and 11 acre-feet annually would be used for drilling purposes over the 10-year project life. Water may be pumped, with permission, from Barrick Cortez, Inc., from the Pipeline Mine dewatering infiltration ponds located in Section 17, Township 27 North, Range 47 East and Section 22, Township 28 North, Range 47 East for use at the Project. Water would be trucked from the source to the site. The appropriate permits from the NDWR would be attained.

2.2.6 Project Schedule

The exploration activities described above would be initiated immediately upon approval of the action and upon acceptance of the reclamation cost estimate by the BLM and the Nevada Division of Environmental Protection (NDEP). Coral plans to conduct the exploration activities and subsequent reclamation over a period of approximately ten years.

2.2.7 Structures and Support Facilities

No structures are proposed. Portable toilets would be provided for the drill and construction crews. Portable toilets, owned by a vendor, would be kept in the drilling areas while crews are present and would be removed upon completion of the drilling program. Coral would utilize the Tenabo warehouse yard, located on private land, as the area for the temporary storage and handling of materials during the Project.

Reclamation

Reclamation of disturbed areas resulting from activities outlined in this Proposed Action would be completed as described in the reclamation plan included in the Plan of Operations and in accordance with BLM and NDEP regulations and requirements.

Growth Media

Where available and where practical, growth media would be salvaged and stockpiled adjacent to the disturbed areas for reclamation purposes. Growth media salvaged from the proposed disturbance areas would be placed back on disturbed areas where applicable prior to seeding.

Revegetation, Seeding, and Planting

Generally, the final surface of backfilled sites and recontoured roads would be left in an uncompacted condition to help to retain moisture and to optimize seed germination. Growth media salvaged from the roads and pads would be placed on the disturbed areas where applicable. Reclaimed areas would be hand- or broadcast-seeded with the seed mix provided in Table 2. Changes and/or adjustments to the seed mix and/or application rate may be made, and approval of the final seed mix to be used would be attained from the BLM prior to reseeding. The seed mix in Table 2 was authorized as part of the approved previous plan amendment (SRK 2007a). The individual species and application rates have been selected to promote optimum seed germination and plant growth. Wyoming big sagebrush seed may be added to the seed mix on suitable soils for greater sage-grouse habitat establishment. Seeding would be completed at the appropriate time of year as advised by BLM personnel.

Table 2: Reclamation Seed Mix

	Seed/Amendments	Application Rate (pounds of pure live seed per acre)
Grasses		
	Crested wheat	1.00
	Basin wildrye	1.00
	Indian ricegrass	1.00
	Squirreltail	1.00
Forbs		
	Lewis flax	0.75
	Palmer penstamon	0.25
Shrubs		
	Douglas rabbitbrush	0.50
	Four-wing saltbush	4.00
	Shadscale saltbush	4.00
	Forage kochia	0.50
	Total	14.00

Coral would monitor revegetation success and for the presence of noxious and invasive plant species on an annual basis according to the *Nevada Guidelines for Successful Revegetation* for the NDEP, the BLM, and the Forest Service until release. Weed control would be performed by Coral during the appropriate season to control infestations, if necessary.

Anticipated Post-Exploration Land Use

If resources are not located, exploration activities would cease and reclamation would proceed; the post-exploration land use would revert back to the original land uses. Major land uses in the Project Area include livestock grazing, wildlife habitat, mineral exploration, and recreation.

Constraints on Estimated Time to Complete Reclamation

The estimated time to complete reclamation assumes average precipitation occurs during the years following reseeding. Periods of drought could delay revegetation. Generally, the time to complete reclamation and closure activities is assumed to be staged in a manner that allows completion within three calendar years.

Proposed Disposition of Buildings, Equipment, and Materials

Temporary facilities such as portable toilets would be removed from the site during reclamation activities. When drilling activities are completed, drill steel, drilling fluids, portable light plants/generators, or other drilling equipment would be removed from the site when the drilling contractor demobilizes.

Proposed Reclamation Techniques of Road Features

To the extent practical, exploration roads and drill sites would be recontoured to the original shape of the ground and the adjacent topography that existed prior to construction operations. Exploration roads, drill sites, and sumps would be backfilled and recontoured using a CAT 325C-type excavator or other suitably sized excavator. Soil material that is placed in road fill during construction would be backfilled into the road cuts and on drill sites, and stockpiled growth media would be placed where applicable. The final surface of backfilled sites would be left in an uncompacted condition to hold seed and optimize germination, and the recontoured roads and drill sites would be seeded.

Surface Facilities or Roads not Subject to Reclamation

Access roads would be left in place if a post-exploration land use is identified and approved by the BLM.

Concurrent Reclamation

Concurrent reclamation of drill roads and drill sites would be undertaken to the extent possible during operations. Annual maintenance, as needed, would be performed on roads in place for more than one year

or in place over a winter. Maintenance may include seeding of roadside disturbances or inspection and maintenance of water bars.

Post-Reclamation Monitoring and Maintenance

Post-closure management would commence on reclaimed areas following completion of the reclamation work for the area. The BLM and the NDEP would be notified before the commencement of final reclamation work. Monitoring of revegetation success would be conducted annually for a minimum of three years or until revegetation standards have been met as determined by the jurisdictional agencies. Revegetation monitoring would occur based on seasonal growth patterns, precipitation, and weather conditions. For sites reclaimed early in operations, management of the reclaimed sites would occur concurrently with operational site management. Annual reports showing reclamation progress would be submitted to the BLM.

2.2.8 Design Features (Applicant-Committed Environmental Protection Measures)

Design features (applicant-committed environmental protection measures) have been developed to minimize or avoid environmental impacts. These design features are discussed in the following paragraphs by resource.

Air Quality

Roads would be watered as necessary to control fugitive dust. Vehicular traffic would be minimized and speeds would not exceed 25 miles per hour (mph) to minimize fugitive dust emissions, protect wildlife and livestock, and maintain operational safety. Vehicles associated with the exploration program would maintain a safe and appropriate speed limit for existing road conditions. Project vehicles would be maintained on a regular basis to ensure they are operating to reduce vehicle emissions.

Water Quality

Spill Contingency

The mobile equipment on the site would use gasoline, diesel fuel, hydraulic oil, and lubricants. Drill rigs and other mobile equipment would be serviced by a fuel truck. Any hydrocarbon spills that may occur would be managed according to the Site Spill Contingency Plan, included as Appendix B of the Plan.

Materials and equipment necessary for spill cleanup would be kept on operational vehicles to mitigate releases or spills in the field during the exploration program. Well-maintained equipment would be used to perform the Project work. When practical, equipment maintenance would be performed off-site. In the event of oil, fuel, lubricating grease, or other equipment leaks, cleanup would be conducted immediately following the discovery of the leak. If the leak is on compacted soil, an oil-absorbing product may be applied. Once the cleanup product has absorbed the leaked material, the product would be cleaned into watertight container, labeled, stored, and disposed of according to state and federal regulations. If the leak occurs on friable soil, the contaminated soil would be removed, managed, and disposed at an off-site facility in compliance with state and federal regulations. In the case of either compacted or friable soils, the soil would be removed to the depth required to capture the contaminated soils or materials as confirmed by sampling and laboratory testing. Notifications to appropriate agencies would occur as described in the Site Spill Contingency Plan.

Erosion Prevention and Control

Coral would conduct exploration operations to minimize soil erosion. Equipment would not be operated when ground conditions would result in excessive rutting or increased sediment transport. Best Management Practices (BMPs) would be utilized to control erosion and sedimentation.

BMPs for sediment control would be employed during construction, operation, and reclamation to minimize sedimentation of disturbed areas. Sediment control structures may include, but would not be limited to, fabric and/or certified 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. Sediment traps (sumps), constructed as necessary adjacent to drill sites, would be used to settle drill cuttings and prevent their release. In order to control erosion from roads and drill sites, and from the unlikely event of drilling cuttings being released, certified weed-free straw bales and silt fences would be placed in drainages to capture sediment, as required.

Stormwater Control

Sediment controls, such as certified weed-free hay bales, filter fences, or other controls would be implemented as necessary. Drainage structures would be constructed or installed where necessary to prevent or minimize erosion and sedimentation. Drainage structures may consist of, but would not be limited to, water bars, roadside ditches, contour furrows, and culverts sized to handle the 25-year, 24-hour storm event.

Drilling Effluent Management

Sumps for drill water, fluids, and cuttings would be excavated within the limit of the drill site. Anticipated sump dimensions would be approximately 12 feet by 20 feet by six feet deep, sufficient to hold approximately 10,000 gallons, which previous drilling experience at the site has shown to be adequate for surface containment of drilling fluids and groundwater flow. One end of each sump would be sloped to provide egress in the event an animal enters the sump. Sumps would be backfilled after completion of drilling for safety and to ensure protection of the environment. If mud tanks are cleaned at the drill site, the contents of the tank would be contained in the sump and covered with backfill.

Riparian Areas

In order to avoid damage or disturbance to riparian areas, avoid surface disturbance and/or drilling within 300 feet of a stream channel, meadow or spring unless authorized by a BLM hydrologist.

Drill Hole Abandonment

Drill holes would be plugged in accordance with Nevada Administrative Code (NAC) 534.4371.

Waste Rock

Because this is an exploration project, rock characterization and handling are not required. However, samples would be collected for geochemical characterization for future use.

Wildlife and Vegetation

To minimize impacts to wildlife and plant resources within the Project, Coral would utilize existing access and exploration roads to the maximum extent possible. In addition, new surface disturbance would be kept to the minimum required to provide safe equipment access and crew working areas at each drill site. Disturbed areas would be reclaimed by recontouring and revegetating at the earliest practical time upon the completion of exploration operations. If necessary, Coral, in coordination with the BLM, would implement measures to avoid or protect special status plant or wildlife species which are either known to occur in the Project Area or which may be observed in the area and that may be impacted by the proposed Project.

Pygmy Rabbit

Although there is potential for pygmy rabbits to occur in the project area, SRK did not observe any pygmy rabbits during baseline surveys or deem the project area suitable for the species based on the height of the sagebrush. Consequently, the likelihood of finding the species in the project area during the life of the project is extremely low. If pygmy rabbits are found within the project area, however, the following design feature will be implemented. Avoid impacts to pygmy rabbits by applying a BLM approved buffer around occupied burrows unless a BLM wildlife biologist deems that the action will most likely not contribute to a trend towards federal listing or cause a loss of viability to the population or species. If a sighting occurs, work in the area must cease and the BLM must be contacted immediately. The necessary buffer distance will be determined by the BLM at the time of the pygmy rabbit sighting and will be based on topography, habitat conditions, and level of proposed activity.

Greater Sage-grouse

Although there was no sign of greater sage-grouse within the project area, and the closest known leks within three miles are not currently active or had any sign of sage-grouse during 2012 baseline surveys, the majority of the project area is classified as Preliminary Priority Habitat (PPH). Additionally, NDOW documents nesting habitat, summer range, and winter range within the project boundary. As a result, these design features for greater sage-grouse are included:

- Road-killed wildlife associated with the project will be promptly removed in order to control raven numbers around the project area.
- Off-site mitigation for surface disturbance in areas that are field verified by BLM and NDOW wildlife biologists to be PPH/ Preliminary General Habitat (PGH) will occur at a minimum of one acre, up to three acres, of habitat for every one acre disturbed. The BLM Authorized Officer will make a determination regarding the appropriate level of mitigation based on the conditions of the specific areas that are proposed for disturbance.
- Surveys of known leks in suitable habitat within three miles of active or proposed disturbance will be conducted during the lekking period March 1- May 15. Contact NDOW to obtain updated lek locations and coordination of survey efforts.
- Working hours will be modified during the period from March 1st to May 15th if a BLM wildlife biologist determines that noise or activity from the disturbance could impact active greater sage-grouse leks. Exact hours will be determined by the BLM Authorized Officer if the modification becomes necessary.
- Nest clearance surveys will be conducted from March 15th to June 30th prior to any surface disturbing activities. If nesting sage-grouse are present, a BLM approved buffer will be placed around a nest until the structure is vacated. The buffer distance may vary and will be determined by the BLM Authorized Officer based on the specific conditions of each located nest.
- Impacts to brood-rearing greater sage-grouse will be avoided by applying a BLM-approved buffer around springs, meadows, and riparian corridors within greater sage-grouse PPH/PGH from June 1st to September 1st, unless it can be demonstrated that the activity would not have significant impacts to sage-grouse populations or their habitat. If this is the case, then general riparian stipulations would apply.

Migratory Birds and Raptors

Land clearing and surface disturbance would be timed to prevent destruction of active bird nests or of young birds during the avian breeding season (March 1 through July 31 for raptors and April 1 through July 31 for all other avian species) in accordance with the Mount Lewis Field Office policies and with the Migratory Bird Treaty Act (MBTA). If surface-disturbing activities are unavoidable during this period, Coral would have a qualified biologist survey areas proposed for disturbance for the presence of active nests immediately prior to the disturbance. Pre-disturbance surveys must be conducted no more than 14 days before the start of disturbance activities. A survey buffer would be determined by the BLM taking into account the species, topography, and vegetation.

If active nests are located, or if behaviors of nesting are observed (mating pairs, territorial defense, carrying nesting material, transporting of food), the area would be avoided using a BLM-approved buffer to prevent destruction or disturbance of nests until the birds are no longer present. Avian surveys would be performed only during the avian breeding season and immediately prior to Coral conducting activities that would result in disturbance. Coral would not conduct any additional disturbance during the avian breeding season without first conducting additional avian surveys. After July 31, in compliance with the Mount Lewis Field Office guidelines, no further avian surveys would be required until the next avian breeding season. Active raptor nests would not be removed as a result of exploration operations unless approved by the BLM in accordance with USFWS and NDOW.

Bald and golden eagles are protected under the *Bald and Golden Eagle Protection Act* (Act) (16 USC 668-688d). The Act prohibits the taking or possession of and commerce in bald and golden eagles, parts, feathers, nests, or eggs with limited exceptions. The definition of “take” includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. “Disturb” means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available:

- Injury to an eagle;
- A decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior; or
- Nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior.

This definition also covers impacts that may result due to human activities to or around a nesting site during times when eagles are not present, if or when the eagles return, the alterations or activities interrupt their normal breeding, feeding, sheltering, or cause death, or nest abandonment (USFWS 2010).

Coral’s existing and proposed construction, operation, and reclamation procedures incorporate measures to protect eagles. Surveys would be conducted prior to ground disturbance in the breeding and nesting seasons (March 1 through July 31) to determine the presence or absence of eagles as well as other raptors species protected under the MBTA. If nesting or brooding eagles are determined to be present, Coral would avoid the area using a buffer zone developed in coordination with the BLM and Nevada Department of Wildlife (NDOW).

Livestock and Range Allotments

Coral would protect fences, gates, stock ponds, and other range improvements within the Project Area. Gates would be closed and/or locked as appropriate. Project-related traffic would observe prudent speed limits, 25 mph or less, to minimize fugitive dust emissions, protect wildlife and livestock, and to enhance public safety.

Soil Resource Protection

Growth media, where present, would be salvaged and stockpiled along the road or along the drill sites. Coral would inspect growth media stockpile locations to ensure the areas have not been encroached upon by other exploration activities and that erosion is not occurring.

Cultural Resources

Avoidance is the Coral-preferred treatment for preventing effects to historic properties (an historic property is any prehistoric or historic cultural site eligible for nomination to the National Register of Historic Places (NRHP)) or an unevaluated cultural resource. Coral would use the results of the Class III cultural resources surveys to ensure that sites eligible or unevaluated for the NRHP are appropriately avoided. Avoidance areas would be staked and/or flagged with an approximately 30-meter buffer, as needed.

If avoidance is not possible or is not adequate to prevent adverse effects, Coral would commit to mitigate adverse effects to the affected historic properties. The BLM and the Nevada State Historic Preservation Office (SHPO) use a Protocol Agreement for implementing the National Historic Preservation Act. Development of a treatment plan, data recovery, archeological documentation, and report preparation would be based on the State Protocol Agreement and the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation*, 48 CFR 44716 (September 29, 1983), as amended or replaced. If an unevaluated site cannot be avoided, additional information would be gathered, sufficient to allow the site to be evaluated. If the site does not meet National Register criteria for eligibility as defined in 36 CFR 60, no further cultural work would be performed. If the site meets eligibility criteria, a data recovery plan would be developed and approved, and mitigation would be done. Once data recovery at an historic property has been completed and approved, the BLM would issue a Notice to Proceed for work at that location.

If the exploration activities uncover previously unidentified human remains/burials, cultural resources, or vertebrate paleontological resources, Coral would immediately cease operations within 300 feet of the discovery and inform the BLM authorized officer.

In order to verify that the surface disturbance due to project roads and other features remains within the authorized aggregate surface disturbance, Coral would conduct GPS mapping at the end of every field season and submit the resulting disturbance calculations in conjunction with the annual reclamation report that would be provided to the NDEP and the BLM by April 15 of each subsequent year. As part of this annual report, Coral would also submit a map showing the locations for the planned exploration drill roads and sites for the coming year. This map would allow BLM to verify that the planned activities would avoid known cultural resource sites. Coral would not initiate new surface disturbance until approval is received from the BLM for the proposed locations of that disturbance.

Public Safety

Active sumps would be flagged for visibility until they are filled in. Existing roads would not be blocked by drilling equipment. Project-related traffic would observe prudent speed limits, 25 mph or less, to minimize fugitive dust emissions, protect wildlife and livestock, and to enhance public safety.

Survey Monuments

Survey monuments, witness corners, and/or reference monuments would be protected to the extent economically and technically feasible. Should moving one of these features be required, Coral would ensure that a licensed Professional Land Surveyor oversees and executes the relocation in a manner consistent with applicable laws. The BLM would be notified in writing prior to the moving of any such survey monument.

Solid and Hazardous Materials

Non-hazardous project-related refuse would be collected in approved trash bins or containers and removed from the site for disposal in accordance with state and federal regulations. The bins and/or containers would be equipped with lids. Debris that may have a hazardous characteristic, residue, or fluids would not be disposed in these trash bins but would be handled and disposed of according to the appropriate regulations. Pursuant to 43 CFR § 8365.1-1(b)(3), no sewage, petroleum products, or refuse would be disposed of in the area of the Proposed Action.

Visual Resources

Exploration activities and reclamation activities would be completed within a 10-year period, minimizing the visual disturbance. Disturbance would be reclaimed to approximately its pre-mining contours, and revegetated with the native seed mix shown in Table 2.

2.3 No Action Alternative

Under the No Action Alternative the Robertson and Try-View disturbances would not be combined, and the proposed disturbances would not occur. Previously authorized activities would continue to occur within the Project Area. The previously unauthorized 20.2 acres of existing disturbance would not be included in the reclamation permit.

2.4 Alternatives Considered but Eliminated from Detailed Study

2.4.1 Use Only Existing Roads Alternative

Under this alternative, exploration activities would use only existing roads and no new roads would be constructed. This alternative does not meet the purpose and need of the Proposed Action because exploration and definition of the deposits in this area requires numerous drill holes and trenches in order to evaluate the 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. However, the Proposed Action incorporates the use of existing roads to maximum extent possible

3 AFFECTED ENVIRONMENT

3.1 Introduction

This section describes the current status of supplemental authorities and resources that may be affected by either the Proposed Action or No Action Alternative. Data concerning existing (i.e., baseline) conditions and resource trends were obtained from: previous studies; published sources; unpublished materials; and/or field observations of the area.

The NEPA is only one of many authorities that contain procedural requirements that pertain to treatment of elements of the environment when the BLM is considering a federal action. To comply with NEPA and these supplemental authorities, the BLM mandates that all NEPA documents address specific elements of the environment that are subject to requirements specified in statute, regulation, or by Executive Order (EO) (BLM, 2008; BLM, 1997b; EO 13186; EO 12898, etc.). Table 3 outlines the elements that must be addressed in all NEPA documents and whether or not the Proposed Action potentially affects those elements. This table lists the rationale to determine whether the element is present in the Project Area and would be affected by the Proposed Action and/or No Action Alternative. Those elements that do not occur in the Project Area and/or would not be affected are not discussed further in this EA. The elimination of irrelevant issues follows CEQ policy, as stated in CFR 1500.4.

Table 3: Supplemental Authorities

Element	Not Present	Present, But Not Affected	Present and Potentially Affected	Rationale for Inclusion or Exclusion
Air Quality			•	Increased fugitive dust creation during exploration. Carried forward for analysis.
Areas of Critical Environmental Concern	•			No areas of critical environmental concern are identified within the area of the Proposed Action.
Cultural Resources			•	Potential for cultural resources exists in the Project Area. Carried forward for analysis.
Environmental Justice	•			No minority or low-income populations would be affected by the Proposed Action.
Farm Lands (prime or unique)	•			No prime or unique farmlands occur within the area of the Proposed Action.
Fish Habitat	•			No fish habitat occurs within the area of the Proposed Action.
Floodplains	•			No floodplains are present in the area of Proposed Action.
Forests and Rangelands	•			No Healthy Forests Restoration Act areas occur within the area of the Proposed Action.
Human Health and Safety	•			No pesticides are proposed in this project.

Element	Not Present	Present, But Not Affected	Present and Potentially Affected	Rationale for Inclusion or Exclusion
Migratory Birds (discussed under Wildlife)			•	Potential for the presence of migratory birds exists in the area, and the potential for habitat loss related to the Proposed Action exists. Carried forward for analysis.
Native American Religious Concerns			•	Potential for impact is unknown. Native American consultation has been initiated
Noxious Weeds, Invasive & Non-native Species (discussed under Vegetation)			•	Potential for noxious weeds exists in the area, and land disturbance could promote further propagation. Carried forward for analysis.
Threatened or Endangered Species (discussed under Wildlife)			•	Potential habitat exists in the area, and potential for habitat loss related to the Proposed Action exists. Carried forward for analysis.
Waste, Hazardous or Solid			•	The creation of solid waste would occur as part of the Proposed Action. Carried forward for analysis.
Water Resources			•	Ephemeral drainages occur within the Project Area, and the Proposed Action involves drilling activities which could encounter groundwater. No seeps, springs, or perennial waters are located within the Project Area. Carried forward for analysis.
Wetlands/Riparian Zones	•			No wetland or riparian areas exist in the Project Area.
Wild and Scenic Rivers	•			No wild and scenic rivers are located in the vicinity of the Project Area.
Wildlife			•	Wildlife habitat exists within the Project Area. Habitat may be affected by the Proposed Action. Carried forward for analysis
Wilderness	•			No designated wilderness areas occur within the area of the Proposed Action. The nearest wilderness study area (WSA) is the Roberts Mountain WSA located approximately 30 miles to the southeast.

Source: H-1790-1 National Environmental Policy Act Handbook: Appendix 1 Supplemental Authorities to be Considered (BLM, 2008).

Elements covered by the supplemental authorities determined to be Not Present or Present/Not Affected need not be carried forward for analysis or discussed further in the document. Elements determined to be Present and Potentially Affected must be carried forward for analysis.

In addition to the resource elements outlined in Table 3, the BLM considers other resources that occur on public lands, or issues that may result from the implementation of the Proposed Action. These additional resources are outlined in Table 4.

Table 4: Additional Resources Considered for Analysis

Resource	Not Present	Present, But Not Affected	Present and Potentially Affected	Rationale for Inclusion or Exclusion
Grazing Management			•	The Proposed Action is located within Carico Lake grazing allotment. Carried forward for analysis.
Land Use Authorization			•	Various land uses occur within the Project Area such as roads and power lines. Carried forward for analysis.

Resource	Not Present	Present, But Not Affected	Present and Potentially Affected	Rationale for Inclusion or Exclusion
Lands with Wilderness Characteristics	•			Area has been heavily used in the past and is in close proximity to other larger minerals operations.
Geology and Minerals			•	The Project is located on patented and unpatented mining claims, and involves mineral exploration. Carried forward for analysis.
Paleontological Resources	•			No known paleontological resources occur in the area of the Proposed Action. The occurrence of paleontological resources within the Project is unlikely.
Recreation		•		Dispersed recreation occurs within the Project. The Proposed Action would have a negligible effect on dispersed recreation.
Soils			•	Soils in the Project Area would be affected by land clearing activities under the Proposed Action. Carried forward for analysis.
Special Status Species (discussed under Wildlife and Vegetation)			•	Special status species have the potential to occur in the Project, and the potential for habitat loss related to the Proposed Action exists. Carried forward for analysis.
Vegetation			•	The Proposed Action would involve land clearing activities which would remove/alter vegetation. Carried forward for analysis.
Visual Resources			•	The Proposed Action is located within a visual resource management (VRM) Class IV area. Changes to visual resources could occur under the Proposed Action. Carried forward for analysis.
Wild Horses and Burros	•			The Project is not located within a wild horse and burro herd management area.
Socioeconomic Values		•		Proposed Action would affect workforce numbers negligibly.

The following describes the supplemental authorities' elements and additional resources that are present and may be potentially affected by the Proposed Action and/or No Action Alternative. For consistency, the resources are listed in the same order as in Tables 3 and 4 above.

3.2 Air Quality

Ambient air quality and the emission of air pollutants are regulated under both federal and state laws and regulations. The NDEP, Bureau of Air Pollution Control issues permits for emission sources and are responsible for permit and enforcement activities in Nevada.

The site is located within the Crescent Valley Hydrographic Basin (54) and the Humboldt River Basin Hydrographic Region.

The Beowawe University of Nevada Ranch site is representative of the local temperature and rainfall in the vicinity of the Project. The climate in the Project region is classified as arid, with elevations below 6,500 feet above mean sea level (amsl) receiving the least amount of precipitation (five to eleven inches per year). An arid climate is characterized by low rainfall, low humidity, clear skies, and relatively large annual and diurnal temperature ranges.

