

APPENDIX C

Biological Resources Assessment

**BIOLOGICAL RESOURCE ASSESSMENT
FOR
MODIFICATIONS TO THE
MINE AND RECLAMATION PLAN
FOR THE
MOUNTAIN PASS MINE**

Submitted to:

COUNTY OF SAN BERNARDINO

Land Use Services Department
Planning Division
385 N. Arrowhead Avenue
San Bernardino, CA 92415

Prepared by:

MOLYCORP MINERALS, LLC

67750 Bailey Road
Mountain Pass, CA 92366

and

LILBURN CORPORATION

1905 Business Center Drive
San Bernardino, CA 92408

JUNE 2010

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	1
1.0 INTRODUCTION	2
1.1 Project Location	2
1.2 Plan Modifications	2
1.3 Purpose of Biological Resources Assessment.....	6
2.0 SENSITIVE SPECIES.....	7
2.1 List of Potentially Occurring Sensitive Plants Species	7
2.2 List of Potentially Occurring Sensitive Animal Species.....	8
3.0 REGULATORY BACKGROUND	9
3.1 State and Federal Sensitive Species Regulations	9
3.1.1 Endangered Species Act.....	9
3.1.2 California Endangered Species Act	9
3.1.3 California Environmental Quality Act	9
4.0 METHODOLOGY	11
4.1 Literature Search	11
4.2 Field Survey	11
5.0 RESULTS	13
5.1 Vegetation Habitat Types.....	13
5.1.1 Survey Area A.....	13
5.1.2 Survey Area B	13
5.2 Rare, Endangered, or Sensitive Species and Habitat Results.....	13
5.3 Sensitive Plants Presence/Absence	16
5.4 Sensitive Animal Presence/Absence	22
6.0 CRITICAL HABITAT.....	23
7.0 POTENTIAL DRAINAGES	23
7.1 Survey Area A Drainages.....	24
7.2 Survey Area B Drainages.....	24
8.0 IMPACTS TO HABITAT	24
9.0 WILDLIFE CORRIDORS.....	24
10.0 PROPOSED RECOMMENDATIONS AND MITIGATION MEASURES	27

	Page
11.0 REFERENCES	32
12.0 CERTIFICATION	35

LIST OF FIGURES

Figure

1	Regional Map.....	3
2	Vicinity Location	4
3	Mountain Pass Proposed Modifications.....	5
4	Biological Survey Areas	12
5	Vegetation Map.....	14
6	State Jurisdictional Drainage Map	25
7	Area of Impact Map	26

LIST OF TABLES

Table

1	Summary of Impacts for Proposed Modifications	24
---	---	----

APPENDICES

- Appendix A Flora Compendia
- Appendix B Fauna List

BIOLOGICAL RESOURCE ASSESSMENT FOR MODIFICATIONS TO THE MOUNTAIN PASS MINE AND RECLAMATION PLAN

EXECUTIVE SUMMARY

Molycorp Minerals, LLC (Molycorp) is applying to the County of San Bernardino (County) to modify its current approved operations and facilities. These modifications include the construction and relocation of updated vested mineral recovery facilities on an approximate 36-acre facilities' pad; the relocation of the crusher plant and stockpiles on approximately 13 acres; the construction of an improved access road on approximately 20 acres extending on-site from near the site entrance to the planned new products warehouse on the east side of the existing mineral recovery plant area; and the elimination of the construction of the planned ponds in the 133-acre Northwest Evaporation Pond (NWEP) area. The proposed modifications include the use of more efficient equipment, replacing older equipment, and by replacing equipment that currently operates on diesel fuel with electric equipment.

Mountain Pass is located approximately 15 miles southwest of the Nevada-California state line and 30 miles northeast of