Air quality is defined by the concentration of various pollutants and their interactions in the atmosphere. Air quality standards specify acceptable upper limits of pollutant concentrations and duration of exposure.

Air pollutant concentrations within the standards generally are not considered to be detrimental to public health and welfare.

The relative importance of pollutant concentrations can be determined by comparison with appropriate national and/or state Ambient Air Quality Standards (AAQS). An area is designated by the Environmental Protection Agency as being in attainment for a pollutant if ambient concentrations of that pollutant are below the national AAQS. Areas where insufficient data are available to make an attainment status designation are listed as unclassifiable and are treated as being in attainment for regulatory purposes.

The existing air quality of the Project is typical of the largely undeveloped regions of the western U.S. For the purposes of statewide regulatory planning, this area has been designated as in attainment for all pollutants that have a national or state AAQS. Current sources of air pollutants in the region include several precious metals mines that are sources for particulate matter (PM)-10 and PM-2.5 (BLM 2008).

Existing climate prediction models are global in nature; therefore they are not at the appropriate scale to estimate potential impacts of climate change within the Crescent Valley Hydrographic Basin in which the Project is located. Due to the nature and scale of the Project, effects on climate change are not analyzed further in this EA.

3.3 Cultural Resources

Historic properties that are significant in history and culture are recognized by both the state and the federal governments as resources to be preserved and interpreted for the benefit of all citizens. All federally funded, permitted, or assisted projects in Nevada must be in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470), and its implementing regulations in (36 CFR § 800.4). This Act ensures that historic and cultural resources are identified, and potential impacts can be evaluated so that appropriate mitigation measures can be developed, as necessary.

A Class III cultural resources survey was performed over the 5,169 acre survey area. During the Class III inventory, 291 sites were identified and documented. These sites include one prehistoric site and 290 historic sites. No multi-component sites were observed.

The single prehistoric site observed is recommended not eligible for the NRHP. Of the 290 historic sites, there are 283 that are recommended not eligible for the NRHP and seven sites that are recommended eligible for the NRHP. None of the identified resources remain unevaluated.

3.4 Native American Religious Concerns

The presence of Native American cultural or religious resources within the Project Area has not been determined. On August 30, 2012 the Mount Lewis Field Office mailed consultation initiation/invitation letters to the following Native American communities; the Battle Mountain Band of the Te-Moak Tribe of the Western Shoshone, the Duckwater Shoshone Tribe, the Elko Band of the Te-Moak Tribe of the Western Shoshone, the South Fork Band of the Te-Moak Tribe of the Western Shoshone, the Yomba Shoshone Tribe of the Yomba Reservation, and the Te-Moak Tribe of the Western Shoshone. At this time no responses have been received.

3.5 Wastes, Hazardous or Solid

The affected environment for hazardous materials and solid and hazardous waste includes air, water, soil, and biological resources that could be potentially affected by materials that have been or are currently used at the site. A Class III landfill was permitted at the facility in order to remove scrap metal, wood, and other construction debris from the facility (SRK, 2011b). In addition, A Final Plan for Permanent Closure (FPPC) for the process facilities was submitted to the BMRR in February 2003. The BMRR approved this in 2003. In 2002 the water pollution control permit was taken off of the active list and was put into temporary closure. Monitoring continues for groundwater draindown, the ET cell piezometer and observation port, the waste rock dumps, and the pits (SRK 2011b).

3.6 Water Resources

The Project is located within the Crescent Valley Hydrographic Basin (#54) which is a designated hydrographic basin within the Humboldt River Hydrographic Region. The climate in the area is arid with most precipitation occurring in the months of March through May. Drainage from the high topographic areas generally drains into broad alluvial fans and valley fills. Flows typically dissipate into fans along the valley margins or drain toward playas near the center of the basins.

No perennial or intermittent water ways, seeps, or springs are located within the Project Area. Indian Creek, located north of the Project Area, is the most prominent drainage in the vicinity and exhibits perennial and/or intermittent flows. Ephemeral flows may occur seasonally in Mill Gulch and Triplet Gulch and generally dissipate prior to reaching the southern end of Crescent Valley. If flows from these drainages do reach the valley floor, they seep into valley fill or evaporate on the playa (BLM 2008). Based on studies performed for adjacent projects (JBR 2000, 2002, and 2006) no waters of the United States are located within or in close proximity to the Project.

According to the NDWR well log database, the following wells shown in Table 5 are located within the Project Area. Their locations are shown on Figure 5 (NDWR 2011). Groundwater recharge generally comes from precipitation infiltration in the higher elevation areas, and evapotranspiration is the primary natural mechanism for groundwater loss. Groundwater elevation in the Project Area ranges from approximately 4,900 to 4,800 feet amsl (BLM 2008). Groundwater wells and exploratory drilling in the area indicate that the depth to water is approximately 350 feet bgs.

Table 5: Wells Within Project Area

Well Log Number	Owner	Hole Depth (feet)	Static Water Level (feet bgs)	Proposed Use
5433	Komp & Eakin	373	N/A	N/A
5584	Komp & Eakin	340	280	Mining
21591	Aaron Mining Co.	412	282	Industrial

Data Source: NDWR 2011

3.7 Wildlife

A variety of wildlife species occur in the vicinity of the Project which are typical of the northern Great Basin desert region. The Project Area is located primarily within NDOW Hunt Unit 152, with approximately 93 acres (less than two percent of the Project Area) located in Hunt Unit 141. For the purposes of this EA, only Hunt Unit 152 has been analyzed. Big game species include mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), and mountain lion (*Puma concolor*). Mule deer occupy the mountainous portions of the Shoshone, Toiyabe, and Cortez ranges, where they prefer the elevations and vegetation above the valley floors. The deer winter at elevations where water, shelter, and forage are more readily available. Mule deer winter range exists within the western portion of the Project Area as shown on Figure 6 while mule deer summer range is located in the higher elevation areas of the Shoshone range. Agricultural mule deer habitat exists to the east of the Project Area in Crescent Valley. Based on data from the Beowawe University of Nevada weather station, this area has received fluctuating precipitation over the past four years with annual precipitation ranging from near the average of 8.62 inches to years with much less. The annual precipitation totals over the past four years were:

- 2009 – 5.39 inches,
- 2010 – 9.99 inches,
- 2011 – 4.72 inches, and
- 2012 – 4.85 inches.

Populations in the management area are below carrying capacity but increased between 2010 and 2011 (NDOW 2011a and 2012a). However, drought conditions during the summer and fall of 2011 and 2012 have altered the quantity and quality of mule deer habitat within Hunt Unit 152. This alteration could be a

concern as the changes in habitat could result in decreased survival during the winter and reproductive success during the upcoming spring (BLM 2012 and 2013).

The successful rehabilitation of burned areas, and other factors have been beneficial for the pronghorn antelope. However, fall and winter precipitation for 2011 and 2012 was well below normal, and drought conditions during 2012 could have altered the pronghorn habitat. The management area population is believed to be below carrying capacity but has experienced gains in the past few years (NDOW 2011a and 2012a).

The Project Area is within the Eastern Region NDOW management area for mountain lions. Mountain lions typically occupy the higher elevations in the surrounding mountain ranges and are closely associated with populations of resident mule deer herds. Mountain lion habitat in this area remains in good condition. An ample prey base exists and minimal habitat loss has occurred although future trends in deer habitat may affect future mountain lion populations (NDOW 2011a and 2012a).

Small game and non-game mammals that exist in the vicinity include the kit fox (*Vulpes macrotis*), gray fox (*Urocyon cinereoargenteus*), and coyote (*Canis latrans*), plus a variety of rabbits, mice, ground squirrels, and other rodents. Several other wildlife species observed in the Project Area during reclamation surveys include Chukar (*Alectoris chukar*) and black-tailed jackrabbits (*Lepus californicus*) (SRK 2007b). In addition, Townsend's big-eared bat (*Corynorhinos townsendii*) and a variety of Myotis were monitored. Furthermore, the Black-billed magpie (*Pica hudsonia*), Common Raven (*Corvus corax*), and Mourning Dove (*Zenaida macroura*) were observed in the vicinity of the Project Area (SRK 2012).

The NDOW complete species list for Hunt Unit 152, within which the Project Area is located, is included as Appendix A with a list of wildlife species observed during the 2012 survey included in Appendix B.

3.7.1 Special Status Species

Special status species are those species for which state or federal agencies afford an additional level of protection by law, regulation, guidance, or policy. For the purpose of this EA, special status species meet one or more of the following criteria:

- Listed as rare, threatened, or endangered by a state or federal agency;
- Proposed to be listed as rare, threatened, or endangered by a state or federal agency;
- Designated protected species, species of special concern, or a harvest species by the NDOW;
- Tracked by the Nevada Natural Heritage Program (NNHP); or
- Included in the BLM Nevada sensitive species list.

A list of BLM-special status species which may occur in the Battle Mountain District is included as Appendix C. These special status species and their potential habitats are discussed in the *Robertson Mine Baseline Studies Report* (SRK 2012). Only those species found to be potentially occurring in the Project Area are discussed in this EA.

The NNHP database was queried to determine the presence or absence of special status wildlife species in the area of the Proposed Action. Pygmy rabbit (*Brachylagus idahoensis*), a Nevada BLM sensitive species, was identified as potentially occurring in the area (NNHP 2011, 2012).

The key components used for pygmy rabbit habitat are mature sagebrush, friable soils, and gentle slopes. No pygmy rabbits or pygmy rabbit sign (e.g., burrows, scat, tracks, dust baths, runways) were observed in the Project Area. Field surveys indicated that suitable pygmy rabbit habitat is not present in the Project Area; even in drainages, the sagebrush does not have adequate canopy cover for pygmy rabbit use (SRK 2012).

The U.S. Fish and Wildlife Service (USFWS) and the NDOW were queried for potential threatened, endangered, or candidate species which may occur in the Project Area. Their records indicated that greater sage-grouse (*Centrocercus urophasianus*), an Endangered Species Act candidate species, has potential to occur in the area (USFWS 2011).

The closest known active greater sage-grouse leks to the Project Area are located approximately five miles from the western edge of the Project Area boundary. No core breeding habitat occurs within the

Project Area although approximately 637 acres of nesting habitat occurs in the northern portion of the Project Area. The entire Project Area (5,169 acres) has been mapped as both summer and winter greater sage-grouse habitat (NDOW 2011b). The existing 213.95 acres of disturbance within the Project Area occur on summer and winter greater sage-grouse habitat as shown on Figure 8.

Two greater sage-grouse lek sites, Tenabo and Indian Creek, are known to exist in the vicinity of the Project Area but have been determined to be inactive. The Tenabo lek is located within the Project Area in Township 28 North, Range 47 East, Section 9. This site was surveyed on April 21, 2012, and no greater sage-grouse were observed. A drill rig was operating within 200 feet of the lek location, and the entire vicinity of the lek location was disturbed. The lek has likely been inactive for years, perhaps since soon after 1947 when it was last recorded in the NDOW database. The Indian Creek lek is located approximately three miles north of the Project Area in Township 29 North, Range 47 East, Section 27. This lek was surveyed twice in April 2012 and no greater sage-grouse were observed. No birds or bird sign (e.g., scat) were detected, and the bird dog never detected signs of birds in the one quarter- and one-mile radius surveys the bird dog was run (SRK 2012).

Approximately 4,646 acres of greater sage-grouse Preliminary Priority Habitat (PPH) and 386 acres of Preliminary General Habitat (PGH) as identified by preliminary mapping efforts between NDOW and the BLM, exist within the Project Area. These estimates could change based on field verification exercises. The NDOW query results also indicated the presence of a variety of raptors which are protected by state and federal laws. In particular, the Western Burrowing Owl (*Athene cunicularia hypugea*), Ferruginous Hawk (*Buteo regalis*), Northern Goshawk (*Accipiter gentilis*), Peregrine Falcon (*Falco peregrinus*), Short-Eared Owl (*Asio flammeus*), and Swainson's Hawk (*Buteo swainsoni*) which are also NDOW species of special concern.

The Western Burrowing Owl is a bird of prey that spends a considerable amount of time on the ground. Found in western North American grasslands and shrub-steppe habitats, the Western Burrowing Owl prefers areas that have gentle slopes, short vegetation, and a high percentage of bare ground. Other habitat indicators of the Western Burrowing Owl include high densities of burrows created by other burrowing animals. Western Burrowing Owls prefer to nest in burrows, rock piles, and eroded stream banks but can establish nests in many man-made structures such as roadside culverts and eroded irrigation ditches (Lantz, Smith, and Keinath 2004). Six active Western Burrowing Owl territories were found during the 2012 field surveys as shown on Figure 8, and owls were observed at two of these territories. All of the burrows were active with one potential exception. All the Western Burrowing Owl detections were in a similar habitat of gently rolling foothills (SRK 2012).

The Ferruginous Hawk is a bird of prey strongly associated with plains and deserts located in grassland and shrub-steppe habitat. The pinyon-juniper ecotone or transition zones between woodland and shrub/grassland habitats are also preferred by the Ferruginous Hawk. Nesting primarily occurs in lone trees located within sagebrush/shrub-steppe, grassland, and mixed shrub/grassland. If trees are not located within its nesting area, this species will nest on the ground, rock outcrops, pinnacles, and cliff faces (Grindrod 1998). This species has potential to exist within the Project Area but is unlikely due to the lack of nesting habitat, although it has been sighted in the vicinity of the Project Area (SRK 2012).

The Northern Goshawk prefers to inhabit mature aspen or coniferous forest bordering the grassland and shrub-steppes. They typically nest in large trees in mature stands, and a majority of nests in Nevada are known to be located in aspen trees near water (NDOW 2011c). This species has potential to exist within the vicinity of the Project Area, but is unlikely due to the lack of nesting habitat (SRK 2012).

The Peregrine Falcon prefers to inhabit mountain ranges, open country, river valleys, and some coastlines. This species of raptor does not build nests but lays eggs in depressions located on cliffs, rock outcrops or pinnacles (NDOW 2011c), or man-made structures. Due to the presence of hilly areas, open country, and outcrops of rocks, this species has potential to exist within the Project Area (SRK 2012).

Short-eared Owls occupy a variety of habitats due to their wide geographical distribution. Their preferred habitat includes marshes and montane meadows but can also occupy sagebrush steppes, grasslands and open shrublands, fresh and saltwater marshes, coastal plains, and old fields (Howard 1994). This species

has potential to exist within the Project Area but is unlikely due to the lack of preferred habitat (SRK 2012).

The Swainson’s Hawk inhabits agricultural lands with open country, plains, and prairies while nesting generally occurs in large trees often but not always associated with riparian areas. Habitat often includes lowland rivers and streams (Woodbridge 1998). This species has potential to exist within the Project Area but is unlikely due to the lack of nesting habitat (SRK 2012).

According to the NDOW, a Golden Eagle (*Aquila chrysaetos*) has been directly observed in the vicinity of the Project Area (NDOW 2012b).

Golden Eagles are currently protected under the Act (16 ISC 668-688d) as described in Section 2.2.8. Golden Eagles exist in a variety of habitats including open terrain of deserts, mountains, plateaus, and steppes. They build stick nests on cliffs or in trees. An active Golden Eagle nest has also been observed in the wall of the Gylding Pit as shown on Figure 8 (SRK 2012). The Project Area and the surrounding area within ten miles provides suitable foraging habitat for Golden Eagles. Existing pit walls and rocky outcrops within this area also provide for suitable nesting habitat.

According to NDOW data, three other Golden Eagle nests are located within or close to a 10-mile radius of the Project Area (NDOW 2012b). The Township, Range, and Section within which they are reported as being located in (Mount Diablo Base & Meridian) and the distance to the Project Area are:

- Township 26 North, Range 47 East, Section 8 – approximately nine to ten miles from the Project Area;
- Township 29 North, Range 47 East, Section 6 – approximately five to six miles from the Project Area; and
- Township 27 North, Range 45 East, Section 23 – approximately 10.5 to 11.5 miles from the Project Area.

Dark kangaroo mice are found throughout North America. This species is located in scrublands and sagebrush habitats (BLM 2011). This species has potential to exist within the Project Area due to the presence of sagebrush.

Pale kangaroo mice are also found throughout North America and have the potential to occur in the Project Area. This species is located in high cold deserts, most commonly in Nevada in the scrublands and deserts (BLM 2011).

American pikas are found in foothills and mountains. They eat a variety of plants, mainly grasses and sedges (BLM 2011). This species has potential to exist within the foothills area of the Project Area.

In addition to the species listed above, Nevada BLM sensitive bat species have the potential to occur in the Project Area in the myriad of underground workings. These underground workings could be used for hibernacula, maternity roosts, or bachelor roosts. Rock outcrops, caves, cliffs, trees, and abandoned buildings could also provide day roost sites. The locations of underground workings are shown on Figure 4. Special status bat species with the potential to occur in the area and the species detected during the October of 2011 and June 2012 surveys are listed in Table 6.

Table 6: Bat Species in the Project Area

Special Status Bat Species Potentially Occurring in the Project Area ¹	Scientific Name	Bat Species Detected in the Project Area	Scientific Name
Pallid Bat	<i>Antrozous pallidus</i>		
Big Brown Bat	<i>Eptesicus fuscus</i>	Big Brown Bat	<i>Eptesicus fuscus</i>
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>
Silver-haired Bat	<i>Lasionycteris noctivagans</i>		
Western Small-footed Myotis	<i>Myotis ciliolabrum</i>	Western Small-footed Myotis	<i>Myotis ciliolabrum</i>
Long-eared Myotis	<i>Myotis evotis</i>	Long-eared Myotis	<i>Myotis evotis</i>
Fringed Myotis	<i>Myotis thysanodes</i>	Fringed Myotis	<i>Myotis thysanodes</i>

Special Status Bat Species Potentially Occurring in the Project Area ¹	Scientific Name	Bat Species Detected in the Project Area	Scientific Name
Long-legged Myotis	<i>Myotis volans</i>		
Spotted Bat	<i>Euderma maculatum</i>		
Western Pipistrelle	<i>Pipistrellus hesperus</i>		
Little brown Bat	<i>Myotis lucifugus</i>	Little Brown Bat	<i>Myotis lucifugus</i>
California Myotis	<i>Myotis californicus</i>		
Yuma Myotis	<i>Myotis yumanensis</i>	Little Brown Myotis	<i>Myotis yumanensis</i>
		Brazilian Free-tailed Bat	<i>Tadarida brasiliensis</i>

¹ Data Source: BLM 2008

3.7.2 Migratory Birds

“Migratory birds” are defined as any bird listed in 50 CFR § 10.13. Migratory birds may be found in the area of the Proposed Action as either seasonal residents or as migrants. Provisions of the MBTA (16 USC 703-711) prohibits the taking of migratory birds, their parts, nests, eggs, and nestlings. EO 13186 (66 FR. 3853), *Responsibilities of Federal Agencies to Protect Migratory Birds*, signed on January 10, 2001, and Memorandum No. 2008-050, issued December 18, 2007, directed executive departments and agencies of the federal government to take certain actions to further implement the MBTA. Section 3 of the EO directed each federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement, within two years, a Memorandum of Understanding (MOU) with the USFWS that shall promote the conservation of migratory bird populations. The National MOU between the BLM and the USFWS was signed on April 12, 2010. The MOU helps identify and implement strategies to complement and support existing efforts, and facilitate new collaborative migratory bird conservation partnerships and comprehensive planning strategies for migratory birds.

Appendix A includes a list of all birds including migratory birds and other special status species which may be found in Hunt Unit 152 within which the Project Area is located, and Table 7 provides an inventory of migratory bird species observed in the vicinity of the Project Area, within approximately 10 miles (SRK 2007b, 2011a and 2012a). A number of these species are associated with a variety of habitat types, and many may occur within the proposed Project Area year-round.

Table 7: Inventory of Migratory Bird Species Observed or Potentially Occurring in the Study Area

Common Name	Scientific Name	Common Name	Scientific Name
Common Poorwill	<i>Phalaenoptilus nuttallii</i>	Lark Sparrow	<i>Chondestes grammacus</i>
Common Nighthawk	<i>Chordeiles minor</i>	Black-throated Sparrow	<i>Amphispiza bilineata</i>
Western Tanager	<i>Piranga rubra</i>	Sage Sparrow	<i>Amphispiza belli</i>
Horned Lark	<i>Eremophila alpestris</i>	Brewer’s Sparrow	<i>Spizella breweri</i>
Mountain Bluebird	<i>Sialia currucoides</i>	Western Meadowlark	<i>Sturnella neglecta</i>
Rock Wren	<i>Salpinctes obsoletus</i>	Brewer’s Blackbird	<i>Euphagus cyanocephalus</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Sage Thrasher	<i>Oreoscoptes montanus</i>
Barn Swallow	<i>Hirundo rustica</i>	House Finch	<i>Carpodacus mexicanus</i>
Mourning Dove	<i>Zenaida macroura</i>	Say’s Phoebe	<i>Sayornis saya</i>
Western Meadowlark	<i>Sturnella neglecta</i>	Chukar	<i>Alectoris chukar</i>

Data Source: SRK 2007b, 2011a and 2012

According to the NDOW, a Red-Tailed Hawk (*Buteo jamaicensis*) nest has been directly observed in the vicinity of the Project Area (NDOW 2012b).

The Red-tailed Hawk occupies a wide range of habitat types including those found in the Project Area. The NDOW has indicated that one Red-tailed Hawk nest is located within or very close to the northwestern portion of the Project Area (NDOW 2011b and SRK 2012).

Furthermore, the following raptor species were observed in the southern portion of Crescent Valley in the vicinity (within approximately ten miles) of the Project Area (SRK 2012):

- American Kestrel (*Falco sparverius*);
- Turkey Vulture (*Cathartes aura*); and
- Prairie Falcon

Other raptor species known to occur in the vicinity of the Project Area but not directly observed in relation to this Project include (NDOW 2011b, NDOW 2012b):

- Barn Owl (*Tyto alba*);
- Great Horned Owl (*Bubo virginianus*);
- Long-eared Owl (*Asio otus*);
- Northern Harrier (*Circus cyaneus*);
- Sharp-shinned Hawk (*Accipiter striatus*);
- Cooper’s Hawk (*Accipiter cooperii*);
- Northern Goshawk;
- Merlin (*Falco columbarius*);
- Northern Saw-whet Owl (*Aegolius acadicus*);
- Osprey (*Pandion haliaetus*);
- Rough-Legged Hawk (*Buteo lagopus*);
- Short-eared Owl;
- Swainson’s Hawk; and the
- Western Screech Owl (*Megascops kennicottii*).

3.8 Ecological Site Inventory

Ecological sites which occur in the Project Area are listed in Table 8 including the soil association within which they are listed as shown on Figure 9. Ecological site observation points are shown with soils and the existing vegetation communities on Figure 10.

Table 8: Ecological Sites Listed as Occurring in the Project Area

Observed Ecological Site	Description	Soil Association Map Unit(s)	Ecological Site Observation Points	Soil Association
R024XY002NV	Loamy 5-8 P.Z.	230, 1240, 2060, 2796	R-8, R-9, R-10, R-11, R-13, and R-14	Broyles very fine sandy loam, Redflame-Kingingham, Oxcorel-Beoska-Whirlo, Old Camp-Osoll-Colbar
R024XY005NV	Loamy 8-10 P.Z.	1240, 2796, 3840, 3843	R-1, R-4, R-5, R-6, R-7, and R-12	Redflame-Kingingham, Old Camp-Osoll-Colbar, Jung-Norfolk-Bufferan, Jung, steep-Robson-Jung
R024XY030NV	Shallow Calcareous Loam 8-10 P.Z.	3840, 3843	R-3, and R-15	Jung-Norfolk-Bufferan, Jung, steep-Robson-Jung
None	-	1600	-	Dumps and Pits
None	-	2555	-	Laped-Colbar

The potential native plant community for site R024X002NV is dominated by shadscale (*Atriplex confertifolia*), with a co-dominant of bud sagebrush (*Picrothamnus desertorum* Nutt.) and an herbaceous understory of Indian ricegrass (*Oryzopsis hymenoides*) and/or bottlebrush squirreltail (*Sitanion hystrix*). Needle and thread (*Stipa comata*) and Sandberg’s bluegrass (*Poa secunda*) are present within most areas (NRCS 2012). Site conditions observed in the field generally match descriptions for the R024XY002NV ecological site although some areas displayed a mosaic quality with a Wyoming big sagebrush-dominated vegetation community (SRK 2012).

The potential plant community for site R024XY005NV is generally dominated by Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) and Thurbur’s needlegrass (*Achnatherum thurberianum*) on gravelly areas and Indian ricegrass on more sandy soil surfaces (NRCS 2012). Field observations indicated that shrubs tend to dominate the vegetation classes as opposed to grasses as listed in the ecological site’s potential vegetation composition description (SRK 2012).

The site R024XY030NV potential plant community is dominated primarily by grasses including Thurber’s needlegrass, and Indian ricegrass with black sagebrush (*Artemisia arbuscula* ssp. *nova*) as the

dominant shrub (NRCS 2003). Field observations at sites where soils were observed to match those listed for site R024XY030NV indicated the presence of a short-statured Wyoming big sagebrush-dominated vegetation community rather than the listed black sagebrush community (SRK 2012).

The site R024XY018NV, of which none was encountered during the field investigation (SRK 2012), potential plant community is also dominated primarily by grasses including Thurber’s needlegrass and bluebunch wheatgrass (*Agropyron spicatum*) with low sagebrush (*Artemisia arbuscula ssp. arbuscula*) as the dominant shrub. The site also supports lesser amounts of Webber’s needlegrass (*Achnatherum webberi*) and other perennial grasses (NRCS 2003).

3.9 Grazing Management

The Project Area is located within the Carico Lake grazing allotment, shown on Figure 9. This allotment covers an area of approximately 562,352 acres of BLM-administered land and 36,952 acres of private land. The allotment has a total active grazing preference of 26,594 animal unit months (AUMs). This allotment has been characterized as “I” (improve the current unsatisfactory condition).

3.10 Land Use Authorization

The Project consists of approximately 5,169 acres, of which 169 acres are private lands, held as patented mining claims either owned or controlled by Coral or others. The remaining 5,000 acres are public lands administered by the BLM Mount Lewis Field Office. Coral controls approximately 456 unpatented lode and placer claims on these public lands.

Entities with an interest in the location or general vicinity of the Proposed Action are limited to the Coral, Nevada Department of Transportation, NV Energy (formerly Sierra Pacific Power Co.), Lander County, Filippini Ranch, and Newmont Gold Corporation (Newmont). The Filippini Ranch and Newmont both hold unpatented claims within the Project Area as shown on Figure 2. Coral currently holds several active rights-of-way (ROWs) in the area. Table 9 lists the other ROW holders adjacent to or within the Project Area.

Table 9: Property Rights Holders

Property-Rights Holder	Case File	Land Use Action	Total Acres
Unpatented mineral survey performed in 1909 for the “Gold Quartz Mining Company” of Butte Montana. The mining claims were never patented.	3227	Mineral Survey	15.456
Unpatented mineral survey performed in 1907 for the “Gold Quartz Mining Company” of Butte Montana. The mining claims were never patented.	3262	Mineral Survey	79.118
Mineral Survey 3431 patented on 3/1/1910 to a “Martin Kline” given Patent number 114751.	3431	Mineral Survey	18.503
Correct number appears to be “158605”. Patented on 10/20/1910 to “Tenabo Consolidated Mines Co.”	159605	Ditches and Canals	19.36
No holder of record. This was a private parcel originally deeded to the State of Nevada. In 1958, it was “reconveyed” to the BLM by a Warranty Deed as part of a private exchange. In 1962 it was restored to its original public land status. Open to entry means it is now public land.	043975	Open to Entry	82.96

Property-Rights Holder	Case File	Land Use Action	Total Acres
Nevada Department of Transportation	044669	Federal Aid Highway	417.050
NV Energy (Sierra Pacific Power Co.)	056088	Power line ROW	204.429
Lander County	060542	Road ROW	45.603
Mineral Survey 3084 patented on 9/28/1909 to "Reliance Mining and Milling Company" and given Patent number 81213.	081213; 3084	Ditches and Canals; Mineral Survey	20.272
See Mineral Survey 3431 above	114751	Patented Land	18.503
Nevada Department of Transportation	044814	Mineral Site and Access Road	164.490

Data Source: BLM 2012

3.11 Geology and Minerals

The Project Area is located within the Great Basin section of the Basin and Range physiographic province characterized by a series of generally north-trending mountain ranges separated by broad alluvial filled basins. Mountain ranges in this area are generally bounded by range-front normal faults which began approximately 14 million years ago (McCormack and Hays 1996) which has resulted in uplifted mountains and thick accumulations of unconsolidated to poorly consolidated sediments in the valleys or basins.

The Project is located in the southern end of Crescent Valley and on the eastern slopes of the Shoshone Range. Paleozoic sedimentary rocks form the regional basement throughout the area and have undergone a complex history of sedimentation and deformation. During the early Paleozoic Era, marine clastic and carbonate rocks were deposited in a shallow sea that represented the western continental margin of North America. These marine clastic rocks (referred to as the Western Assemblage) were deposited in the deep water to the west, while carbonate rocks (referred to as the Eastern Assemblage) were deposited in the shallow water to the east (Stewart 1980). The formations associated with the Western Assemblage are predominantly siliceous with very little carbonate, while formations associated with the Eastern Assemblage are predominately carbonate (Gilluly and Masursky 1965).

During the Late Devonian and Early Mississippian geologic periods, sedimentary deposition was interrupted, and the Paleozoic sediments were uplifted, folded, and faulted during a tectonic period referred to as the Antler Orogeny. The Roberts Mountains Thrust, a system of low angle thrust faults that has caused major deformation of the Paleozoic rocks, is the main expression of the Antler Orogeny apparent in the region today. Movement along the Roberts Mountain Thrust resulted in the displacement of the Western Assemblage up to approximately 90 miles eastward over the Eastern Assemblage (Stewart 1980). As a result, the Western Assemblage occurs in the upper plate of the thrust, while the Eastern Assemblage occurs in the lower plate of the thrust (Gilluly and Masursky 1965). The Eastern Assemblage is believed to occur as basement rocks beneath the alluvium in Crescent Valley (BLM 2008) and underlies all other stratigraphic units in eastern and central Nevada.

3.12 Soils

According to the Natural Resources Conservation Service (NRCS) soil survey for Lander County, Nevada, North Part (NRCS 1992) eight soil associations are present within the Project Area. The soils in the area of the Proposed Action are listed in Table 10 and shown on Figure 9. In general, the soils in the Project Area are well drained sandy to gravelly loams with some fractions higher in clay or containing cobbles. The parent material is generally weathered volcanic rocks from higher altitude sources.

Table 10: Soils in the Area of Proposed Action

Map Unit	Soil Association	Soil	Elevation (amsl)	Mean Annual Precipitation (inches)	Slope (%)	Depth to Restrictive Feature (inches)	Drainage Class
230	Broyles Very Fine Sandy Loam	Broyles Very Fine Sandy Loam	4,400-5,000	6-8	0-2	>80	Well Drained
1240	Redflame-Kingingham	Redflame	5,000-5,200	6-8	4-15	>80	Well Drained
		Kingingham			2-8	20-30	Well Drained
1600	Dumps and Pits, Mine	N/A	N/A	N/A	N/A	N/A	N/A
2060	Oxcorel-Beoska-Whirlo	Oxcorel	4,600-5,500	6-8	2-8	>80	Well Drained
		Beoska			0-4	>80	Well Drained
		Whirlo			2-8	>80	Well Drained
2555	Laped-Colbar	Laped	5,200-6,400	7-9	15-30	14-20	Well Drained
		Colbar			30-50	20-40	Well Drained
2796	Old Camp-Osoll-Colbar	Old Camp	5,700-6,000	7-9	15-30	10-20	Well Drained
		Osoll			15-30	8-14	Well Drained
		Colbar			15-30	20-40	Well Drained
3840	Jung-Norfork-Buffaran	Jung	5,500-6,400	8-10	8-30	14-20	Well Drained
		Norfork			15-30	10-20	Well Drained
		Buffaran			4-8	14-20	Well Drained
3843	Jung, Steep-Robson-Jung	Jung, Steep	6,000-7,000	9-11	30-50	14-20	Well Drained
		Robson			30-50	12-20	Well Drained
		Jung			8-15	14-20	Well Drained

Data Source: NRCS 1992

While the soil units in the Project Area have been defined, areas within the Project Area have been previously disturbed through human activity. Historic mining and off-highway vehicle (OHV) use have substantively altered the native soil. Approximately 191.3 acres have been authorized for disturbance, and approximately 50 acres were disturbed prior to 1981. Disturbed areas are shown on Figure 3.

3.13 Vegetation

The vegetation in the Project Area varies by soil type, elevation, aspect, and past disturbance ranging from a mixed salt desert scrub near the eastern side of the Project to sagebrush dominated communities. Disturbed areas have been populated by annual grasses and other primary successional brush communities. Species observed on undisturbed and disturbed areas near the center of the Project Area are listed in Appendix D (SRK 2007b, 2010 and 2012a). No wetland or riparian zones exist within the Project Area.

The vegetation mapping was conducted May 13 to 16, 2012. Two main plant communities were identified, Wyoming big sagebrush and shadscale, as shown on Figure 10, as well as two plant

communities occurring on previously disturbed areas. These are labeled as fourwing saltbush and rubber rabbitbrush (SRK 2012).

Wyoming big sagebrush R024XY005NV

The Wyoming big sagebrush community was identified as generally matching the ecological site description for R024XY005NV (Loamy 5-8 P.Z.) except for that the observed vegetation community is shrub-dominated rather than grass-dominated. This community is dominated by Wyoming big sagebrush with grasses found in the interspace. Other species present within this community include shadscale saltbush, yellow rabbitbrush, mormon tea, rubber rabbitbrush, dwarf goldenbush, Heermann's buckwheat, slender buckwheat, spiny hopsage, winterfat, prickly phlox, budsage, little leaf horsebrush, shortspine horsebrush, Indian ricegrass, Thurber's needlegrass, desert wheatgrass, cheatgrass, squirreltail, Great Basin wildrye, Sandburg bluegrass, bluebunch wheatgrass, plains pricklypear, mountain ball cactus, pale agoseris, twinleaf onion, desert madwort, bristly fiddleneck, Holboell's rockcress, silver rockcress, morning milkvetch, Humboldt River milkvetch, freckled milkvetch, arcane milkvetch, woollypod milkvetch, Hooker's balsamroot, arrowleaf balsamroot, sego lily, hoary cress, Indian paintbrush, thickstem wild cabbage, Douglas' dustymaiden, crossflower, maiden blue eyed mary, tapertip hawksbeard, modoc hawksbeard, largeflower hawksbeard, roundspike cryptantha, wingnut cryptantha, Ibapah springparsley, western tansymustard, tansymustard, rayless shaggy fleabane, matted buckwheat, Hooker's buckwheat, cushion buckwheat, Palmer's buckwheat, fillarie, shy gilia, Saltlover, clasping pepperweed, bitter root, Macdougals biscuitroot, Torrey's desert dandelion, whitestem blazingstar, winged four o'clock, tufted evening primrose, King's beardtongue, varileaf phacelia, mountain phlox, longleaf phlox, wallflower phoenicaulis, thorn skeleton weed, Anderson's buttercup, bur buttercup, prickly Russian thistle, tumble mustard, gooseberryleaf Globemallow, desert princes plume, stemless mock, goldenweed, and death camas.

Also occurring within this community are areas which generally match the soil type description for ecological site R024XY030NV (Shallow Calcareous Loam 8-10 P.Z.). However, the vegetation communities observed at these locations (ecological site observation points R-3 and R-15) were dominated by short-statured Wyoming big sagebrush rather than black sagebrush, as was listed for this ecological site.

Shadscale R024XY002NV

The shadscale community was identified as generally matching the ecological site description for R024XY002NV (Loamy 8-10 P.Z.). This community is a shrub-dominated community with shadscale, saltbush and budsagebrush dominating this class. Grasses are dominated by Indian ricegrass and bottlebrush squirreltail. Other species occurring within this community include consisted of Wyoming big sagebrush, yellow rabbitbrush, rubber rabbitbrush, Heermann's buckwheat, spiny hopsage, winterfat, little leaf horsebrush, shortspine horsebrush, desert wheatgrass, red brome, cheatgrass, Great Basin wildrye, Sandburg bluegrass, alkali sacaton, plains pricklypear, darkred onion, desert madwort, bristly fiddleneck, Humboldt River milkvetch, freckled milkvetch, woollypod milkvetch, Indian paintbrush, bighead dustymaiden, Esteves pincushion, cross flower, wingnut cryptantha, western tansymustard, tansymustard, Great Basin woollystar, rayless shaggy fleabane, matted buckwheat, cushion buckwheat, Palmer's buckwheat, fillarie, shy gilia, Saltlover, clasping pepperweed, shortstem lupine, whitestem blazingstar, winged four o'clock, longleaf phlox, Bur buttercup, prickly Russian thistle, tumble mustard, gooseberryleaf Globemallow, desert princes plume, tufted townsend daisy, and death camas.

Fourwing Saltbush

A fourwing saltbush-dominated community occurs within disturbed portions of the Project Area as shown on Figure 10. Cheatgrass is the dominant grass within this community. Other species observed in these areas include shadscale, spiny hopsage, rubber rabbitbrush, Sandburg bluegrass, Great Basin wildrye, crested wheat, bottlebrush squirreltail, penstemon, bur buttercup, death camas, forage kochia, halogeton, greasewood, and mustard species (SRK 2007b).

Rubber Rabbitbrush

A rubber rabbitbrush-dominated community also occurs within disturbed portions of the Project Area, also having cheatgrass as a dominant grass species. Other species observed in these areas include fourwing saltbush, Douglas rabbitbrush, shadscale, spiny hopsage, Great Basin wildrye, crested wheat, bottlebrush squirreltail, bur buttercup, penstemon, globemallow, Russian thistle, phlox, mustard species, Holboell's rockcress, and death camas (SRK 2007b).

3.13.1 Special Status Species

The NNHP database was queried to determine the presence or absence of special status plant species in the area of the Proposed Action. Beatley buckwheat (*Eriogonum Beatleyae*), determined to be imperiled by the NNHP was identified as potentially occurring in the area (NNHP 2011) but not in 2012 (NNHP 2012). A list of other special status plant species which may occur in the BLM Battle Mountain District are included in Appendix C.

Beatley buckwheat is a low matted herbaceous perennial that forms highly branched mats and grows in tufts or clumps. It has broadly elliptic leaves and yellow to reddish-yellow flowers. Beatley buckwheat is known to exist at elevations ranging between 5,600 feet amsl and 8,745 feet amsl in dry volcanic outcrops. No Beatley buckwheat was observed during reclamation surveys (SRK 2012). Although some of the habitat criteria are present at the site (elevation) geologic mapping indicate that the correct soil geologic cross-sections are not present for Beatley buckwheat to be present on the site (SRK 2012).

3.13.2 Noxious Weeds, Invasive and Non-native Species

Nevada noxious weeds are designated per NAC 555.010. Non-native, invasive, and noxious weed species observed within the Project Area during field surveys included cheatgrass, tansy mustard, clasping pepperweed, prickly Russian thistle, tumble mustard, hoary cress, and halogeton (SRK 2007b, SRK 2010, and SRK, 2012a). Cheatgrass, tansy mustard, clasping pepper weed, prickly Russian thistle, and tumble mustard are currently not listed as Nevada state noxious weeds, although they are widely known as non-native, invasive plant species. These species are pervasive across the site and vary in density from sparse to very dense. Hoary cress is listed as a category C noxious weed under NAC 555.010. Category C noxious weeds are weeds that are currently established and generally widespread in many counties of the state. Hoary cress was observed scattered in the north eastern portion of the Project Area as shown on Figure 10 (SRK, 2012a).

Although not formally designated as a noxious weed species, cheatgrass is one of the most problematic undesirable plant species in the West, especially in northern Nevada. Cheatgrass is extremely difficult and/or expensive to control through conventional means. Levels of cheatgrass fluctuate based on the amount, timing, and duration of annual precipitation (BLM 2008).

3.14 Visual Resources

The BLM VRM system was developed to facilitate the effective discharge of that responsibility in a systematic interdisciplinary manner. The VRM system includes an inventory process, based on a matrix of scenic quality, viewer sensitivity to visual change, and viewing distances, which leads to classification of public lands and assignment of visual management objectives. Four VRM classes have been established, which serve two purposes: 1) as an inventory tool portraying relative value of existing visual resources and 2) as a management tool portraying visual management objectives for the respective classified lands.

The Project is located in VRM Class IV. The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic (design) elements.

The existing landscape is disturbed with a long history of mining having occurring on site. Mining first occurred at the Project in 1905, and production increased in 1931. There is an existing network of old prospects, mines, mineshafts, open pits, tailings, and roadways throughout the site from previous mining operations.

Four plant communities exist on site, Wyoming big sagebrush in the central and western portions of the site, shadscale in the lower eastern portion of the site, and fourwing saltbush and rubber rabbitbrush occupy relatively minor portions of the site. The Wyoming big sagebrush is a shrub-dominated community that is moderately populated with relatively low sagebrush heights at approximately 24 inches. The shadscale community is also shrub-dominated but is more sparsely populated than the sagebrush and is lower growing. Extensive bare soil is visible between the vegetation. The fourwing saltbush and rubber rabbitbrush communities both occur in disturbed areas and are dominated by cheatgrass. Extensive portions of the site remain as disturbed areas.

4 ENVIRONMENTAL CONSEQUENCES

The direct and indirect effects of the Proposed Action on resources present and brought forward for analysis are discussed in this section. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. The effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).

4.1 Proposed Action

4.1.1 Air Quality

Up to approximately 80 additional acres would be disturbed under the Proposed Action equaling a disturbance area increase of approximately 1.5 percent. In addition, 20.2 acres of existing disturbance would be permitted for a total Project Area disturbance of 5.7 percent. This additional land disturbance would contribute to increased fugitive dust emissions. Increased fugitive dust emissions from Project-related disturbed lands would continue until successful reclamation and revegetation is achieved. Increased vehicle emissions related to exploration activities and reclamation would occur. Impacts to air quality would be transitory and temporary, limited in duration, and would end at the completion of the reclamation phase of the Project.

As described in Section 2.2.8 design features would be implemented to reduce and/or control project related air emissions.

4.1.2 Cultural Resources

Avoidance is the Coral-preferred treatment for preventing effects to historic properties and measures would be taken to avoid cultural sites. During the Class III survey a total of 291 archeological sites were identified and documented. Of these sites, seven sites are recommended as eligible for the NRHP. If the BLM concurs with this recommendation, Coral would avoid these sites when possible. If avoidance is not possible or it is not practical to prevent adverse effects, Coral would undertake mitigation as described in Section 2.2.8. With the flexibility of the block permitting approach the effects to cultural resources would be negligible.

4.1.3 Native American Religious Concerns

Located within the traditional territory of the Western Shoshone, the Mount Lewis Field Office administrative boundary contains spiritual, traditional, and cultural resources, sites, and social practices that aid in maintaining and strengthening social, cultural, and spiritual integrity of the tribes. Recognized Native American communities with known interests near the Project Area are the Battle Mountain Band of the Te-Moak Tribe of the Western Shoshone, the Duckwater Shoshone Tribe, the Elko Band of the Te-Moak Tribe of the Western Shoshone, the South Fork Band of the Te-Moak Tribe of the Western Shoshone, the Yomba Shoshone Tribe of the Yomba Reservation, and the Te-Moak Tribe of the Western Shoshone.

Social activities that continue to define the Native American cultures take place across lands currently administered by the BLM. Some Western Shoshone maintain certain cultural, spiritual, and traditional activities, visit their sacred sites, hunt game, and gather available medicinal and edible plants. Through oral history (the practice of handing down knowledge from the elders to the younger generations), some Western Shoshone continue to maintain a world view similar to that of their ancestors.

Cultural, traditional, and spiritual sites and activities of importance to tribes include, but are not limited to the following: existing antelope traps; certain mountain tops used for vision questing and prayer; medicinal and edible plant gathering locations; prehistoric and historic village sites and gravesites; sites associated with creation stories; hot and cold springs; collection of materials used for basketry and cradle board making; locations of stone tools such as points and grinding stones; chert and obsidian quarries;

hunting sites; sweat lodge locations; locations of pine nut ceremonies, traditional gathering, and camping; rocks used for offerings and medicine gathering; tribally identified traditional cultural properties; traditional cultural properties found eligible to the NRHP have included: rock shelters; rock art locations; and lands or resources that are near, within, or bordering current reservation boundaries.

In accordance with the National Historic Preservation Act (P.L. 89-665), the NEPA, the FLPMA (P.L. 94-579), the American Indian Religious Freedom Act (P.L. 95-341), the Native American Graves Protection and Repatriation Act (P.L. 101-601) and EO 13007, the BLM must provide affected tribes an opportunity to comment and consult on the Proposed Action. The BLM must attempt to limit, reduce, or possibly eliminate negative impacts to Native American traditional/cultural/spiritual sites, activities, and resources.

On August 30, 2012 consultation initiation/invitation letters were mailed from the BLM to the tribes/bands listed above. At the time this EA was prepared, the BLM continues to provide opportunities for participation and input although no feedback regarding the Proposed Action had been received.

4.1.4 Noxious Weeds, Invasive and Non-native Species

Impacts from non-native invasive species as a result of the Proposed Action include increased potential spread of non-native invasive species into adjacent disturbed areas and along transportation routes. Noxious weed impacts from the Proposed Action include the potential for additional establishment of noxious weeds with the removal of native vegetation on approximately 80 acres or an additional 1.5 percent of the Project Area. Under the Proposed Action 20.2 acres of existing disturbance would be permitted resulting in a total disturbance area of approximately 293.95 acres or 5.7 percent of the Project Area.

Indirect impacts include a decrease in native plant communities with the potential increase in competition from noxious weeds and invasive species. These impacts are expected to be low with continued implementation of the applicant-committed environmental protection measures as described in Section 2.2.8 and reclamation activities including revegetation as described in Section 2.2.7.

4.1.5 Waste, Hazardous or Solid

Hazardous materials and solid waste associated with the Proposed Action would be managed by Coral as described in Section 2.2.8.

Nominal volumes of solid wastes would be generated as part of the drilling operations that would include general waste such as cardboard and plastic packaging. In addition limited volumes of hazardous waste would be utilized on site include Diesel, gasoline, hydraulic oil, engine oil, and lubricants.

Spills of hazardous materials, including petroleum products, would be cleaned and reported according to state and federal regulations within the required timeframes. Both the BLM and NDEP would also be notified of spills and completion of cleanup within the required timeframes.

The proposed action would not affect any of the existing waste sites such as the landfill and leach pad. Impacts related to hazardous and solid wastes from the Proposed Action are considered to be negligible.

4.1.6 Water Resources

Drill holes included in the Proposed Action would reach average depths of 1,000 feet bgs and are anticipated to intersect the water table at depths of approximately 350 feet bgs. Proper drilling methods would be used to prevent contamination of groundwater by following the standards set in NAC 534.300 through 534.438. Drilling effluent would be managed as described in Section 2.2.8. Proposed monitoring wells would be drilled using the same design features and would be constructed, maintained, and closed according to applicable regulations. Potential impacts to groundwater resources are considered to be negligible due to the anticipated limited nature of groundwater contact and adherence to design features described in Section 2.2.8.

Up to 80 acres of additional land would be disturbed under the Proposed Action increasing erosional potential on these areas, and 20.2 acres of existing disturbance would be permitted for a total Project Area disturbance of approximately 293.95 acres or 5.7 percent of the Project Area. Wind and water erosion of disturbed lands could affect ephemeral surface water features in the Project Area through increased sedimentation and nutrient loading. Potential impacts to ephemeral waterways would be temporary in nature, occurring seasonally during spring snowmelt and precipitation events, and lasting until reclamation is complete and vegetation is established. Potential impacts to surface water resources for the Proposed Action are anticipated to be short-term and negligible.

4.1.7 Wildlife including Special Status Species and Migratory Birds

Under the Proposed Action approximately 80 acres of previously undisturbed lands would be disturbed, resulting in the temporary removal or destruction of vegetation and potential wildlife habitat and fodder. This disturbance equals approximately 1.5 percent of the Project Area. In addition, an existing disturbance area of 20.2 acres would be permitted for a total disturbance area of approximately 293.95 acres or 5.7 percent of the Project Area. Habitats would be restored after completion of reclamation and successful revegetation, although the plant species composition on reclaimed areas may differ from the existing composition until the areas are colonized by adjacent native species, resulting in a potential long-term change in habitat types. Some vegetation, such as sagebrush, could take up to 25 years to reach maturity and the short-term revegetation species composition may differ from the existing vegetation communities. This could have both positive and negative effects on wildlife depending on the species and their habitat or prey habitat composition preference. Habitat removal, fragmentation, and disturbance may push some species onto adjacent lands, creating more pressure on these areas. However, given the limited nature of the proposed disturbance and the surrounding intact habitats, this impact is considered to be negligible for all species. Impacts related to human activity and noise would occur and would continue until reclamation activities are complete.

4.1.7.1 Wildlife

Impacts to big game species would involve habitat loss as described above, and the potential for alteration of big game movement in the Project Area caused by an increase in humans, equipment, and their related noise and visual stimuli. Winter habitat for both mule deer and pronghorn antelope occur within the Project Area as shown on figures 6 and 7. A loss of habitat within these areas could affect these species' winter survival, with extra consideration given to mule deer whose populations have been recently stressed by drought. However, the proposed disturbance area under consideration (80 acres or 1.5 percent of the Project Area) and the permitting of an additional 20.2 acres of existing disturbance would not likely have a measurable negative impact on big game species populations. The taking of big game individuals is not likely to occur.

Impacts to small game species and non-game mammals would also involve temporary habitat and prey habitat loss of up to 80 acres (approximately 1.5 percent of the Project Area) due to the increased disturbance as discussed above. In addition to the proposed 80-acre disturbance increase, 20.2 acres of existing disturbance would be permitted for a total Project disturbance area of 293.95 acres or 5.7 percent of the Project Area. A potential long-term impact would be the altered post-reclamation vegetation community change. Less mobile species could also experience direct loss due to earth-moving activities and equipment use. Impacts due to increased noise, human presence, and equipment use may also occur, causing small game and non-game species to not utilize areas previously utilized. Given the limited nature of the proposed disturbance, impacts to small game and non-game species is considered to be low.

4.1.7.2 Special Status Species

No pygmy rabbits, their burrows, or sign were observed during surveys, and field studies determined that the Project Area does not contain pygmy rabbit habitat. Therefore, impacts to pygmy rabbits or their habitat are not anticipated to occur.

Greater sage-grouse, their sign, or active leks were not observed within the Project Area although various types of greater sage-grouse habitat have been documented as described in Section 3.7.1. Impacts to greater sage-grouse would involve the temporary loss of summer and winter habitats as well as PPH and PGH. The proposed disturbance is for 80 acres or approximately 1.5 percent of the Project Area and the permitting of 20.2 acres of existing disturbance for a total Project Area disturbance of 293.95 acres or 5.7 percent of the Project Area. Long-term impacts may occur if the post-reclamation vegetation communities differ from the existing communities. Human presence and project-related noise may also have an impact on how the greater sage-grouse use the area. However, considering the existing disturbance, past use of the area, the limited nature of the proposed disturbance, and the lack of greater sage-grouse sightings in the area, impacts to greater sage-grouse would likely be low. If greater sage-grouse are observed Coral would coordinate with the BLM to implement appropriate protection measures as necessary.

Western Burrowing Owls are known to be present within the Project Area. Potential impacts to the Western Burrowing Owl would include habitat loss of approximately 80 acres (or 1.5 percent of the Project Area) for prey species and the potential for burrow destruction caused by earth moving activities. The total permitted Project Area, including the permitting of 20.2 acres of existing disturbance would be approximately 293.95 acres or 5.7 percent of the Project Area. However, the applicant-committed design features and/or mitigation described in Section 2.2.8 include migratory bird surveys which would occur prior to land-clearing. Active Western Burrowing Owl territories would be identified during these surveys, thus avoiding the direct taking of individuals. An increase in humans and equipment in the area would likely impact this species temporarily due to an increase in Project-related noise which may alter the way the species uses the area, especially considering that the Western Burrowing Owls often utilize man-made features which often occur alongside existing roads to be utilized by personnel under the Proposed Action.

Impacts to the Ferruginous Hawk would include a temporary loss of prey habitat and the long-term alteration of prey habitat after reclamation. Proposed surface disturbances would disturb up to 80 additional acres (approximately 1.5 percent of the Project Area) for a total Project Area disturbance of 293.95 acres or 5.7 percent including the permitting of 20.2 acres of existing disturbance. Given the limited nature of the proposed disturbance, this impact would be low. The Ferruginous Hawk would not likely be impacted by the increased presence of humans and equipment in the area since the species was not observed within the Project Area, and their forays into the area would likely be short in duration.

The Northern Goshawk may also be impacted by the temporary loss of and long-term change to prey habitat in the area. Proposed surface disturbances would disturb up to 80 additional acres (approximately 1.5 percent of the Project Area) for a total Project Area disturbance of 5.7 percent including the permitting of 20.2 acres of existing disturbance. However, this species has not been sighted in the vicinity of the Project Area. Impacts to Northern Goshawk are not likely to occur.

Impacts to the Peregrine Falcon would include a temporary loss of approximately 80 acres of prey habitat within the Project Area (approximately 1.5 percent of the Project Area) and the addition of 20.2 existing disturbance acres (for a total Project Area disturbance of 5.7 percent) and the long-term alteration of prey habitat after reclamation. This impact would likely be low given the limited nature of the proposed disturbance. The Peregrine Falcon would not likely be impacted by the increased presence of humans and equipment in the area.

Preferred habitat for the Short-Eared Owl does not occur within the Project Area although the species could occur here. Impacts to the Short-Eared Owl could include the loss of 80 acres of prey habitat (approximately 1.5 percent of the Project Area) and the addition of 20.2 existing disturbance acres (for a total Project Area disturbance of 5.7 percent) and disturbance caused by the increase in humans and equipment. These impacts are considered to be negligible.

The Swainson's Hawk could also occur in the Project Area although nesting habitat does not occur there. The temporary loss of approximately 80 acres of prey habitat (approximately 1.5 percent of the Project Area) and the permitting of 20.2 existing disturbance acres (for a total Project Area disturbance of 5.7 percent) could affect this species, although the impact would be small given the limited nature of the

proposed disturbance. An increase in humans and equipment in the area could also impact this species by increasing noise in the area, but this impact is also considered to be low.

Golden Eagles are known to nest within the Project Area and within a 10-mile radius of the Project Area as described in Section 3.7.1. The proposed disturbance would temporarily reduce the Golden Eagle's prey habitat by 80 acres (approximately 1.5 percent of the Project Area) and would add an existing 20.2 acres of disturbance to the permit for a total Project Area disturbance of 293.95 acres or 5.7 percent and may have a long-term effect on their prey habitat depending on the resulting post-reclamation vegetation community. An increase in humans, equipment, and their related noise may affect the way Golden Eagles utilize the area. As described in Section 2.2.8, surveys would be conducted prior to ground disturbance during the breeding and nesting seasons (March 1 through July 31) to determine the presence or absence of eagles (as well as other raptors species protected under the MBTA). If nesting or brooding eagles are determined to be present, Coral would avoid the area using a buffer zone developed in coordination with the BLM and NDOW. Golden Eagles nesting within the existing pit would not be disturbed by exploration related activities. Considering this buffer zone, impacts to nesting eagles should not occur and impacts to eagles using the area for forage would be low.

Impacts to dark and pale kangaroo mice may also involve temporary loss of up to 80 acres of foraging habitat due to the increased disturbance within the Project Area. This increased disturbance equals approximately 1.5 percent of the Project Area. In addition, 20.2 acres of existing disturbance would be permitted for a total Project Area disturbance of 293.95 acres or 5.7 percent of the Project Area. A potential long-term impact would be the altered post-reclamation vegetation community change. Direct loss of individuals could occur due to earth-moving activities and equipment use. Impacts due to the increased human and equipment presence and their related noise may also occur, altering the way the species use the area. Given the limited nature of the proposed disturbance, impacts to the pale and dark kangaroo mice are considered to be low.

Impacts to the American pika may involve a temporary habitat loss of 80 acres (approximately 1.5 percent of the Project Area) and would add an existing 20.2 acres of disturbance to the permit for a total Project Area disturbance of 293.95 acres or 5.7 percent. There could be potential long-term impacts related to the altered post-reclamation vegetation community. Direct loss of individuals could occur due to earth-moving activities and equipment use. Impacts from an increased human and equipment presence may also occur resulting in a change to how the species utilizes the area. Given the limited nature of the proposed disturbance, these impacts are considered to be low.

A variety of special status bat species have been documented as occurring in the Project Area as discussed in Section 3.7.1 and listed in Table 6. Underground workings would not be disturbed as part of the Proposed Action, so impacts to bat hibernacula, maternity roosts, or bachelor roosts would not occur. The Proposed Action involves the disturbance of approximately 80 acres or 1.5 percent of the Project Area, and the permitting of approximately 20.2 acres of existing disturbance for a total Project Area disturbance of 293.95 acres or 5.7 percent. The temporary loss of and long-term change to vegetation communities could impact bat foraging opportunities, but this impact would be low considering the proposed disturbance within the greater landscape.

4.1.7.3 Migratory Birds

Impacts to migratory birds including raptors would include a temporary loss of nesting habitat and/or prey habitat resulting from land clearing, and impacts related to an increased human presence, equipment, and related noise in the area which many affect the way the birds use the habitat. The Proposed Action involves the disturbance of approximately 80 acres or 1.5 percent of the Project Area, and the permitting of approximately 20.2 acres of existing disturbance for a total Project Area disturbance of 293.95 acres or 5.7 percent of the Project Area. However, as described in Section 2.2.8, surveys would be conducted prior to ground disturbance during the breeding and nesting seasons (March 1 through July 31 for raptors and April 1 through July 31 for all other avian species)) to determine the presence or absence of migratory birds and raptors. A survey buffer would be determined by the BLM taking into account the species, topography, and vegetation. If nesting or brooding birds are determined to be present, Coral would avoid

the area using a buffer zone developed in coordination with the BLM and NDOW. The direct taking of migratory birds or raptors, their eggs, or young is not expected to occur. Impacts related to habitat loss would be low considering the relatively small disturbance area proposed within the greater landscape.

4.1.8 Grazing Management

Under the Proposed Action approximately 80 acres of additional disturbance would be created on the Carico Lake Grazing Allotment which covers 562,352 acres of BLM-administered land and 36,952 acres of private land. An existing disturbance area of 20.2 acres would also be permitted under the Proposed Action. The proposed additional disturbance would temporarily disturb less than five AUMs of forage. This is less than one percent of the allocated AUMs. Therefore, no reduction to the active grazing preference would occur. The disturbance of vegetation would be temporary, lasting until reclamation is complete and the site has been successfully revegetated. The vegetation community resulting from reclamation and reseeding would be different than the community currently present, which could either increase or decrease the available AUMs in the area. Applicant-committed design features and practices described in Sections 2.2.8 would be followed to minimize other adverse effects to grazing.

4.1.9 Land Use Authorization

Exploration activities under the Proposed Action would take place on patented lands currently either held by Coral or on unpatented claims held by Coral. Exploration activities would not occur on patented or unpatented claims held by others within the Project Area unless authorization is received from the land owner. Other property rights holders within the Project Area would be notified of the Proposed Action. Existing ROWs and land use authorizations would not be affected by the Proposed Action.

4.1.10 Geology and Minerals

Under the Proposed Action exploration activities would be conducted on patented and unpatented mining claims to delineate the extent of economically viable gold reserves in the Project Area. Identification of the extent of gold resources could alter future mining development plans. Exploration activities would not deplete the existing mineral resources. Therefore, the impact to mineral resources under the Proposed Action is considered negligible.

4.1.11 Soils

Under the Proposed Action, up to an additional 80 acres of land would be disturbed and an existing disturbance area of 20.2 acres would be permitted for a Project Area disturbance of approximately 293.95 acres or approximately 5.7 percent of the Project Area. Blading and vegetation destruction/removal related to road construction, and drill pad construction would be the primary contributors to soil disturbance. Removed soils would be pushed to the side of the proposed disturbance areas and used during reclamation as growth media. These disturbances would be temporary, and reclamation would occur as described in Section 2.2.7.

Soil disturbances would impede maturation of soil development, degrade soil structure, and hinder soil biological activity. Additionally, exposed soils would be susceptible to wind and water erosion; however, this impact would be reduced by adherence to soil erosion BMPs as described in Section 2.2.7. Impacts would last until the successful revegetation of disturbed areas after reclamation.

Indirect impacts would include the loss of soil due to wind and water erosion after clearing and or earthworks. Based on the existing level of activity at the site and avoidance measures proposed by Coral, potential impacts to soils as a result of the Proposed Action are considered to be low.

4.1.12 Vegetation including Special Status Species

Up to 80 additional acres of land would be disturbed under the Proposed Action and 20.2 acres of existing disturbance would be permitted for a total Project Area disturbance of approximately 293.95 acres or approximately 5.7 percent. The proposed disturbance would be temporary, and reclamation would occur as described in Section 2.2.7. Vegetation would be removed from disturbed areas.

This impact would last until vegetation is established. Vegetation established as part of the reclamation process would be through the use of an approved seed mixture. Post-reclamation plant communities would differ in species composition and diversity from the adjacent native plant communities. Upon successful reclamation of these areas the shrub-dominated vegetation types would be modified to a predominantly grassland community until the shrublands are restored over time. Overall, potential impacts to vegetation are considered to be low. No special status plant species were determined to occur within the Project Area, so no impacts to special status plant species are anticipated.

4.1.13 Visual Resources

As described in Section 3.14, the Project is located in VRM Class IV. The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic (design) elements.

The proposed action calls for up to 80 acres of proposed disturbance. These acreages have been defined earlier in Table 1 and are alternately quantified in Table 11 below.

Table 11: Proposed Disturbance

Disturbance Type	Authorized/Existing Disturbance (acres)	Proposed Disturbance (acres)			Proposed Disturbance		
	Total	Public	Private	Total	Public	Private	Total
Roads General	15.6/40.6	0.0	0.0	0.0	0 miles	0 miles	0.0 miles
Roads <30% slope	0.0/0.0	14.0	1.5	15.5	Approx. 7.7 miles	Approx. 0.8 miles	Approx. 8.5 miles
Roads >30% slope	0.0/0.0	14.0	1.5	15.5	Approx. 2.6 miles	Approx. 0.3 miles	Approx. 2.9 miles
Cross-Country Travel	1.5/1.5	0.0	0.0	0.0	0.0	0.0	0.0 miles
Drill Sites and Sumps	7.2/7.2	51.4	3.6	55.0	Approx. 417 sites		
Exploration	2.9/0.9	0.0	0.0	0.0	0.0	0.0	0.0 miles
Test Pits	0.0/0.0	1.4	0.2	1.6	Approx. 44 pits	Approx. 6 pits	Approx. 50 pits

No permanent features are proposed. Grading would occur to develop the exploration roads, drill pads, and sumps. The majority of the disturbance proposed in this action would be from the creation of drill sites and sumps. Existing roads would be used to access drill locations whenever possible, and the creation of new roads would be minimized. The proposed 80-acre disturbance represents approximately 1.5 percent of the project area.

The disturbance of the visual landscape would be temporary, lasting until reclamation is complete and the site has been successfully revegetated. The regrading and revegetation that Coral Resources has committed to in Section 2.2.8 would be adhered to, to mitigate the visual impact.

4.2 No Action Alternative

4.2.1 Air Quality

Under the No Action Alternative no additional impacts to air quality would occur beyond those already authorized. The existing 20.2 acres of existing unpermitted disturbance would remain unpermitted and not part of Coral's reclamation permit.

4.2.2 Cultural Resources

Under the No Action Alternative disturbances that have not previously been authorized would not occur. The identified 291 archaeological sites would remain undisturbed other than what may occur from dispersed non-project related activities; no impacts would occur from the proposed exploration activities.

4.2.3 Native American Religious Concerns

Under the No Action Alternative no new disturbance would occur that has not already been permitted, and there would be no additional increase in human presence in the area related to the Project. Further impacts to Native American Religious Concerns are not anticipated to occur.

4.2.4 Noxious Weeds, Invasive and Non-native Species

Under the No Action Alternative no new disturbance would occur that was not previously authorized. The previously unauthorized 20.2 acres of disturbance would remain unpermitted and not included under Coral's reclamation permit. No further impacts from noxious weeds and invasive and non-native species would occur.

4.2.5 Waste, Hazardous or Solid

Hazardous materials and solid wastes would not be used or generated in the Project Area under the No Action Alternative unless authorized under a previously approved action.

4.2.6 Water Resources

Under the No Action Alternative, no exploration holes or monitoring wells would be drilled. No potential impacts to groundwater resources aside from those associated with previously authorized actions would occur. Since no further disturbance under the No Action Alternative would occur, there would also be no impacts to surface water resources beyond those related to previously approved actions. The previously existing and unauthorized 20.2 acres of disturbance would remain unpermitted and not included under Coral's reclamation permit.

4.2.7 Wildlife including Special Status Species and Migratory Birds

Under the No Action Alternative, the proposed exploration activities would not occur and no further impacts to wildlife including special status species and migratory birds beyond impacts related to previously approved activities would occur. The previously existing 20.2 acres of unauthorized disturbance would remain unpermitted and not included as part of Coral's reclamation permit.

4.2.8 Grazing Management

Under the No Action Alternative, the proposed exploration activities would not occur, and no further impacts to livestock grazing beyond impacts related to previously approved activities would occur. The 20.2 acres of unpermitted existing disturbance would remain unpermitted and not part of the reclamation permit.

4.2.9 Land Use Authorization

Under the No Action Alternative the proposed exploration activities would not occur. No changes to the existing land use authorization would occur.

4.2.10 Geology and Minerals

Under the No Action Alternative the proposed exploration activities would not occur, and the extent of mineralization beyond the Project Area would remain unidentified.

4.2.11 Soils

No impacts to soils associated with the No Action Alternative would occur beyond those resulting from the prior authorized activities within the Project Area. The unauthorized existing disturbance area of 20.2 acres would remain unpermitted and included under the reclamation permit.

4.2.12 Vegetation including Special Status Species

No ground disturbance would occur under the No Action Alternative other than those related to previously approved actions. No further impacts to vegetation would occur. The previously existing 20.2 acres of unauthorized disturbance would remain unpermitted and not included as part of Coral's reclamation permit.

4.2.13 Visual Resources

Under the No Action Alternative no further disturbance to the site would occur and thus no further impacts to visual resources.

5 CUMULATIVE EFFECTS

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

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

As required under the NEPA, this chapter addresses those cumulative effects on the environmental resources in the Cumulative Effects Study Areas (CESAs), which could result from the implementation of the Proposed Action in combination with past actions, present actions, and RFFAs. The extent of each CESA would vary depending on the resources it contains and based on the geographic or biologic limits of that resource. As a result, the list of projects considered under the cumulative impacts analysis may vary according to the resources 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.

Therefore, as required under NEPA, this chapter addresses the cumulative effects on the identified environmental resources in the CESA which could result from the implementation of the Proposed Action and the No Action Alternative, past actions, present actions, and RFFAs.

5.1 Introduction

The Proposed Action and its environmental consequences were evaluated in Chapter 4. Based on the analysis the resources which have the potential to be cumulatively impacted by actions within the CESA are discussed in this chapter. The resources that would not be affected by the Proposed Action or where the effects would be negligible and would not contribute to cumulative impacts are listed below:

- Wastes, Hazardous or Solid;
- Water Resources;
- Grazing Management;
- Land Use Authorization;
- Geology and Minerals;
- Recreation; and
- Visual Resources.

Since these resources would not be affected or would be minimally affected, these resources are not further analyzed. The remaining resources, listed in Table 12, are analyzed within this section under five separate CESAs. The CESAs and the associated resources are listed in Table 12, the CESA boundaries are shown on Figure 11, and pending and approved surface management actions within the CESAs are listed in Appendix E.

Table 12 : Land Ownership by CESA

Resources	CESA Name	CESA AREA (Acres)				Total Area
		BLM Administered	Private Land	Bureau of Reclamation	Water	
Cultural Resources	Project Boundary CESA	5,000	169	0	0	5,169
Noxious weeds, invasive and non-	Project Boundary CESA	5,000	169	0	0	5,169

Resources	CESA Name	CESA AREA (Acres)				
		BLM Administered	Private Land	Bureau of Reclamation	Water	Total Area
native species						
Soils / Vegetation Including Special Status Species	Immediate Watershed CESA	45,300	15,640	0	0	60,940
Air Quality	Crescent Valley Hydrographic Basin CESA	321,754	158,436 ¹	0	0	480,190
Wildlife including Special Status Species	Shoshone/Cortez Mountain Range CESA	655,800	259,132 ¹	0	698	915,630
Native American Religious Concerns	Native American CESA	1,516,286	608,142 ^{1, 2, 3}	9,062	910	2,134,400

¹ The town of Crescent Valley is approximately 640 acres

² The town of Carlin is approximately 5,888 acres and is partially located within the Native American CESA

³ The town of Battle Mountain is approximately 1,162 acres and is partially located within the Native American CESA

The BLM-administered lands comprise the majority of the each CESA. The BLM administers the greatest percentage of land in the Project Boundary CESA at 97 percent of the CESA while in the Crescent Valley Hydrographic Basin CESA the BLM administered lands comprise the lowest percentage at 67 percent of the CESA.

5.2 Past Actions and Present Actions

According to LR2000 database records (BLM 2012) and general information sources, past and present actions in all of the CESAs include the activities shown in Table 13.

Table 13 : Land Uses by CESA

	Project Boundary CESA	Immediate Watershed CESA	Crescent Valley Hydrographic Basin CESA	Shoshone / Cortez Mountain Range CESA	Native American CESA
Utilities ROWs	✓	✓	✓	✓	✓
Communication ROWs	✓	✓	✓	✓	✓
Roads and road ROWs	✓	✓	✓	✓	✓
Oil and gas ROWs			✓	✓	✓
Sand and gravel developments			✓	✓	✓
Grazing permits	✓	✓	✓	✓	✓
Exploration and mining	✓	✓	✓	✓	✓
Wildlife use	✓	✓	✓	✓	✓
Wildland fire		✓	✓	✓	✓
Dispersed recreation.	✓	✓	✓	✓	✓

Approximately 74,800 acres within the Crescent Valley Hydrologic Basin CESA, or approximately 16 percent of the CESA, have burned between 1999 and 2012. These fires have included the Frenchy Fire in 1999 that burned 53,200 acres as shown in Figure 12.

Active and pending exploration and mining actions requiring surface management plans that are wholly or partially located within the CESAs are listed in Appendix E. The numbers of approved and pending actions are listed in Table 14 for each CESA.

Table 14 : Approved and Pending Actions

CESA Name	Approved Actions	Pending Actions
Project Boundary CESA	6	0
Immediate Watershed CESA	15	2
Crescent Valley Hydrographic Basin CESA	31	12
Shoshone/Cortez Mountain Range CESA	50	13
Native American CESA	82	28

Currently 14 active surface management plans are located within the Crescent Valley Hydrographic Basin CESA; the largest two are operated by Newmont USA Ltd dba NMC at the Mule Canyon site and Barrick Cortez Inc. at the Cortez Gold Mines site as shown on Figure 11. There are total of 21,395 acres that are included in 43 projects. These represent the area where the Proposed Action could impact other present and past mining actions.

5.3 Reasonably Foreseeable Future Actions

Many of the existing and ongoing activities within the CESAs can also be considered as RFFAs including the continued use of existing ROWs associated with utilities, communications, and roads. Other RFFAs which can be expected to continue to occur within the CESA include:

- Exploration and mining;
- Livestock grazing;
- Wildlife use;
- Wildland fires; and
- Dispersed recreation.

Twelve pending surface management plans are located wholly or partially within the Crescent Valley Hydrographic Basin CESA boundary as listed in Appendix E. The pending applications for these projects would total approximately 1,023 acres of new disturbance.

5.4 Impact Analysis

5.4.1 Air Quality

Past and Present Actions

Activities within the Crescent Valley Hydrographic Basin CESA which have or would involve land use or land disturbance can also affect air quality. Activities that could result in increased soil disturbance, increased human and mechanical activity and wildfire have the ability to affect air quality. Such activities include:

- Use of existing ROWs and the related surface disturbances;
- Sand and gravel developments;
- Exploration and mining;
- Wildland fires; and
- Dispersed recreation.

Many permitted activities on public lands require that disturbed areas be reclaimed, thus potentially restoring vegetation communities over the long term and potentially reducing wind erosion. Permitted exploration and mining activities require permits and emissions would be monitored, limiting impacts.

Reasonably Foreseeable Future Actions

RFFAs which may impact air quality are the activities where surface disturbances and human activities could occur which could alter the existing air quality. RFFAs requiring permitting by the federal and state agencies require provisions for the management of air quality. RFFAs potentially affecting air quality include:

- Exploration and mining;
- Wildland fires; and
- Dispersed recreation.

Proposed Action

The Proposed Action proposes to disturb up to 80 additional acres, which is less than 0.02 percent of the Crescent Valley Hydrographic Basin CESA. Cumulatively, the past, present, RFFAs, and Proposed Action would result in potential impacts related to air quality. This impact would likely be minimal in relation to the CESA size. The only RFFA which could impact a measurably large area of the CESA would be the occurrence of a wildfire.

For the Proposed Action, the proponent would follow environmental protection measures described in Section 2.2.8 to help minimize impacts to air quality. The proponent would reclaim and revegetate not only the proposed disturbance area but also the authorized disturbance areas within the Project Area. Air discharges would be limited by watering roads and maintaining responsible speed limits. A minimal incremental impact to air quality in the Crescent Valley Hydrographic Basin CESA is expected.

5.4.2 Cultural Resources

Past and Present Actions

Activities within the Project Boundary CESA which have or would create disturbances, have the potential to impact culturally historic resources protected under Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470). These resources could have or could be disturbed through activities such as:

- Exploration and mining;
- Livestock grazing;
- Wildland fires; and
- Dispersed recreation.

While the disturbance and loss of artifacts cannot be repaired, the continued loss of culturally important resources can be slowed through survey, identification, documentation, protection, and, if necessary, mitigation. Many permitted activities on public lands require that disturbance to cultural resource areas be mitigated, thus managing for the long-term loss of culturally significant resources.

Reasonably Foreseeable Future Actions

RFFAs which may affect cultural resources are also activities for which surface disturbance could occur. RFFAs requiring permitting by the federal and state agencies would require provisions for mitigation, as well as the implementation of BMPs to reduce artifact loss. RFFAs potentially affecting cultural resources include:

- Exploration and mining;
- Livestock grazing;
- Wildland fires; and
- Dispersed recreation.

Proposed Action

The Proposed Action would disturb up to 80 additional acres, which is approximately 1.5 percent of the Project Boundary CESA. Cumulatively, the past, present, RFFAs, and Proposed Action would result in potential impacts related to the cultural resources in localized areas. This impact is not readily quantifiable but would likely be minimal in relation to the CESA size. The only RFFA which could impact a measurably large area of the CESA would be wildfire.

The proponent would follow environmental protection measures described in Section 2.2.8 to help minimize disturbance. The proponent has performed a Class III cultural resources survey and identified archaeological sites. If impacts are anticipated, Coral would undertake mitigation at the affected historic properties as previously described. A minimal incremental impact to cultural resources in the CESA could occur.

No Action Alternative

The past, present, and RFFAs which involve surface disturbance would cumulatively result in impacts to cultural resources in localized areas. Impacts related to these actions would most likely be minimal with the exception of the potential for large wildfires.

5.4.3 Noxious weeds, Invasive and Non-native Species

Past and Present Actions

Activities within the Project Boundary CESA which have or would create disturbances have the potential to increase the prevalence of noxious weeds, invasive and non-native species. These disturbances could be created through activities such as:

- Exploration and mining;
- Sand and gravel developments;
- Livestock grazing;
- Wildland fires; and
- Dispersed recreation.

Reasonably Foreseeable Future Actions

RFFAs which may result in the establishment or spread of noxious weeds and invasive non-native species are activities for which surface disturbance could occur. RFFAs requiring permitting by the federal and state agencies would require provisions for reclamation, as well as the implementation of BMPs to reduce these impacts. RFFAs potentially affecting noxious weeds and invasive non-native species include:

- Surface disturbance related to the use of existing rights-of-way;
- Mineral exploration and development;
- Livestock grazing;
- Sand and gravel developments;
- Wildland fires; and
- Dispersed recreation.

Proposed Action

The Proposed Action would disturb up to 80 additional acres, which is approximately 1.5 percent of the Project Boundary CESA. Cumulatively, the past, present, RFFAs, and Proposed Action would result in potential impacts related to noxious weeds and invasive and non-native species. Noxious weeds, invasive and non-native species are well established in portions of the site. Additional disturbance provides opportunity for increased spreading. This impact is not readily quantifiable but would likely be minimal in relation to the CESA size. Noxious weeds, invasive and non-native species can be contained through the applicant-committed environmental protection measures as described in Section 2.2.8 and reclamation activities including revegetation as described in Section 2.2.7. Potentially the most significant RFFA which could impact a measurably large area of the CESA would be wildfire.

No Action Alternative

The past, present, and RFFAs which involve land disturbance and noxious weeds, invasive and non-native species would cumulatively result in impacts. Additional areas would not be reclaimed, adding to the potential for noxious weeds, invasive and non-native species establishment.

5.4.4 Native American Religious Concerns

Past and Present Actions

Activities that would or have taken place within the Native American CESA which have or could have created disturbances to Native American spiritual, traditional or cultural resources include:

- Sand and gravel developments;
- Exploration and mining;
- Livestock grazing;
- Wildland fires; and
- Dispersed recreation.

While the disturbance and loss of artifacts, spiritual, traditional or cultural resources cannot be replaced, the continued loss of culturally important resources can be stopped or mitigated through survey, identification, consultation, documentation, protection, and mitigation if necessary.

Reasonably Foreseeable Future Actions

RFFAs which may affect Native American resources are activities for which surface disturbance could occur. RFFAs requiring permitting by the federal and state agencies would require provisions for mitigation, as well as the implementation of BMPs to reduce these impacts or loss. RFFAs potentially affecting cultural resources include:

- Sand and gravel developments;
- Exploration and mining;
- Wildland fires; and
- Dispersed recreation.

Proposed Action

The Proposed Action proposes to disturb up to 80 additional acres, which is approximately 0.005 percent of the Native American CESA. Cumulatively, the past, present, RFFAs, and Proposed Action would result in potential impacts related to the Native American resources in localized areas. This impact is not readily quantifiable but would likely be minimal in relation to the Native American CESA size. The only RFFA which could impact a measurably large area of the CESA would be wildfire.

The proponent would follow environmental protection measures described in Section 2.2.8 to help minimize disturbance. The BLM has initiated consultation with the Battle Mountain Band of the Te-Moak Tribe of the Western Shoshone, the Duckwater Shoshone Tribe, the Elko Band of the Te-Moak Tribe of the Western Shoshone, the South Fork Band of the Te-Moak Tribe of the Western Shoshone, the Yomba Shoshone Tribe of the Yomba Reservation, and the Te-Moak Tribe of the Western Shoshone in compliance with The National Historic Preservation Act (P.L. 89-665), the NEPA, the FLPMA (P.L. 94-579), the American Indian Religious Freedom Act (P.L. 95-341), the Native American Graves Protection and Repatriation Act (P.L. 101-601) and EO 13007 to limit, reduce, or possibly eliminate negative impacts to Native American traditional/cultural/spiritual sites, activities, and resources.

5.4.5 Wildlife including Special Status Species

Past and Present Actions

Activities within the Shoshone/Cortez Mountain Range CESA which have or would involve vegetation change or land disturbance can also affect wildlife and wildlife habitat, including special status species

and their habitat. Activities could also result in the loss of individuals or disturbance of wildlife due to human presence. Such activities include:

- Use of existing ROWs and the related surface disturbances;
- Sand and gravel developments;
- Exploration and mining;
- Livestock grazing;
- Wildland fires; and
- Dispersed recreation.

Approximately 22,236 acres have been disturbed or approved for disturbance related to surface management plans for gold, barite, and non-precious gemstone operations within the Shoshone/Cortez Mountain Range CESA, equaling approximately two percent of the CESA. The projects and their disturbance acreages are listed in Appendix E. Of this, 193.75 acres are related to the Robertson Project, equaling less than one percent of the CESA.

Many permitted activities on public lands require that disturbed areas be reclaimed, thus potentially restoring vegetation communities over the long term and potentially altering the vegetation communities present until native vegetation is reestablished. Permitted activities also require measures to protect wildlife species and habitat, such as requirements to conduct breeding bird surveys and measures to not disturb special status species and their habitat, as applicable.

Reasonably Foreseeable Future Actions

RFFAs which may impact wildlife habitat and wildlife individuals are activities for which surface disturbances and vegetation change could occur or that involve a change in human presence. RFFAs requiring permitting by the federal and state agencies would involve provisions for the management or reestablishment of habitats and the protection of wildlife. RFFAs potentially affecting wildlife and wildlife habitat include:

- Use of existing ROWs and the related surface disturbances;
- Exploration and mining;
- Livestock grazing;
- Wildland fires; and
- Dispersed recreation.

Proposed Action

The Proposed Action proposes to disturb up to 80 additional acres, which is less than 0.01 percent of the Shoshone/Cortez Mountain Range CESA. Cumulatively, the past, present, RFFAs, and Proposed Action would result in potential impacts to wildlife resulting from an increase in human presence and the removal of vegetation with a temporary change in vegetation communities in localized areas until native vegetation is reestablished. This impact would likely be minimal in relation to the CESA size. The only RFFA which could impact a measurably large area of the CESA would be wildfire.

The applicant would follow environmental protection measures described in Section 2.2.8 to minimize potential impacts to wildlife. A minimal incremental impact to wildlife including special status species in the Shoshone/Cortez Mountain Range CESA is expected.

No Action Alternative

The past, present, and RFFAs would result in cumulative impacts to wildlife including special status species following disturbances which affect wildlife habitats, increase human presence, and those which could result in a loss of individuals. With the exception of the potential for large wildfires in the

Shoshone/Cortez Mountain Range CESA, these areas would be limited in nature, and impacts related to these actions would most likely be minimal.

5.4.6 Soils

Past and Present Actions

Activities within the Immediate Watershed CESA which have or would create surface disturbances would affect soil resources through the disturbance of the soil horizons and create the potential for soil-loss from wind and water erosion. Such activities include:

- Exploration and mining;
- Livestock grazing;
- Wildland fires; and
- Dispersed recreation.

While the disturbance of surficial soils can be minimized, lost soils cannot be recovered. The continuation of soil loss can be stopped through reclamation and successful seeding. Many permitted activities on public lands require that disturbed areas be reclaimed, thus managing for the long-term loss of soils.

Reasonably Foreseeable Future Actions

RFFAs which may affect soil resources are also activities for which surface disturbances and vegetation removal could occur. RFFAs requiring permitting by the federal and state agencies would require provisions for reclamation, as well as the implementation of BMPs to reduce soil loss. RFFAs potentially affecting soil resources include:

- Exploration and mining;
- Livestock grazing;
- Wildland fires; and
- Dispersed recreation.

Proposed Action

The Proposed Action would disturb up to 80 additional acres, which is approximately 0.2 percent of the Immediate Watershed CESA. Cumulatively, the past, present, RFFAs, and Proposed Action would result in potential impacts related to the soil disturbance and loss following the removal of vegetation and land disturbance in localized areas. This impact is not readily quantifiable but would likely be minimal in relation to the CESA size. The only RFFA which could impact a measurably large area of the CESA would be wildfire.

The proponent would follow environmental protection measures described in Section 2.2.8 to help minimize soil disturbance and soil loss from wind and water erosion. The proponent would also reclaim and revegetate not only the proposed disturbance area but also 20.2 acres of existing disturbance within the Project Area. A minimal incremental impact to soil resources in the CESA is expected.

No Action Alternative

The past, present, and RFFAs which involve land disturbance and vegetation removal would cumulatively result in impacts to soil resources in localized areas. Impacts related to these actions would most likely be minimal with the exception of the potential for large wildfires.

5.4.7 Vegetation Including Special Status Species

Past and Present Actions

Activities within the Immediate Watershed CESA which have or would result in the loss or alteration of vegetation include:

- Use of existing ROWs and their related surface disturbances;

- Sand and gravel developments;
- Exploration and mining;
- Livestock grazing;
- Wildlife use;
- Wildland fires; and
- Dispersed recreation.

Many permitted activities on public lands require that disturbed areas be reclaimed and revegetated. Permitted activities also require that seed mixes be approved for their use location, and that projects be managed for the control of noxious weeds and non-native invasive species which have the potential to invade and affect native or desired vegetation communities.

Reasonably Foreseeable Future Actions

RFFAs which may impact vegetation are those activities for which surface disturbances and vegetation removal could occur or activities that could alter the existing vegetation community. RFFAs requiring permitting by the federal and state agencies require provisions for the management or reestablishment of vegetation resources including management for appropriate species. RFFAs potentially affecting vegetation include:

- Exploration and mining;
- Livestock grazing;
- Wildlife use;
- Wildland fires; and
- Dispersed recreation.

Proposed Action

The Proposed Action proposes to disturb up to 80 additional acres, which is approximately 0.2 percent of the Immediate Watershed CESA. Cumulatively, the past, present, RFFAs, and Proposed Action would result in potential impacts related to the initial removal of vegetation and a change in vegetation communities resulting from reseeding. This impact would likely be minimal in relation to the CESA size. The only RFFA which could impact a measurably large area of the CESA would be the occurrence of a wildfire.

For the Proposed Action, the proponent would follow environmental protection measures described in Section 2.2.8 to help minimize the removal of vegetation and successful reseeding with beneficial species. The proponent would also reclaim and revegetate not only the proposed disturbance area but also existing disturbance areas within the Project Area. A minimal incremental impact to vegetation in the CESA is expected.

No Action Alternative

Cumulatively, the past, present, and RFFAs would result in impacts to vegetation following vegetation removal, disturbances, and actions resulting in a vegetation community change. With the exception of the potential for large wildfires in the CESA, these areas would be limited in nature, and impacts related to these actions would most likely be minimal.

6 CONSULTATION AND COORDINATION

The people, groups, and Agencies consulted in the EA process are listed below:

Name	Position & Authority
NDOW	
Timothy Herrick	Conservation Aide
USFWS	
Jill Ralston	Acting State Supervisor
NNHP	
Eric Miskow	Biologist – Data Manager
Tribal Contacts	
The Battle Mountain Band of the Te-Moak Tribe of the Western Shoshone	
The Duckwater Shoshone Tribe	
The Elko Band of the Te-Moak Tribe of the Western Shoshone	
The South Fork Band of the Te-Moak Tribe of the Western Shoshone	
The Yomba Shoshone Tribe of the Yomba Reservation	
The Te-Moak Tribe of the Western Shoshone	
BLM Preparers	
Andrea Dolbear	Minerals Lead/Environmental Protection Specialist
Kent Bloomer	Weed Management Specialist
Tim Coward	Native American Religious Concerns
David Djikine	Mining Engineer
Janice George	Paleontology
Janice George	Archeologist
Katherine Graham	GIS Specialist
Larry Grey	Hydrology, Surface and Groundwater
Dorothy Harvey	Public Outreach
Ashley Johnson	Range Management Specialist
Jon Kramer	Land Law Examiner
Chris Kula	Wildlife
Cheryl LaRoque	Hazmat
Gloria Tibbetts	Environmental Justice/Socioeconomics
Gloria Tibbetts	Planning and Environmental Coordinator
Non- BLM Preparers	
Peter Keefe	Senior Consultant - SRK
Angel Lino	Consultant - SRK
Val Sawyer	Principal Consultant - SRK
Carrie Schultz	Consultant - SRK

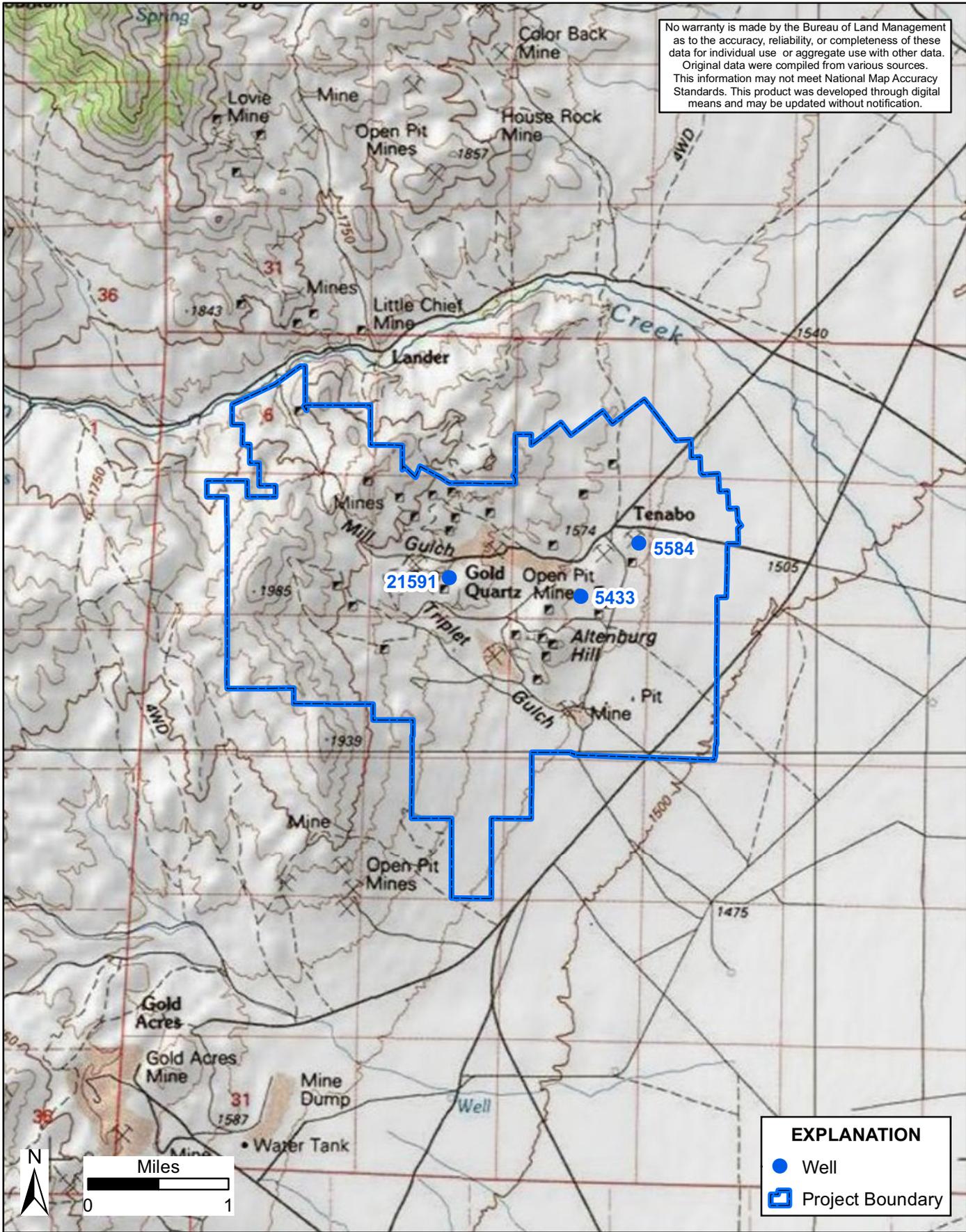
7 REFERENCES

- BLM. 1986. *Shoshone-Eureka Proposed Resource Management Plan Amendment and Final Environmental Impact Statement*. Battle Mountain District Office. Battle Mountain, Nevada.
- BLM.. 2000. *South Pipeline Project Final Environmental Impact Statement*. Battle Mountain District, Battle Mountain, Nevada. February 2000.
- BLM. 2008. *Cortez Hills Expansion Project: Final Environmental Impact Statement*. September 2008.
- BLM. 2011. PST-Middle Mile-BAHA Revised doc. Appendix D. April 8, 2011.
http://www.blm.gov/pgdata/etc/medialib/blm/nv/field_offices/carson_city_field/lands_and_realty/mid_mile_fiber_project.
- BLM. 2012. *Comments from A. Johnson and C. Kula to SRK Consulting (U.S.), Inc. on the Preliminary EA*. October, 2012.
- BLM. 2013. *Comments from A. Johnson to SRK Consulting (U.S.), Inc. on the Preliminary EA*. January, 2013.
- Fox, Sue. 2011. Letter to Carrie Schultz (SRK). *Re: Acoustic Bat Surveys – Robertson Project Area*. November 22, 2011.
- Gilluly, J. and H. Masursky. 1965. *Geology of the Cortez Quadrangle Nevada*. U.S. Geological Survey Bulletin 1175, 117 p.
- Grindrod, P. 1998. *Ferruginous Hawk*. Salt Lake City: HawkWatch International.
- Howard, J. L. 1994. *Asio Flammeus*. Retrieved September 13, 2011, from Index of Species Information: <http://www.fs.fed.us/database/feis/>
- JBR. 2000. *Delineation of Wetlands and Waters of the United States – Pediment Baseline Study Area, Cortez Gold Mines, Lander County, Nevada*. Prepared for Cortez Gold Mines. August 2000.
- JBR. 2002. *Cortez Gold Mines Pediment Project Seep & Spring Monitoring Spring Quarter 2002*. Prepared for Cortez Gold Mines. JBR Project Number Cortez-29. JBR Report Number 382 Final. August 9, 2002.
- JBR. 2005. *Cortez Hills/Pediment Baseline Study*. Cortez Gold Mines, Crescent Valley, Nevada. December 2005.
- JBR. 2006. *Jurisdictional Waters Survey and Report*. Letter to R. Gebhart, U.S. Army Corps of Engineers. November 13, 2006.
- Lander County. 2005. *Lander County 2005 Policy Plan for Federally Administered Lands*. Prepared by the Lander County Public Land Use Advisory Planning Commission. Battle Mountain, Nevada. July 25, 2005.
- Lantz, S. J., Smith, H., & Keinath, D. A. 2004. *Species Assessment for Western Burrowing Owl (Athene Cunicularia Hypugaea) in Wyoming*. Cheyenne: Bureau of Land Management.
- LR2000. 2012. *Mass Serial Recordation Report for NVN-067688*. Run November 9, 2012.
- McCormack, J. C. and R. C. Hays. 1996. *Crescent Valley: A Model for Reconstruction of District Mineralization in the Basin and Range. Geology and Ore Deposits of the American Cordillera, Symposium Proceedings, Geological Society of Nevada*.
- Nevada Department of Conservation and Natural Resources. 1992. *Recreation in Nevada*. Division of State Parks. Carson City, Nevada.

- NDOW. 2011a. *2010-2011 Big Game Status*.
- NDOW. 2011b. Letter from Timothy Herrick (NDOW) to Angel Lino (SRK). *Re: Robinson [Robertson] Mine Exploration (sic)*. November 4, 2010.
- NDOW. 2011c. Wildlife & Habitat. Retrieved September 13, 2011, from Nevada Wildlife - Fact Sheets: <http://www.ndow.org/wild/animals/facts/>
- NDOW. 2012a. *2011-2012 Big Game Status*.
- NDOW. 2012b. Letter from Timothy Herrick (NDOW) to Sue Fox (Wildlife Resource Consultants). *Re: Robertson Exploration Project* March 22, 2012.
- NDWR. 2011. *Well Log Database Query Tool*. <http://water.nv.gov/data/welllog/>. Accessed December 7, 2011.
- NNHP. 2011. Letter from Erik Miskow (NNHP) to Angel Lino (SRK). *Re: Data request received 26 August 2011*. August 29, 2011.
- NNHP. 2012. Letter from Erik Miskow (NNHP) to Sue Fox (Wildlife Resource Consultants). *Re: Data request received 13 March 2012*. March 19, 2012.
- NRCS. 1992. *Soil Survey of Lander County, Nevada, North Part*. May 1992.
- NRCS. 2003. *Rangeland Ecological Site Description*. Technical Guide Section IIE.
- NRCS. 2012. *Ecological Site Description*. <http://esis.sc.egov.usda.gov/Welcome/pgESDWelcome.aspx>. Accessed January 2012.
- SRK. 2007a. *2007 Amendment to the Robertson Plan of Operations*, November 2007.
- SRK. 2007b. *Robertson Mine Reclamation Success Monitoring Report*. July 2007.
- SRK. 2009. *Stormwater Pollution Prevention Plan, Robertson Mine, Lander County Nevada*. May 2009.
- SRK. 2010. *Robertson Mine Reclamation Success Monitoring Report*. September 2010.
- SRK. 2009. *Robertson Mine Aerial Survey Ground Truthing and Revised Cost Estimate*, Revised June 10, 2009.
- SRK. 2011a. *Robertson Project Amendment to the Exploration Plan of Operations (NVN-067688(10-A)) and Reclamation Permit Application (#0055)*. September 2011.
- SRK. 2011b. *Robertson Project Environmental Section for Preliminary Economic Assessment*. September 2011.
- SRK. 2012. *Coral Resources, Inc. Robertson Mine Baseline Studies Report*. June 2012.
- Stewart, J. H. 1980. *Geology of Nevada, A Discussion to Accompany the Geologic Map of Nevada*. Nevada Bureau of Mines and Geology Special Publication 4, 136 p.
- US Department of Interior. 1987. *Shoshone – Eureka Resource management Plan Amendment*. 1987.
- USFWS. 2010. *Bald Eagle Management Guidelines and Conservation Measures*. <http://www.fws.gov/midwest/eagle/guidelines/bgepa.html>. Accessed July 2010.
- USFWS. 2011. Letter from Jill Ralson (USFWS) to Angel Lino (SRK). *Subject: Species List Request for the Robertson Mine Project, Lander County, Nevada*. September 14, 2011.
- Woodbridge, B. 1998. *Swainson's Hawk (Buteo swainsoni)*. In *The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California*. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/riparian_v-2.html

FIGURES

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EXPLANATION	
●	Well
 	Project Boundary



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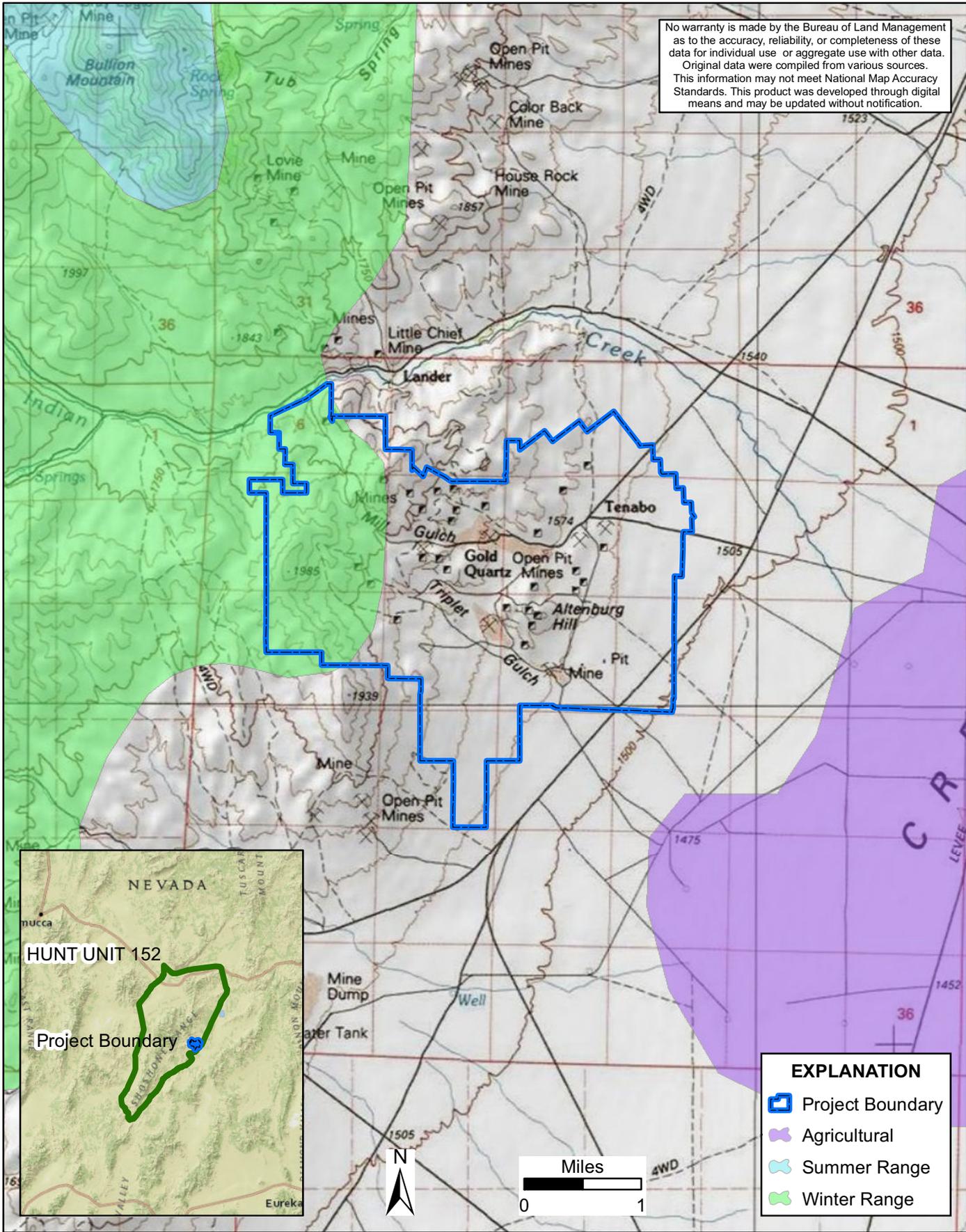
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DRAWING TITLE:
WATER RESOURCES

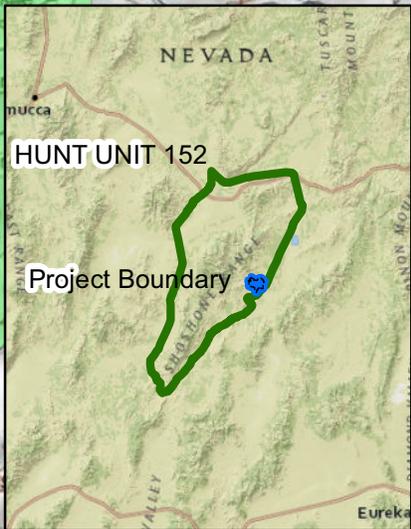
DRAWING NO.	FIGURE 5	REVISION NO.
DATE:	11/13/2012	A

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EXPLANATION

- Project Boundary
- Agricultural
- Summer Range
- Winter Range



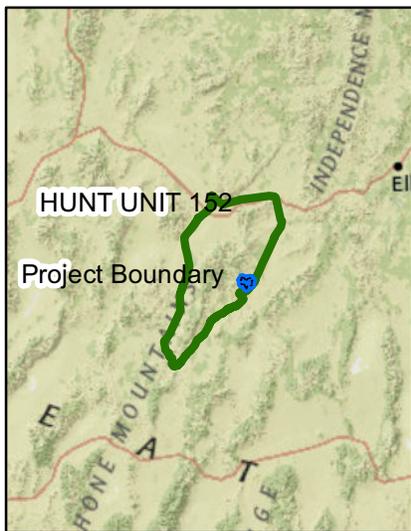
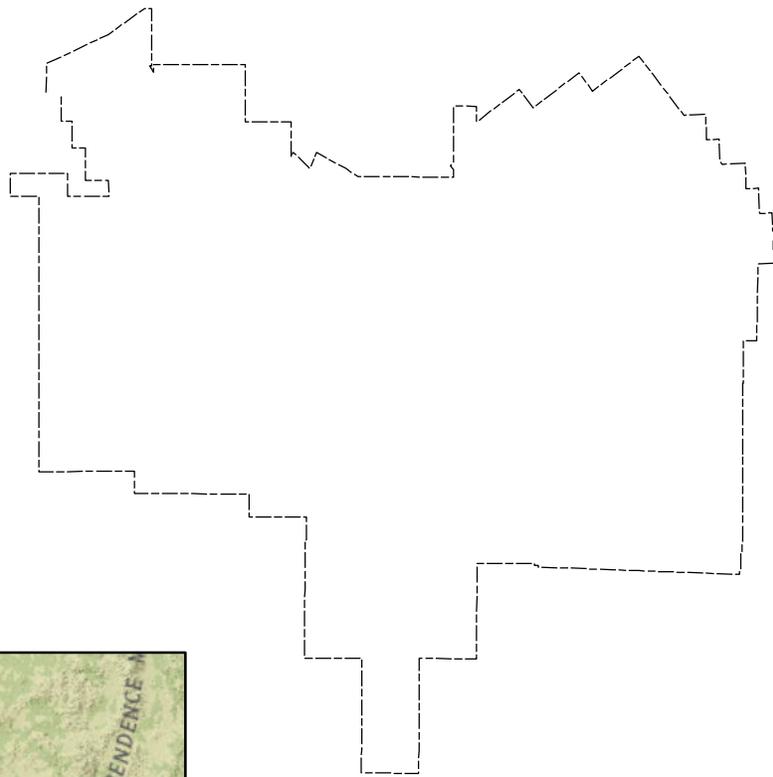
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DRAWING TITLE: MULE DEER HABITAT		
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EXPLANATION	
	Project Boundary
Pronghorn Habitat	
	Winter Range
	Year-round Range

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DRAWING TITLE:

**PRONGHORN ANTELOPE
HABITAT**

DRAWING NO.

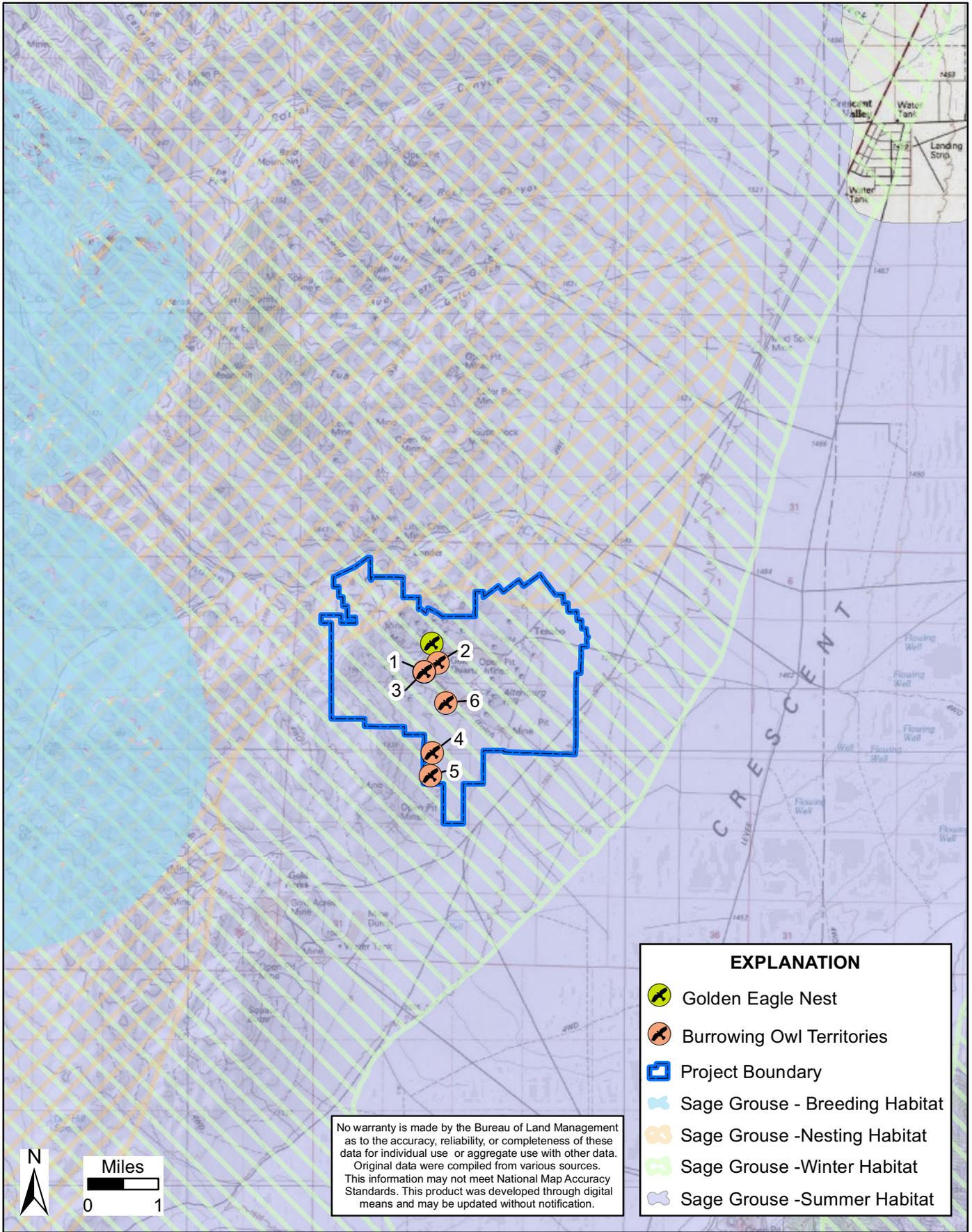
FIGURE 7

REVISION NO.

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EXPLANATION	
	Golden Eagle Nest
	Burrowing Owl Territories
	Project Boundary
	Sage Grouse - Breeding Habitat
	Sage Grouse - Nesting Habitat
	Sage Grouse - Winter Habitat
	Sage Grouse - Summer Habitat

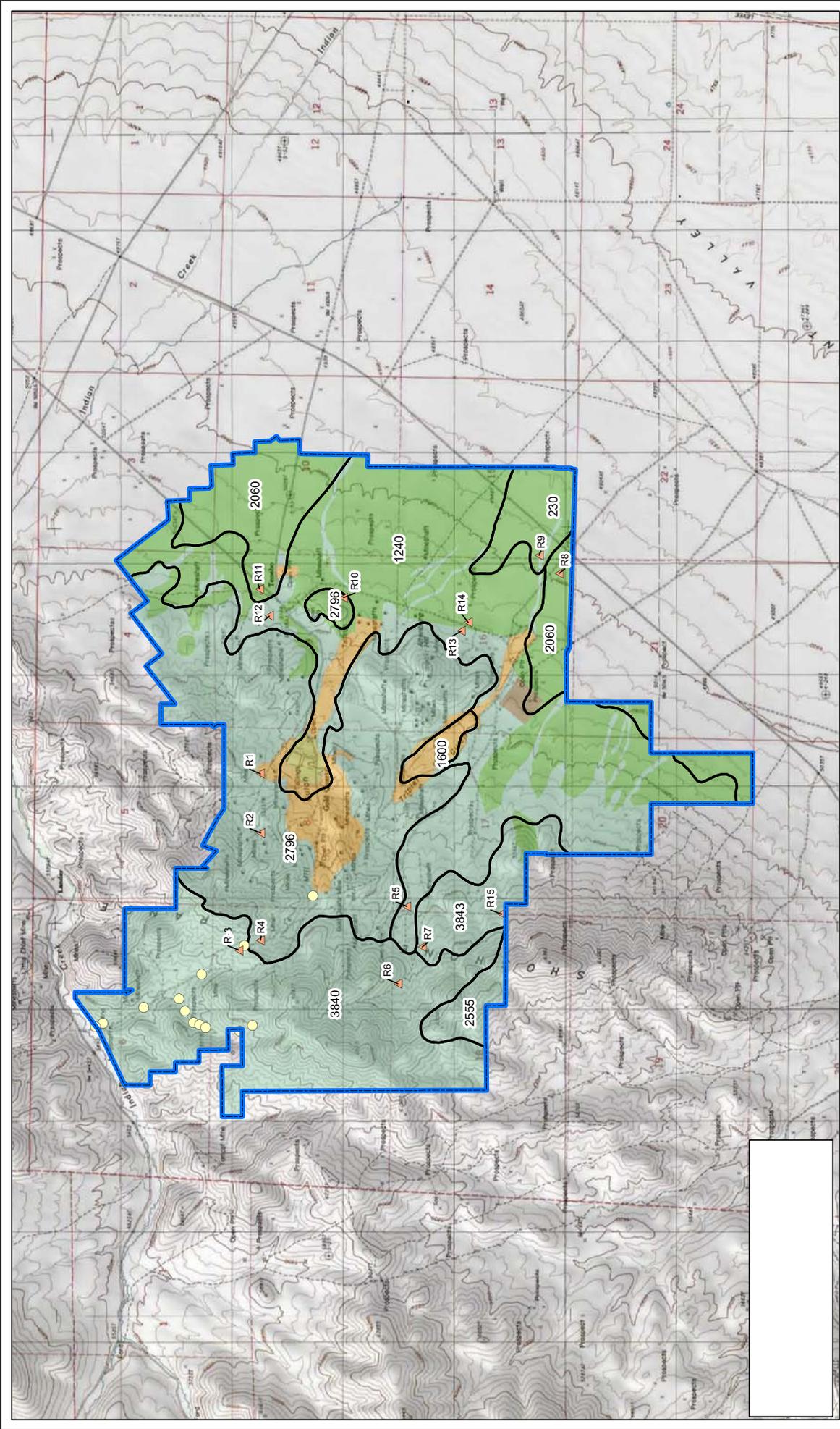


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DRAWING TITLE: GREATER SAGE GROUSE, GOLDEN EAGLES, AND WESTERN BURROWING OWLS		
DRAWING NO.	FIGURE 8	REVISION NO.
DATE:	4/5/2013	A



DRAWING TITLE
**VEGETATION AND
 ECOLOGICAL SITES**

DRAWING NO.
FIGURE 10

DATE
11/26/2012

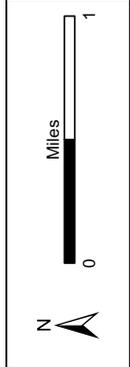
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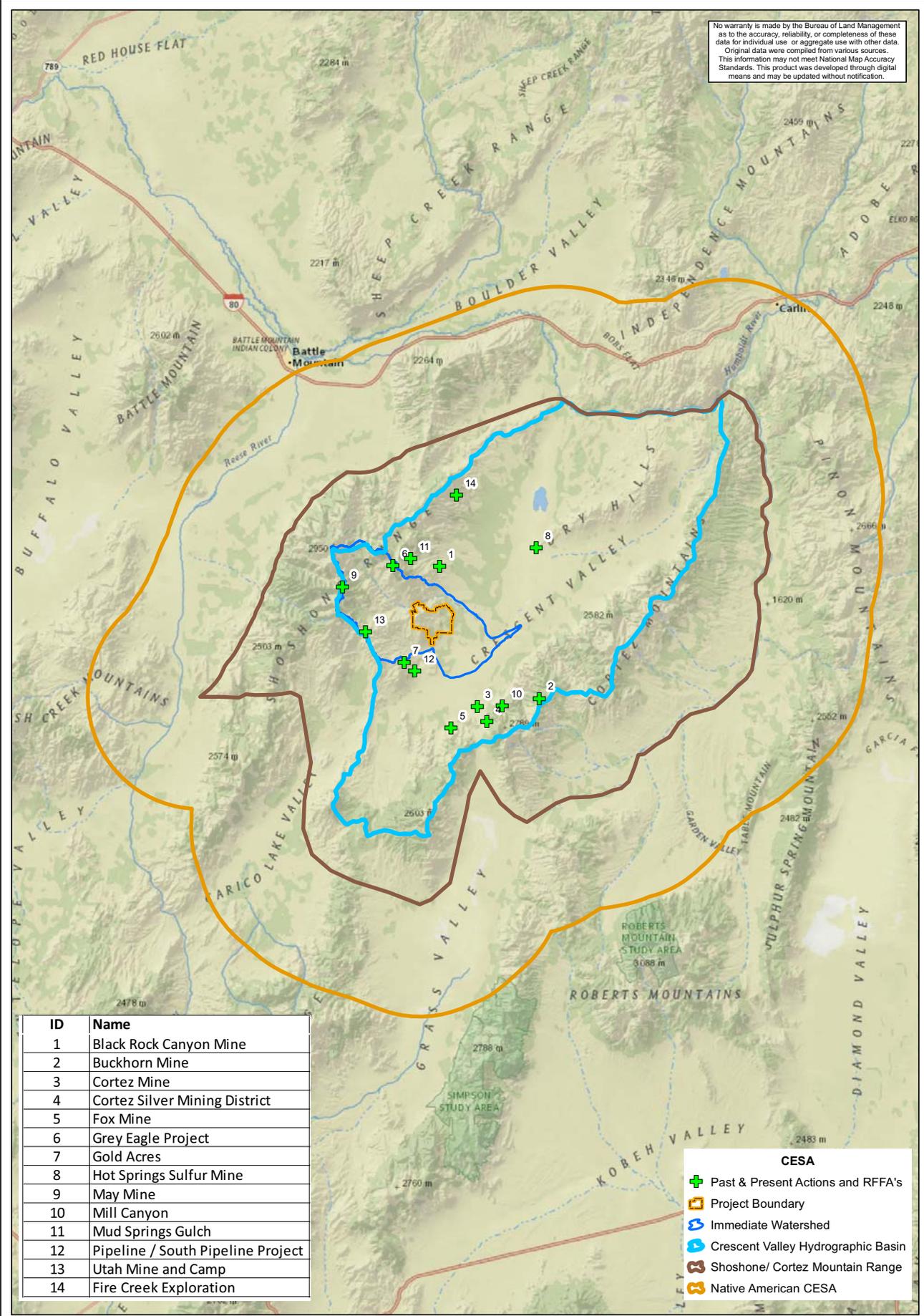
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- EXPLANATION**
- Project Boundary
 - ## Soil Association
 - Disturbance
 - Wyoming Big Sagebrush Community
 - Shadscale Community
 - Fourwing Saltbush Community
 - Rubber Rabbitbrush Community
 - ESI Point
 - Hoary Cress



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ID	Name
1	Black Rock Canyon Mine
2	Buckhorn Mine
3	Cortez Mine
4	Cortez Silver Mining District
5	Fox Mine
6	Grey Eagle Project
7	Gold Acres
8	Hot Springs Sulfur Mine
9	May Mine
10	Mill Canyon
11	Mud Springs Gulch
12	Pipeline / South Pipeline Project
13	Utah Mine and Camp
14	Fire Creek Exploration

CESA

- Past & Present Actions and RFFA's
- Project Boundary
- Immediate Watershed
- Crescent Valley Hydrographic Basin
- Shoshone/ Cortez Mountain Range
- Native American CESA



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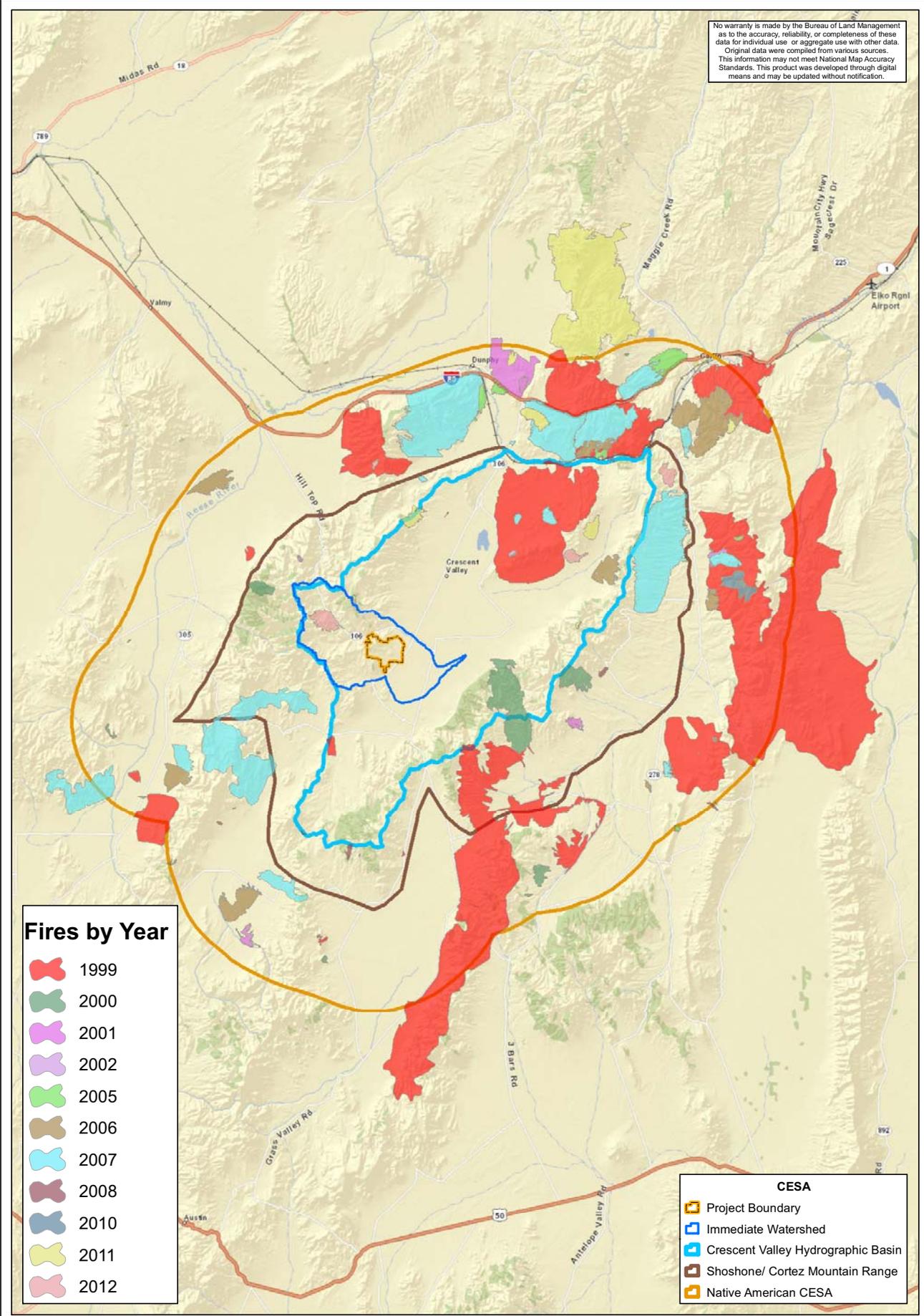
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DRAWING TITLE:
**CUMULATIVE EFFECTS
STUDY AREA**

DRAWING NO. **FIGURE 11** REVISION NO.
DATE: **11/26/2012** **A**

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Fires by Year

- 1999
- 2000
- 2001
- 2002
- 2005
- 2006
- 2007
- 2008
- 2010
- 2011
- 2012

CESA

- Project Boundary
- Immediate Watershed
- Crescent Valley Hydrographic Basin
- Shoshone/ Cortez Mountain Range
- Native American CESA



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DRAWING TITLE:		FIRE HISTORY
DRAWING NO.	FIGURE 12	REVISION NO.
DATE:	11/26/2012	A

**APPENDIX A:
SPECIES WHICH MAY OCCUR IN THE PROJECT AREA
NDOW LIST OF ANIMAL SPECIES FOR HUNT UNIT 152**

**Wildlife Species List from NDOW
Unit 152, West Lander County, Nevada**

Birds

Order: Gaviiformes (Diver/Swimmers)

Family: Gaviidae (Loons)

Common Loon *Gavia immer*

Order: Podicipediformes (Flat-toed Divers)

Family: Podicipedidae (Grebes)

Pied-billed Grebe *Podilymbus podiceps*
Eared Grebe *Podiceps nigricollis*
Western Grebe *Aechmophorus occidentalis*
Clark's Grebe *Aechmophorus clarkii*

Order: Pelecaniformes (Four-toed Fish eaters)

Family: Pelecanidae (Pelicans)

American White Pelican *Pelecanus erythrorhynchos*

Family: Phalacrocoracidae (Cormorants)

Double-crested Cormorant *Phalacrocorax auritus*

Order: Ciconiiformes (Waders and Vultures)

Family: Ardeidae (Bitterns, Herons, Egrets)

American Bittern *Botaurus lentiginosus*
Great Blue Heron *Ardea herodias*
Great Egret *Ardea alba*
Snowy Egret *Egretta thula*
Cattle Egret *Bubulcus ibis*
Green Heron *Butorides virescens*
Black-crowned Night Heron *Nycticorax nycticorax*

Family: Threskiornithidae (Ibises)

White-faced Ibis *Plegadis chihi*

Family: Cathartidae (New World Vultures)

Turkey Vulture *Cathartes aura*
California Condor *Gymnogyps californianus(L.E.)*

Order: Anseriformes (Waterfowl)

Family: Anatidae (Ducks, Geese, Swans)

Greater White-fronted Goose *Anser albifrons*
Snow Goose *Chen caerulescens*
Canada Goose *Branta canadensis*
Tundra Swan *Cygnus columbianus*
Wood Duck *Aix sponsa*
Gadwall *Anas strepera*
American Wigeon *Anas americana*
Mallard *Anas platyrhynchos*
Blue-winged Teal *Anas discors*
Cinnamon Teal *Anas cyanoptera*
Northern Shoveler *Anas clypeata*
Northern Pintail *Anas acuta*
Green-winged Teal *Anas crecca*
Canvasback *Aythya valisineria*
Redhead *Aythya americana*
Ring-necked Duck *Aythya collaris*
Greater Scaup *Aythya marila*
Lesser Scaup *Aythya affinis*

Long-tailed Duck *Clangula hyemalis*
Bufflehead *Bucephala albeola*
Common Goldeneye *Bucephala clangula*
Barrow's Goldeneye *Bucephala islandica*
Hooded Merganser *Lophodytes cucullatus*
Common Merganser *Mergus merganser*
Red-breasted Merganser *Mergus serrator*
Ruddy Duck *Oxyura jamaicensis*

Order: Falconiformes (Diurnal Flesh Eaters)

Family: Accipitridae (Hawks, Eagles, Osprey)

Osprey *Pandion haliaetus*
Bald Eagle *Haliaeetus leucocephalus*
Northern Harrier *Circus cyaneus*
Sharp-shinned Hawk *Accipiter striatus*
Cooper's Hawk *Accipiter cooperii*
Northern Goshawk *Accipiter gentilis*
Swainson's Hawk *Buteo swainsoni*
Red-tailed Hawk *Buteo jamaicensis*
Ferruginous Hawk *Buteo regalis*
Rough-legged Hawk *Buteo lagopus*
Golden Eagle *Aquila chrysaetos*

Family: Falconidae (Falcons)

American Kestrel *Falco sparverius*
Merlin *Falco columbarius*
Gyr Falcon *Falco rusticolus*
Peregrine Falcon *Falco peregrinus*
Prairie Falcon *Falco mexicanus*

Order: Galliformes (Chicken Relatives)

Family: Phasianidae (Grouse, Partridge)

Chukar *Alectoris chukar*
Gray Partridge *Perdix perdix*
Ring-necked Pheasant *Phasianus colchicus*
Greater Sage-Grouse *Centrocercus urophasianus*
Dusky Grouse *Dendragapus obscurus*
Wild Turkey *Meleagris gallopavo*

Family: Odontophoridae (New World Quail)

California Quail *Callipepla californica*
Mountain Quail *Oreortyx pictus*

Order: Gruiformes (Cranes and Allies)

Family: Rallidae (Rails, Coots)

Virginia Rail *Rallus limicola*
Sora *Porzana carolina*
Common Moorhen *Gallinula chloropus*
American Coot *Fulica americana*

Family: Gruidae (Cranes)

Greater Sandhill Crane *Grus canadensis tabida*

Order: Charadriiformes (Wading Birds)

Family: Charadriidae (Plovers)

Black-bellied Plover *Pluvialis squatarola*
Snowy Plover *Charadrius alexandrinus*
Semi-palmated Plover *Charadrius semipalmatus*
Killdeer *Charadrius vociferus*

Mountain Plover *Charadrius montanus*

Family: *Recurvirostridae* (Avocets)

Black-necked Stilt *Himantopus mexicanus*

American Avocet *Recurvirostra americana*

Family: *Scolopacidae* (Sandpipers, Phalaropes)

Greater Yellowlegs *Tringa melanoleuca*

Lesser Yellowlegs *Tringa flavipes*

Solitary Sandpiper *Tringa solitaria*

Willet *Catoptrophorus semipalmatus*

Spotted Sandpiper *Actitis macularia*

Long-billed Curlew *Numenius americanus*

Western Sandpiper *Calidris mauri*

Long-billed Dowitcher *Limnodromus scolopaceus*

Wilson's Snipe *Gallinago gallinago*

Wilson's Phalarope *Phalaropus tricolor*

Red-necked Phalarope *Phalaropus lobatus*

Family: *Laridae* (Gulls, Terns)

Franklin's Gull *Larus pipixcan*

Ring-billed Gull *Larus delawarensis*

California Gull *Larus californicus*

Caspian Tern *Sterna caspia*

Forster's Tern *Sterna forsteri*

Black Tern *Chlidonias niger*

Order: *Columbiformes* (Pigeons and Allies)

Family: *Columbidae* (Doves)

Rock Dove *Columba livia*

White-winged Dove *Zenaida asiatica*

Mourning Dove *Zenaida macroura*

Eurasian Collared-Dove *Streptopelia decaocto*

Ringed Turtle-Dove *Streptopelia risoria*

Order: *Strigiformes* (Nocturnal Flesh Eaters)

Family: *Tytonidae* (Barn Owls)

Barn Owl *Tyto alba*

Family: *Strigidae* (Owls)

Flammulated Owl *Otus flammeolus*

Western Screech-Owl *Otus kennicottii*

Great Horned Owl *Bubo virginianus*

Snowy Owl *Nyctea scandiaca*

Northern Pygmy-Owl *Glauclidium gnoma*

Burrowing Owl *Athene cucularia*

Long-eared Owl *Asio otus*

Short-eared Owl *Asio flammeus*

Northern Saw-whet Owl *Aegolius acadicus*

Order: *Caprimulgiformes* (Night Jars)

Family: *Caprimulgidae* (Goatsuckers)

Common Nighthawk *Chordeiles minor*

Common Poorwill *Phalaenoptilus nuttallii*

Order: *Apodiformes* (Small Fast Fliers)

Family: *Apodidae* (Swifts)

White-throated Swift *Aeronautes saxatalis*

Family: *Trochilidae* (Hummingbirds)

Black-chinned Hummingbird *Archilochus alexandri*

Calliope Hummingbird *Stellula calliope*

Broad-tailed Hummingbird *Selasphorus platycercus*

Rufous Hummingbird *Selasphorus rufus*

Order: *Coraciiformes* (Cavity Nesters)

Family: *Alcedinidae* (Kingfishers)

Belted Kingfisher *Ceryle alcyon*

Order: *Piciformes* (Cavity Builders)

Family: *Picidae* (Woodpeckers)

Lewis' Woodpecker *Melanerpes lewis*

Williamson's Sapsucker *Sphyrapicus thyroideus*

Red-naped Sapsucker *Sphyrapicus nuchalis*

Downy Woodpecker *Picoides pubescens*

Hairy Woodpecker *Picoides villosus*

Northern Flicker *Colaptes auratus*

Order: *Passeriformes* (Perching Birds)

Family: *Tyrannidae* (Flycatchers)

Western Wood-Pewee *Contopus sordidulus*

Willow Flycatcher *Epidonax traillii*

Hammond's Flycatcher *Epidonax hammondii*

Gray Flycatcher *Epidonax wrightii*

Dusky Flycatcher *Epidonax oberholseri*

Cordilleran Flycatcher *Epidonax occidentalis*

Say's Phoebe *Sayornis saya*

Ash-throated Flycatcher *Myiarchus cinerascens*

Western Kingbird *Tyrannus verticalis*

Eastern Kingbird *Tyrannus tyrannus*

Family: *Laniidae* (Shrikes)

Loggerhead Shrike *Lanius ludovicianus*

Northern Shrike *Lanius excubitor*

Family: *Vireonidae* (Vireos)

Plumbeous Vireo *Vireo plumbeus*

Warbling Vireo *Vireo gilvus*

Family: *Corvidae* (Jays)

Western Scrub-Jay *Aphelocoma californica*

Pinyon Jay *Gymnorhinus cyanocephalus*

Clark's Nutcracker *Nucifraga columbiana*

Black-billed Magpie *Pica pica*

American Crow *Corvus brachyrhynchos*

Common Raven *Corvus corax*

Family: *Alaudidae* (Larks)

Horned Lark *Eremophila alpestris*

Family: *Hirundinidae* (Swallows)

Tree Swallow *Tachycineta bicolor*

Violet-green Swallow *Tachycineta thalassina*

Bank Swallow *Riparia riparia*

N. Rough-winged Swallow *Stelgidopteryx serripennis*

Cliff Swallow *Petrochelidon pyrrhonota*

Barn Swallow *Hirundo rustica*

Family: *Paridae* (Chickadees, Titmice)

Black-capped Chickadee *Poecile atricapillus*

Mountain Chickadee *Poecile gambeli*

Juniper Titmouse *Baeolophus griseus*

Family: *Aegithalidae* (Bushtits)

Bushtit *Psaltriparus minimus*

Family: *Sittidae* (Nuthatches)

Red-breasted Nuthatch *Sitta canadensis*

White-breasted Nuthatch *Sitta carolinensis*

Family: Troglodytidae (Wrens)

Rock Wren	<i>Salpinctes obsoletus</i>
Canyon Wren	<i>Catherpes mexicanus</i>
Bewick's Wren	<i>Thyromanes bewickii</i>
House Wren	<i>Troglodytes aedon</i>
Marsh Wren	<i>Cistothorus palustris</i>

Family: Cinclidae (Dippers)

American Dipper	<i>Cinclus mexicanus</i>
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Family: Regulidae (Kinglets)

Golden-crowned Kinglet	<i>Regulus satrapa</i>
Ruby-crowned Kinglet	<i>Redulus calendula</i>

Family: Sylviidae (Gnatcatchers)

Blue-gray Gnatcatcher	<i>Poliopitila caerulea</i>
-----------------------	-----------------------------

Family: Turdidae (Thrushes)

Western Bluebird	<i>Sialia mexicana</i>
Mountain Bluebird	<i>Sialia currucoides</i>
Townsend's Solitaire	<i>Myadestes townsendi</i>
Swainson's Thrush	<i>Catharus ustulatus</i>
Hermit Thrush	<i>Catharus guttatus</i>
American Robin	<i>Turdus migratorius</i>
Varied Thrush	<i>Ixoreus naevius</i>

Family: Mimidae (Thrashers, Mockingbirds)

Northern Mockingbird	<i>Mimus polyglottos</i>
Sage Thrasher	<i>Oreoscoptes montanus</i>

Family: Sturnidae (Starlings)

European Starling	<i>Sturnus vulgaris</i>
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Family: Motacillidae (Wagtails, Pipits)

American Pipit	<i>Anthus rubescens</i>
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Family: Bombycillidae (Waxwings)

Bohemian Waxwing	<i>Bombycilla garrulus</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>

Family: Parulidae (Wood Warblers)

Orange-crowned Warbler	<i>Vermivora celata</i>
Virginia's Warbler	<i>Vermivora virginiae</i>
Yellow Warbler	<i>Dendroica petechia</i>
Yellow-rumped Warbler	<i>Dendroica coronata</i>
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>
Townsend's Warbler	<i>Dendroica townsendi</i>
MacGillivray's Warbler	<i>Oporornis tolmiei</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Wilson's Warbler	<i>Wilsonia pusilla</i>
Yellow-breasted Chat	<i>Icteria virens</i>

Family: Thraupidae (Tanagers)

Western Tanager	<i>Piranga ludoviciana</i>
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Family: Emberizidae (Sparrows, Towhees, Juncos)

Green-tailed Towhee	<i>Pipilo chlorurus</i>
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Spotted Towhee	<i>Pipilo maculatus</i>
American Tree Sparrow	<i>Spizella arborea</i>
Chipping Sparrow	<i>Spizella passerina</i>
Brewer's Sparrow	<i>Spizella breweri</i>
Vesper Sparrow	<i>Poocetes gramineus</i>
Lark Sparrow	<i>Chondestes grammacus</i>
Black-throated Sparrow	<i>Amphispiza bilineata</i>
Sage Sparrow	<i>Amphispiza belli</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Fox Sparrow	<i>Passerella iliaca schistacea</i>
Song Sparrow	<i>Melospiza melodia</i>
Lincoln's Sparrow	<i>Melospiza lincolni</i>
Gambel's White-crowned Sparrow	<i>Zonotrichia leucophrys gambelii</i>
Mountain W-crowned Sparrow	<i>Zonotrichia leucophrys oriantha</i>
Dark-eyed Junco (Oregon)	<i>Junco hyemalis therburi</i>
Dark-eyed Junco (Gray-headed)	<i>Junco hyemalis caniceps</i>
Lapland Longspur	<i>Calcarius lapponicus</i>

Family: Cardinalidae (Grosbeaks, Buntings)

Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>
Blue Grosbeak	<i>Guiraca caerulea</i>
Lazuli Bunting	<i>Passerina amoena</i>
Indigo Bunting	<i>Passerina cyanea</i>

Family: Icteridae (Blackbirds, Orioles)

Bobolink	<i>Dolichonyx oryzivorus</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Western Meadowlark	<i>Sturnella neglecta</i>
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>
Great-tailed Grackle	<i>Quiscalus mexicanus</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Bullock's Oriole	<i>Icterus bullockii</i>
Scott's Oriole	<i>Icterus parisorum</i>

Family: Fringillidae (Finches, Grosbeaks)

Gray-crowned Rosy-Finch	<i>Leucosticte tephrocotis</i>
Black Rosy-Finch	<i>Leucosticte atrata</i>
Cassin's Finch	<i>Carpodacus cassinii</i>
House Finch	<i>Carpodacus mexicanus</i>
Red Crossbill	<i>Loxia curvirostra</i>
Common Redpoll	<i>Carduelis flammea</i>
Pine Siskin	<i>Carduelis pinus</i>
Lesser Goldfinch	<i>Carduelis psaltria</i>
American Goldfinch	<i>Carduelis tristis</i>
Lawrence's Goldfinch	<i>Carduelis lawrencei</i>

Evening Grosbeak	<i>Coccothraustes vespertinus</i>
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Family: Passeridae (Old World Sparrows)

House Sparrow	<i>Passer domesticus</i>
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Mammals**Order: Insectivora (Insect Eaters)****Family: Soricidae (Shrews)**

Merriam's Shrew	<i>Sorex meriammi</i>
Montane Shrew	<i>Sorex monticolus</i>
Vagrant Shrew	<i>Sorex vagrans</i>
American Water Shrew	<i>Sorex palustris</i>

Order: Chiroptera (Bats)**Family: Vespertilionidae (Plainnose Bats)**

California Myotis	<i>Myotis californicus</i>
Western Small-footed Myotis	<i>Myotis ciliolabrum</i>
Long-eared Myotis	<i>Myotis evotis</i>
Little Brown Bat	<i>Myotis lucifugus</i>
Fringed Myotis	<i>Myotis thysanodes</i>
Long-legged Myotis	<i>Myotis volans</i>
Yuma Myotis	<i>Myotis yumanensis</i>
Western Red Bat	<i>Lasiurus blossomii</i>
Hoary Bat	<i>Lasiurus cinereus</i>
Silver-haired Bat	<i>Lasionycteris noctivagans</i>

Western Pipistrelle	<i>Pipistrellus hesperus</i>
Big Brown Bat	<i>Eptesicus fuscus</i>
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>
Pallid Bat	<i>Antrozous pallidus</i>

Family: Molossidae (Freetail Bats)

Brazilian Free-tailed Bat	<i>Tadarida brasiliensis</i>
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Order: Lagomorpha (Pikas, Hares, Rabbits)

Family: Leporidae (Hares, Rabbits)

Black-tailed Jackrabbit	<i>Lepus californicus</i>
Mountain Cottontail	<i>Sylvilagus nuttalli</i>
Pygmy Rabbit	<i>Brachylagus idahoensis</i>

Order: Rodentia (Rodents)

Family: Sciuridae (Squirrels)

Least Chipmunk	<i>Tamias minimus</i>
Cliff Chipmunk	<i>Tamias dorsalis</i>
Uinta Chipmunk	<i>Tamias umbrinus</i>
Yellow-bellied Marmot	<i>Marmota flaviventris</i>
White-tailed Antelope Squirrel	<i>Ammospermophilus leucurus</i>
Great Basin Ground Squirrel	<i>Spermophilus mollis</i>
Golden-mantled Ground Squirrel	<i>Spermophilus lateralis</i>

Family: Geomyidae (Gophers)

Botta's Pocket Gopher	<i>Thomomys bottae</i>
Northern Pocket Gopher	<i>Thomomys talpoides</i>
Townsend's Pocket Gopher	<i>Thomomys townsendii</i>

Family: Heteromyidae (Kangaroo Rodents)

Little Pocket Mouse	<i>Perognathus longimembris</i>
Great Basin Pocket Mouse	<i>Perognathus parvus</i>
Dark Kangaroo Mouse	<i>Microdipodops megacephalus</i>
Ord Kangaroo Rat	<i>Dipodomys ordii</i>
Chisel-toothed Kangaroo Rat	<i>Dipodomys microps</i>

Family: Castoridae (Beavers)

American Beaver	<i>Castor canadensis</i>
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Family: Cricetidae (Mice, Rats, Voles)

Western Harvest Mouse	<i>Reithrodontomys megalotis</i>
Canyon Mouse	<i>Peromyscus crinitus</i>
Deer Mouse	<i>Peromyscus maniculatus</i>
Pinion Mouse	<i>Peromyscus truei</i>
Northern Grasshopper Mouse	<i>Onychomys leucogaster</i>
Desert Woodrat	<i>Neotoma lepida</i>
Bushy-tailed Woodrat	<i>Neotoma cinerea</i>
Montane Vole	<i>Microtus montanus</i>
Long-tailed Vole	<i>Microtus longicaudus</i>
Sagebrush Vole	<i>Lemmyscus curtatus</i>
Muskrat	<i>Ondatra zibethica</i>

Family: Zapodidae (Jumping Mice)

Western Jumping Mouse	<i>Zapus princeps</i>
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Family: Erethizontidae (New World Porcupines)

North American Porcupine	<i>Erethizon dorsatum</i>
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Order: Carnivora (Flesh-Eaters)

Family: Canidae (Dogs)

Coyote	<i>Canis latrans</i>
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Common Gray Fox	<i>Urocyon cinereoargenteus</i>
Kit Fox	<i>Vulpes velox</i>
Red Fox	<i>Vulpes vulva</i>

Family: Procyonidae (Racoons and Allies)

Ringtail	<i>Bassariscus astutus</i>
Common Raccoon	<i>Procyon lotor</i>

Family: Mustelidae (Weasels and Allies)

Ermine	<i>Mustela erminea</i>
Long-tailed Weasel	<i>Mustela frenata</i>
Mink	<i>Mustela vison</i>
Northern River Otter	<i>Lontra canadensis</i>
American Badger	<i>Taxidea taxus</i>
Striped Skunk	<i>Mephitis mephitis</i>
Western Spotted Skunk	<i>Spilogale gracilis</i>

Family: Felidae (Cats)

Mountain Lion	<i>Felix concolor</i>
Bobcat	<i>Lynx rufus</i>

Order: Artiodactyla (Hoofed Mammals)

Family: Cervidae (Deer)

Mule Deer	<i>Odocoileus hemionus</i>
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Family: Antilocapridae (Pronghorn)

Pronghorn	<i>Antilocapra americana</i>
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Family: Bovidae (Bison, Sheep, Goats)

Desert Bighorn Sheep	<i>Ovis canadensis nelsoni</i>
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Reptiles

Order: Squamata (Lizards, Snakes)

Family: Iguanidae (Iguanas and Allies)

Common Zebra-tailed Lizard	<i>Callisaurus draconoides</i>
Long-nosed Leopard Lizard	<i>Gambelia wislizenii</i>
Western Fence Lizard	<i>Sceloporus occidentalis</i>
Sagebrush Lizard	<i>Sceloporus graciosus</i>
Common Side-blotched Lizard	<i>Uta stansburiana</i>
Greater Short-horned Lizard	<i>Phrynosoma hernandesi</i>
Desert Horned Lizard	<i>Phrynosoma platyrhinos</i>

Family: Scincidae (Skinks)

Great Basin Skink	<i>Eumeces skiltonianus utahensis</i>
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Family: Teiidae (Whiptails)

Western Whiptail	<i>Cnemidophorus tigris</i>
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Family: Boidae (Boas, Pythons)

Rubber Boa	<i>Charina bottae</i>
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Family: Colubridae (Solid-toothed Snakes)

Ringneck Snake	<i>Diadophis punctatus</i>
Striped Whipsnake	<i>Masticophis taeniatus</i>
Western Yellow-bellied Racer	<i>Coluber constrictor mormon</i>
Great Basin Gopher Snake	<i>Pituophis cantenifer deserticola</i>
Common Kingsnake	<i>Lampropeltis getulus</i>
Long-nosed Snake	<i>Rhinocheilus lecontei</i>
Western Terrestrial Garter	<i>Thamnophis elegans</i>
Ground Snake	<i>Sonora semiannulata</i>
Night Snake	<i>Hypsiglena torquata</i>

Family: Viperidae (Vipers)

Great Basin Rattlesnake	<i>Crotalus viridis lutosus</i>
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Amphibians

Order: *Anura* (Frogs and Toads)

Family: *Pelobatidae* (Spadefoots)

Great Basin Spadefoot Toad *Spea intermontana*

Family: *Ranidae* (True Frogs)

Columbia Spotted Frog *Rana luteiventris* (L.E.)

Northern Leopard Frog *Rana pipiens*

Bullfrog *Rana catesbeiana*

Family: *Bufonidae* (Toads)

Boreal Toad *Bufo boreas boreas*

Family: *Hylidae* (Treefrogs)

Pacific Chorus Frog *Pseudacris regilla*

Fish

Order: *Salmoniformes*

Family: *Salmonidae* (Salmon and Trout)

Rainbow Trout *Oncorhynchus mykiss*

Lahontan Cutthroat *Oncorhynchus clarki
henshawi*(L.E.)

Brook Trout *Salvelinus fontinalis*

Brown Trout *Salmo trutta*

Order: *Scorpaeniformes*

Family: *Cottidae* (Sculpins)

Paiute Sculpin *Cottus beldingii*

Order: *Cypriniformes*

Family: *Cyprinidae* (Carp and Minnows)

Speckled Dace *Rhinichthys osculus*

Redside Shiner *Richardsonius balteatus*

Tui Chub *Gila bicolor*

Asiatic Carp *Cyprinus carpio*

Family: *Catostomidae* (Suckers)

Mountain Sucker *Catostomus platyrhynchus*

Order: *Siluriformes*

Family: *Ictaluridae* (Catfish)

Channel catfish *Ictalurus punctatus*

Order: *Perciformes*

Family: *Percidae* (Walleye)

Walleye *Sander vitreus vitreus*

Family: *Centrarchidae* (Bass and allies)

Largemouth Bass *Micropterus salmoides*

Bluegill *Lepomis macrochirus*

L.E. = Locally Extirpated

Note: This list is a combination of wildlife sight record data and our best effort to predict what wildlife species live in this area in all seasons and under optimum habitat conditions.

*With the exception of the European Starling, House Sparrow, Eurasian Collared-Dove, Ringed Turtle-Dove and Rock Dove, all birds are protected in Nevada by either the International Migratory Bird Treaty Act, Endangered Species Act or as game species. Several mammal, reptile and amphibian species are also protected as either game, sensitive, threatened or priority species. For further information on a species status, visit our web site at NDOW.ORG.

Updated: January 2011 - Peter V. Bradley
Nevada Department of Wildlife - Elko, Nevada.

APPENDIX B:
WILDLIFE SPECIES OBSERVED AT THE ROBERTSON MINE

Robertson Mine Inventory of Wildlife Species Observed (2012)

BIRD SPECIES	MAMMAL SPECIES	REPTILE SPECIES
American kestrel (<i>Falco sparverius</i>)	Black-tailed jackrabbit (<i>Lepus californicus</i>)	Desert horned lizard (<i>Phrynosoma platyrhinos</i>)
Black-throated sparrow (<i>Amphispiza bilineata</i>)	Coyote (<i>Canis latrans</i>)	Great Basin gopher snake (<i>Pituophis catenifer</i>)
Barn swallow (<i>Hirundo rustica</i>)	Desert cottontail (<i>Sylvilagus audubonii</i>)	Striped whipsnake (<i>Masticophis taeniatus</i>)
Brewer's blackbird (<i>Euphagus cyanocephalus</i>)	Gray fox (<i>Urocyon cinereoargenteus</i>)	Western fence lizard (<i>Sceloporus occidentalis</i>)
Burrowing owl (<i>Athene cunicularia</i>)	Fringed myotis (<i>Myotis thysanodes</i>)	Western whiptail (<i>Cnemidophorus tigris</i>)
Chukar (<i>Alectoris chukar</i>)	Little brown myotis (<i>Myotis lucifugus</i>)	
Common nighthawk (<i>Chordeiles minor</i>)	Mule deer (<i>Odocoileus hemionus</i>)	
Common raven (<i>Corvus corax</i>)	Pronghorn (<i>Antilocapra americana</i>)	
Golden eagle (<i>Aquila chrysaetos</i>)	Small-footed myotis (<i>Myotis ciliolabrum</i>)	
Horned lark (<i>Eremophila alpestris</i>)	Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	
House finch (<i>Carpodacus mexicanus</i>)	White-tailed antelope ground squirrel (<i>Ammospermophilus leucurus</i>)	
Lark sparrow (<i>Chondestes grammacus</i>)	Woodrat (<i>Neotoma spp.</i>)	
Loggerhead shrike (<i>Lanius ludovicianus</i>)		
Mourning dove (<i>Zenaida macroura</i>)		
Prairie falcon (<i>Falco mexicanus</i>)		
Red-tailed hawk (<i>Buteo jamaicensis</i>)		
Rock wren (<i>Salpinctes obsoletus</i>)		
Say's phoebe (<i>Sayornis saya</i>)		
Turkey vulture (<i>Cathartes aura</i>)		
Western meadowlark (<i>Sturnella neglecta</i>)		

APPENDIX C:
BLM LIST OF SPECIAL STATUS SPECIES FOR THE BATTLE MOUNTAIN DISTRICT

Special Status Species List from the BLM

Mammals

Pallid bat	<i>Antrozous pallidus</i>
Pygmy rabbit	<i>Brachylagus idahoensis</i>
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>
Big brown bat	<i>Eptesicus fuscus</i>
Spotted bat	<i>Euderma maculatum</i>
Silver-haired bat	<i>Lasiorycteris noctivagans</i>
Western red bat	<i>Lasiurus blossevillii</i>
Hoary bat	<i>Lasiurus cinereus</i>
Dark kangaroo mouse	<i>Microdipodops megacephalus</i>
Pale kangaroo mouse	<i>Microdipodops pallidus</i>
California myotis	<i>Myotis californicus</i>
Western small-footed myotis	<i>Myotis ciliolabrum</i>
Long-eared myotis	<i>Myotis evotis</i>
Little brown myotis	<i>Myotis lucifugus</i>
Fringed myotis	<i>Myotis thysanodes</i>
Cave myotis	<i>Myotis velifer</i>
Long-legged myotis	<i>Myotis volans</i>
Big free-tailed bat	<i>Nyctinomops macrotis</i>
Pika	<i>Ochotona princeps</i>
Bighorn sheep	<i>Ovis canadensis</i>
Western pipistrelle	<i>Pipistrellus hesperus</i>
Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>
Fish Spring pocket gopher	<i>Thomomys bottae abstrusus</i>
San Antonio pocket gopher	<i>Thomomys bottae curatus</i>

Birds

Northern goshawk	<i>Accipiter gentilis</i>
Golden eagle	<i>Aquila chrysaetos</i>
Western burrowing owl	<i>Athene cucularia</i> <i>hypugaea</i>
Ferruginous hawk	<i>Buteo regalis</i>
Swainson's hawk	<i>Buteo swainsoni</i>
Greater sage-grouse	<i>Centrocercus urophasianus</i>
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>
Peregrine falcon	<i>Falco peregrinus</i>
Pinyon jay	<i>Gymnorhinus cyanocephalus</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Black rosy-finch	<i>Leucosticte atrata</i>
Lewis woodpecker	<i>Melanerpes lewis</i>
Sage thrasher	<i>Oreoscoptes montanus</i>
Brewer's sparrow	<i>Spizella breweri</i>

Fish

Railroad Valley springfish	<i>Crenichthys nevadae</i>
Fish Lake Valley tui chub	<i>Gila bicolor ssp. 4</i>
Hot Creek Valley tui chub	<i>Gila bicolor ssp. 5</i>
Railroad Valley tui chub	<i>Gila bicolor ssp. 7</i>
Monitor Valley speckled dace	<i>Rhinichthys osculus spp 5</i>

Amphibians

Amagosa toad	<i>Bufo nelson</i>
Columbia spotted frog (including Toiyabe spotted frog subpopulation)	<i>Rana luteiventris</i>

Molluscs

California floater	<i>Anodonta californiensis</i>
Southern Duckwater pyrg	<i>Pyrgulopsis anatina</i>
Large-gland Carico pyrg	<i>Pyrgulopsis basiglans</i>
Carinate Duckwater pyrg	<i>Pyrgulopsis carinata</i>
Dixie Valley pyrg	<i>Pyrgulopsis dixensis</i>
Oasis Valley pyrg	<i>Pyrgulopsis micrococcus</i>
Wongs pyrg	<i>Pyrgulopsis wongi</i>

Insects

Crescent Dunes aegialian scarab	<i>Aegialia crescenta</i>
Aegialian scarab beetle	<i>Aegialia knighti</i>
Crescent Dunes aphodius scarab	<i>Aphodius sp. 2</i>
Big Smoky wood nymph	<i>Cercyonis oetus alkalorum</i>
White River wood nymph	<i>Cercyonis pegala pluvialis</i>
White Mountains skipper	<i>Hesperia miriamae longaevicola</i>
Railroad Valley skipper	<i>Hesperia uncas fulvapalla</i>
White River Valley skipper	<i>Hesperia uncas grandiosa</i>
Great Basin small blue	<i>Philotiella speciosa septentrionalis</i>
Crescent Dunes serican scarab	<i>Serica ammenisco</i>
Sand Mountain serican scarab	<i>Serica psammobunus</i>

Plants

Eastwood milkweed	<i>Asclepias eastwoodiana</i>
Cima milkvetch	<i>Astragalus cimae var. cimae</i>
Needle Mountains milkvetch	<i>Astragalus eurylobus</i>
Black woollypod	<i>Astragalus funereus</i>
Tonopah milkvetch	<i>Astragalus pseudiodanthus</i>
Toquima milkvetch	<i>Astragalus toquimanus</i>
Currant milkvetch	<i>Astragalus uncialis</i>
Elko rockcress	<i>Boechera falcifruca</i>
Monte Neva paintbrush	<i>Castilleja salsuginosa</i>
Tecopa birdbeak	<i>Cordylanthus tecopenis</i>
Goodrich biscuitroot	<i>Cymopterus goodrichii</i>
Nevada willowherb	<i>Epilobium nevadense</i>
Windloving buckwheat	<i>Eriogonum anemophilum</i>
Beatley buckwheat	<i>Eriogonum beatleyae</i>
Lewis buckwheat	<i>Eriogonum lewisii</i>
Tiehm buckwheat	<i>Eriogonum tiehmii</i>
Sunnyside green gentian	<i>Frasera gypsicola</i>

Smooth dwarf greasebush	<i>Glossopetalon pungens</i> var. <i>glabrum</i>	Tiehm beardtongue	<i>Penstemon tiehmii</i>
Sand cholla	<i>Grusonia pulchella</i>	Clarke phacelia	<i>Phacelia filiae</i>
Rock purpusia	<i>Ivesia arizonica</i> var. <i>saxosa</i>	Least phacelia	<i>Phacelia minutissima</i>
Waxflower	<i>Jamesia tetrapetala</i>	Williams combleaf	<i>Polycytenium williamsiae</i>
Lunar Crater buckwheat	<i>Johanneshowellia</i> <i>crateriorum</i>	Blaine pincushion	<i>Sclerocactus blainei</i>
Holmgren lupine	<i>Lupinus holmgrenianus</i>	Tonopah pincushion	<i>Sclerocactus nyensis</i>
Oryctes	<i>Oryctes nevadensis</i>	Nachlinger catchfly	<i>Silene nachlingerae</i>
Low feverfew	<i>Parthenium ligulatum</i>	Holmgren Smelowskia	<i>Smelowskia holmgrenii</i>
Pahute Mesa beardtongue	<i>Penstemon pahutensis</i>	Railroad Valley globemallow	<i>Sphaeralcea caespitosa</i> var. <i>williamsiae</i>
Lahontan beardtongue	<i>Penstemon palmeri</i> var.	Lone Mountain goldenhead	<i>Tonestus graniticus</i>
<i>macranthus</i>		Currant Summit clover	<i>Trifolium andinum</i> var. <i>podocephalum</i>
Bashful beardtongue	<i>Penstemon pudicus</i>	Rock violet	<i>Viola lithion</i>

APPENDIX D:
PLANT SPECIES OBSERVED IN THE ROBERTSON MINE

Robertson Mine Inventory of Plant Species Observed

Disturbed Areas:

bud sagebrush (*Picrothamnus desertorum* Nutt.);
Sandburg bluegrass (*Poa secunda*);
Death camas (*zigadenus venenosus*);
Douglas rabbitbrush (*Chrysothamnus viscidiflorus*);
Fourwing saltbush (*Atriplex canescens*);
Spiny hopsage (*Grayia spinosa*);
Rubber rabbitbrush (*Ericameria nauseosa*);
Cheatgrass (*Bromus tectorum*);
Great Basin wildrye (*Leymus cinereus*);
Shadscale (*Atriplex confertifolia*);
Halogeton (*Halogeton glomeratus*);
Palmer's Penstemon (*Penstemon ambiguus*);
bottlebrush squirreltail (*Sitanion hystrix*);
Crested wheat (*Agropyron cristatum*);
Forage kochia (*Kochia prostrata*);
Holbiell's rockcress ();
Indian ricegrass (*Achnatherum hymenoides*);
Phlox (*Phlox sp.*);
Wyoming big sage (*Artemisia tridentate wyomingensis*);
bur buttercup (*Ranunculus testiculatus*);
greasewood (*Sarcobatus sp.*);
Desert Globemallow (*Sphaeralcea sp.*);
Russian thistle (*Salsola sp.*);
Lewis Flax (*Linum lewisii*);
Mustard (*Brassica sp.*);

Buckwheat (*Eriogonum sp.*);
Wooly vetch (*Vicia villosa*);
Mustard (*Brassica sp.*);

Undisturbed Areas:

Sandburg bluegrass (*Poa secunda*);
bottlebrush squirreltail (*Sitanion hystrix*);
bur buttercup (*Ranunculus testiculatus*);
Mustard (*Brassica sp.*);
Phlox (*Phlox sp.*);
Death camas (*zigadenus venenosus*);
Douglas rabbitbrush (*Chrysothamnus viscidiflorus*);
Horsebrush (*Tetradymia glabrata*);
Wyoming big sage (*Artemisia tridentate wyomingensis*);
Spiny hopsage (*Grayia spinosa*);
Rubber rabbitbrush (*Ericameria nauseosa*);
Cheatgrass (*Bromus tectorum*);
Great Basin wildrye (*Leymus cinereus*);
Indian ricegrass (*Achnatherum hymenoides*);
greasewood (*Sarcobatus sp.*);
Shadscale (*Atriplex confertifolia*);
Pricley pear cactus (*Opuntia phaeacantha*);
Fourwing saltbush (*Atriplex canescens*);
Desert mallow (*Sphaeralcea ambigua*);
Stork's Bill (*Erodium cicutarium*);

**APPENDIX E:
SURFACE MANAGEMENT PLANS
LOCATED PARTIALLY OR WHOLLY WITHIN THE CESAS**

Project Boundary CESA

NVN	Name	Status	Activity	Acres Approved
66834	Ken Nickerson	Authorized	Gemstone	0.20
66896	Barrick Cortez Inc.	Authorized	Gold - Lode	417.50
67261	Barrick Cortez Inc.	Authorized	Gold	22.00
67575	Barrick Cortez Inc.	Authorized	Gold - Lode	16,045.00
67688	Coral Resources Inc.	Authorized	Gold	191.30
87413	Coral Resources Inc.	Authorized	Gold	2.45
			TOTAL	16,678.45

Immediate Watershed CESA

NVN	Name	Status	Activity	Acres Approved
66621	Barrick Cortez Inc.	Authorized	Gold - Lode	688.31
66834	Ken Nickerson	Authorized	Gemstone	0.20
66896	Barrick Cortez Inc.	Authorized	Gold - Lode	417.50
67261	Barrick Cortez Inc.	Authorized	Gold	22.00
67452	Leon Belaustegui	Pending	Gold	10.00
67575	Barrick Cortez Inc.	Authorized	Gold - Lode	16,045.00
67688	Coral Resources Inc.	Authorized	Gold	191.30
67813	Barrick Gold Exploration Inc.	Authorized	Gold	92.00
67947	Joel Dresser	Authorized	Gemstone, Nonprecious	0.10
78104	Nevada Rae Gold Inc.	Authorized	Gold	89.00
79134	Lee Loudon	Authorized	Gemstone, Nonprecious	0.90
80632	X-Cal USA Inc.	Pending	Gold	720.00
87413	Coral Resources Inc.	Authorized	Gold	2.45
89967	Clipper Gold LLC	Authorized	Gold - Lode	1.99
90101	WK Mining (USA) LTD	Authorized	Gold - Lode	4.94
90103	WK Mining (USA) LTD	Authorized	Gold - Lode	4.85
90315	Sierra Nevada Gold	Authorized	Gold - Lode	0.48
			TOTAL	18,291.02

Crescent Valley Hydrographic Basin CESA

NVN	Name	Status	Activity	Acres Approved
66621	Barrick Cortez Inc.	Authorized	Gold - Lode	688.31
66834	Ken Nickerson	Authorized	Gemstone	0.20
66896	Barrick Cortez Inc.	Authorized	Gold - Lode	417.50
67249	Barrick Cortez Inc.	Authorized	Gold	60.00
67261	Barrick Cortez Inc.	Authorized	Gold	22.00
67452	Leon Belaustegui	Pending	Gold	10.00
67453	Newmont USA LTD dba NMC	Authorized	Gold	150.00
67494	Newmont USA LTD dba NMC	Authorized	Gold - Lode	1,400.00
67575	Barrick Cortez Inc.	Authorized	Gold - Lode	16,045.00
67688	Coral Resources Inc.	Authorized	Gold	191.30
67813	Barrick Gold Exploration Inc.	Authorized	Gold	92.00
67947	Joel Dresser	Authorized	Gemstone, Nonprecious	0.10
70255	Buckhorn Mines Co	Authorized	Gold - Lode	465.00
70714	Buckhorn Mines Co	Pending	Gold - Lode	11.30
71002	Victoria Resources (US) Inc.	Authorized	Gold - Lode	220.40
71098	Barrick Gold Exploration Inc.	Authorized	Gold - Lode	209.70
75049	Nevada Drilling Fluids	Pending	Gold	72.90
77213	Anglogold USA Exploration Inc.	Authorized	Gold - Lode	150.00
78104	Nevada Rae Gold Inc.	Authorized	Gold	89.00
79134	Lee Loudon	Authorized	Gemstone, Nonprecious	0.90
79769	Klondex Gold & Silver Mining	Authorized	Gold - Lode	135.00
80632	X-Cal USA Inc.	Pending	Gold	720.00
86307	C3 Resources Inc.	Pending	Gold - Lode	1.35
87413	Coral Resources Inc.	Authorized	Gold	2.45
87765	Golden Oasis Exploration	Authorized	Gold - Lode	4.40
88030	JKR Gold Resources (US) Inc.	Authorized	Gold - Lode	1.47
88306	Cantex Mine Development Corp	Pending	Gold - Lode	4.31
89245	Carlin Gold US Inc.	Pending	Gold - Lode	2.60
89286	Baker Hughes Drilling Fluids	Authorized	Gold - Lode	0.33
89461	Lithium Corporation	Authorized	Gold - Lode	3.92
89482	Baker Hughes Drilling Fluids	Authorized	Barium, Barite	4.80
89501	Halliburton Energy Services	Authorized	Gold - Lode	4.54
89699	Gold Standard Ventures Corp	Authorized	Gold - Lode	0.63
89720	Minquest	Pending	Gold - Lode	2.25
89967	Clipper Gold LLC	Authorized	Gold - Lode	1.99
90101	WK Mining (US) LTD	Authorized	Gold - Lode	4.94

90103	WK Mining (US) LTD	Authorized	Gold - Lode	4.85
90315	Sierra Nevada Gold	Authorized	Gold - Lode	0.48
90455	Pediment Gold LLC	Authorized	Gold - Lode	1.00
90457	Halliburton Energy Services	Pending	Barium, Barite	41.20
91111	Klondex Gold & Silver Mining	Pending	Gold - Lode	135.00
91265	Golden Oasis Exploration	Pending	Gold - Placer	20.00
91336	Allied Nevada Gold Company	Pending	Gold - Lode	1.87
			Total	21,394.99

Shoshone/Cortez Mountain Range CESA

NVN	Name	Status	Activity	Acres Approved
66621	Barrick Cortez Inc.	Authorized	Gold - Lode	688.31
66834	Ken Nickerson	Authorized	Gemstone	0.20
66896	Barrick Cortez Inc	Authorized	Gold - Lode	417.50
67003	Dresser Magcobar Minerals	Authorized	Barium, Barite	245.00
67249	Barrick Cortez Inc.	Authorized	Gold	60.00
67261	Barrick Cortez Inc.	Authorized	Gold	22.00
67452	Leon Belaustegui	Pending	Gold	10.00
67453	Newmont USA LTD dba NMC	Authorized	Gold	150.00
67494	Newmont USA LTD dba NMC	Authorized	Gold - Lode	1,400.00
67575	Barrick Cortez Inc.	Authorized	Gold - Lode	16,045.00
67596	M I Drilling Fluids	Authorized	Barium, Barite	74.00
67601	Baker Hughes Drilling Fluids	Authorized	Gold	417.00
67688	Coral Resources Inc.	Authorized	Gold	191.30
67813	Barrick Gold Exploration Inc.	Authorized	Gold	92.00
67934	Rye Patch Gold U.S. Inc.	Authorized	Gold	29.20
67947	Joel Dresser	Authorized	Gemstone, Nonprecious	0.10
70255	Buckhorn Mines Co	Authorized	Gold - Lode	465.00
70714	Buckhorn Mines Co	Pending	Gold - Lode	11.30
71002	Victoria Resources (U.S.) Inc.	Authorized	Gold - Lode	220.40
71098	Barrick Gold Exploration Inc.	Authorized	Gold - Lode	209.70
75049	Nevada Drilling Fluids	Pending	Gold	72.90
77213	Barrick Gold Exploration Inc.	Authorized	Gold - Lode	150.00
78041	Cortez Gold Mines	Pending	Gold	50.00
78104	Nevada Rae Gold Inc.	Authorized	Gold	89.00
79134	Lee Loudon	Authorized	Gemstone, Nonprecious	0.90
79769	Klondex Gold & Silver Mining	Authorized	Gold - Lode	135.00
79958	Golden Gryphon Exploration Inc.	Authorized	Gold - Lode	1.66
79960	Golden Gryphon Exploration Inc.	Authorized	Gold - Lode	0.60
80632	X-Cal USA Inc	Pending	Gold	720.00
84135	Golden Gryphon Exploration Inc.	Authorized	Gold - Lode	3.64
86307	C3 Resources Inc.	Pending	Gold - Lode	1.35
87413	Coral Resources Inc.	Authorized	Gold	2.45
87765	Golden Oasis Exploration	Authorized	Gold - Lode	4.40
88030	JKR Gold Resources (US) Inc.	Authorized	Gold - Lode	1.47
88306	Discovery Consultants	Pending	Gold - Lode	4.31
88988	Arttor Gold LLC	Authorized	Gold - Lode	4.83

89217	Redstar Gold USA Inc.	Authorized	Gold - Lode	0.66
89245	Carlin Gold U.S. Inc.	Pending	Gold - Lode	2.60
89286	Baker Hughes Drilling Fluids	Authorized	Gold - Lode	0.33
89334	Baker Hughes Drilling Fluids	Authorized	Gold - Lode	4.53
89461	Lithium Corp	Authorized	Gold - Lode	3.92
89482	Baker Hughes Drilling Fluids	Authorized	Barium, Barite	4.80
89501	Halliburton Energy Services	Authorized	Gold - Lode	4.54
89650	Nulegacy Gold Corporation NV	Authorized	Gold - Lode	0.62
89695	Nulegacy Gold Corporation NV	Authorized	Gold - Lode	0.25
89699	Gold Standard Ventures Corp	Authorized	Gold - Lode	0.63
89720	Minquest	Pending	Gold - Lode	2.25
89791	Rye Patch Gold U.S. Inc.	Authorized	Gold - Lode	1.61
89967	Clipper Gold LLC	Authorized	Gold - Lode	1.99
90101	WK Mining (US) LTD	Authorized	Gold - Lode	4.94
90103	WK Mining (US) LTD	Authorized	Gold - Lode	4.85
90182	Pediment Gold LLC	Authorized	Gold - Lode	0.36
90315	Sierra Nevada Gold	Authorized	Gold - Lode	0.48
90357	WPC Resources Inc.	Authorized	Gold - Lode	1.41
90375	Halliburton Energy Services	Authorized	Barium, Barite	0.06
90445	Pediment Gold LLC	Authorized	Gold - Lode	1.00
90457	Halliburton Energy Services	Pending	Barium, Barite	41.20
90824	Nulegacy Gold Corporation NV	Authorized	Gold - Lode	0.67
90973	Centerra US Inc.	Authorized	Gold - Lode	3.05
91070	Golden Reef Mining Co Inc.	Authorized	Gold - Lode	1.66
91111	Klondex Gold & Silver Mining	Pending	Gold - Lode	135.00
91265	Golden Oasis Exploration	Pending	Gold - Placer	20.00
91336	Allied Nevada Gold Company	Pending	Gold - Lode	1.87
			Total	22,235.8

Native American CESA

NVN	Name	Status	Activity	Acres Approved
66464	McEwen Mining Inc.	Authorized	Gold - Lode	21.2
66621	Barrick Cortez Inc.	Authorized	Gold - Lode	688.31
66834	Ken Nickerson	Authorized	Gemstone	0.20
66896	Barrick Cortez Inc.	Authorized	Gold - Lode	417.50
66923	Maestetti Bonnie	Authorized	Gemstone	1.00
66999	Buena Vista Exploration Co	Pending	Gold	16.00
67003	Dresser Magcobar Minerals	Authorized	Barium, Barite	245.00
67086	Newmont Mining Corporation	Authorized	Gold	4,256.00
67124	Atlas Gold Mining Inc.	Pending	Gold	597.50
67249	Barrick Cortez Inc.	Authorized	Gold	60.00
67261	Barrick Cortez Inc.	Authorized	Gold	22.00
67450	Newmont Mining Corporation	Authorized	Gold	150.35
67452	Leon Belaustegui	Pending	Gold	10.00
67453	Newmont USA LTD dba NMC	Authorized	Gold	150.00
67494	Newmont USA LTD dba NMC	Authorized	Gold - Lode	1,400.00
67575	Barrick Cortez Inc.	Authorized	Gold - Lode	16,045.00
67595	Battle Mountain Gold Company	Authorized	Gold	1,121.70
67596	M I Drilling Fluids	Authorized	Barium, Barite	74.00
67601	Baker Hughes Drilling Fluids	Authorized	Gold	417.00
67604	Newmont USA Ltd dba NMC	Authorized	Gold	536.00
67622	Gramm James	Authorized	Gemstone, Semiprecious	1.00
67688	Coral Resources Inc.	Authorized	Gold	191.30
67716	Newmont USA LTD dba Newmont	Authorized	Gold	299.40
67813	Barrick Gold Exploration Inc.	Authorized	Gold	92.00
67881	Tonkin Springs LLC	Authorized	Gold	448.30
67930	Newmont USA Ltd dba NMC	Authorized	Gold	1,909.00
67934	Rye Patch Gold U.S. Inc.	Authorized	Gold	29.20
67947	Joel Dresser	Authorized	Gemstone, Nonprecious	0.10
70255	Buckhorn Mines Co	Authorized	Gold - Lode	465.00
70445	Newmont Mining Corporation	Authorized	Gold - Lode	139.00
70550	Newmont Mining Corporation	Authorized	Gold - Lode	9,710.00
70714	Buckhorn Mines Co	Pending	Gold - Lode	11.30
70927	Crown Resources Corp	Authorized	Gold	21.70
71002	Victoria Resources (U.S.) Inc.	Authorized	Gold - Lode	220.40
71065	Newmont Mining Corporation	Authorized	Gold	63.00

71098	Barrick Gold Exploration Inc.	Authorized	Gold - Lode	209.70
71219	Newmont Mining Corporation	Authorized	Gold - Lode	59.00
75049	Nevada Drilling Fluids	Pending	Gold	72.90
77213	Barrick Gold Exploration Inc.	Authorized	Gold - Lode	150.00
77223	Carico Lake Mining Co.	Authorized	Metals - Precious	19.00
78041	Cortez Gold Mines	Pending	Gold	50.00
78104	Nevada Rae Gold Inc.	Authorized	Gold	89.00
78123	Newmont Mining Corporation	Authorized	Gold - Lode	1,172.00
79134	Lee Loudon	Authorized	Gemstone, Nonprecious	0.90
79769	Klondex Gold & Silver Mining	Authorized	Gold - Lode	135.00
79958	Golden Gryphon Exploration Inc.	Authorized	Gold - Lode	1.66
79959	Golden Gryphon Exploration Inc.	Authorized	Gold - Lode	1.38
79960	Golden Gryphon Exploration Inc.	Authorized	Gold - Lode	0.60
79961	Golden Gryphon Exploration Inc.	Authorized	Gold - Lode	1.50
80632	X-Cal USA Inc.	Pending	Gold	720.00
81365	Independence Gold-Silver Mines	Pending	Gold - Lode	50.00
82395	Royal Standard Minerals Inc.	Pending	Gold	261.40
84135	Golden Gryphon Exploration Inc.	Authorized	Gold - Lode	3.64
86154	Newmont Mining Corporation	Authorized	Gold - Lode	4.37
86307	C3 Resources Inc	Pending	Gold - Lode	1.35
86653	Golden Predator Mines US Inc.	Authorized	Stone	1.43
87413	Coral Resources Inc.	Authorized	Gold	2.45
87765	Golden Oasis Exploration	Authorized	Gold - Lode	4.40
87957	General Gold Corp	Authorized	Gold - Lode	4.90
88030	JKR Gold Resources (US) Inc.	Authorized	Gold - Lode	1.47
88030	JKR Gold Resources (US) Inc.	Authorized	Gold - Lode	1.47
88264	Montezuma Mines Inc.	Authorized	Gold - Lode	125.00
88306	Discovery Consultants	Pending	Gold - Lode	4.31
88512	JKR Gold Resources (US) Inc.	Authorized	Gold - Lode	2.31
88795	AU-Reka Gold Corporation	Pending	Gold - Lode	419.30
88817	Nevada North Resources	Authorized	Gold - Lode	0.81
88890	Carruthers Joseph	Pending	Gold - Lode	67.00
88948	Evolving Gold Corp	Pending	Gold - Lode	1.15
88988	Arttor Gold LLC	Authorized	Gold - Lode	4.83
89217	Redstar Gold USA Inc.	Authorized	Gold - Lode	0.66
89245	Carlin Gold U.S. Inc.	Pending	Gold - Lode	2.60

89286	Baker Hughes Drilling Fluids	Authorized	Gold - Lode	0.33
89334	Baker Hughes Drilling Fluids	Authorized	Gold - Lode	4.53
89461	Lithium Corp	Authorized	Gold - Lode	3.92
89482	Baker Hughes Drilling Fluids	Authorized	Barium, Barite	4.80
89501	Halliburton Energy Services	Authorized	Gold - Lode	4.54
89543	Gold Standard Ventures Corp	Pending	Gold - Lode	50.00
89650	Nulegacy Gold Corporation NV	Authorized	Gold - Lode	0.62
89694	Nulegacy Gold Corporation NV	Authorized	Gold - Lode	0.08
89695	Nulegacy Gold Corporation NV	Authorized	Gold - Lode	0.25
89696	Nulegacy Gold Corporation NV	Authorized	Gold - Lode	0.15
89699	Gold Standard Ventures Corp	Authorized	Gold - Lode	0.63
89720	Minquest	Pending	Gold - Lode	2.25
89791	Rye Patch Gold U.S. Inc.	Authorized	Gold - Lode	1.61
89945	Golden Gryphon Exploration Inc.	Pending	Gold - Lode	1.70
89967	Clipper Gold LLC	Authorized	Gold - Lode	1.99
90101	WK Mining (US) LTD	Authorized	Gold - Lode	4.94
90103	WK Mining (US) LTD	Authorized	Gold - Lode	4.85
90146	Direct Detection Services LLC	Authorized	Gold - Lode	4.97
90182	Pediment Gold LLC	Authorized	Gold - Lode	0.36
90315	Sierra Nevada Gold	Authorized	Gold - Lode	0.48
90357	WPC Resources Inc.	Authorized	Gold - Lode	1.41
90375	Halliburton Energy Services	Authorized	Barium, Barite	0.06
90404	Premier Gold Mines USA Inc.	Pending	Gold - Lode	1.00
90407	Gold Standard Ventures Corp	Pending	Gold - Lode	1.00
90445	Pediment Gold LLC	Authorized	Gold - Lode	1.00
90457	Halliburton Energy Services	Pending	Barium, Barite	41.20
90639	Barrick Gold Exploration Inc.	Authorized	Gold - Lode	4.17
90824	Nulegacy Gold Corporation NV	Authorized	Gold - Lode	0.67
90825	Nulegacy Gold Corporation NV	Authorized	Gold - Lode	0.34
90973	Centerra US Inc.	Authorized	Gold - Lode	3.05
91014	Newmont USA LTD dba NMC	Authorized	Gold - Lode	3.07
91070	Golden Reef Mining Co Inc.	Authorized	Gold - Lode	1.66
91110	Newmont USA LTD DBA NMC	Pending	Gold - Lode	100.00
91111	Klondex Gold & Silver Mining	Pending	Gold - Lode	135.00
91265	Golden Oasis Exploration	Pending	Gold - Placer	20.00
91274	Carlin Gold U.S. Inc.	Pending	Gold - Load	3.23
91334	Bullfrog Gold Corp	Pending	Gold - Lode	3.50
91336	Allied Nevada Gold Company	Pending	Gold - Lode	1.87
91341	Newmont USA LTD dba NMC	Pending	Gold - Lode	0.65
			Total	43,892.83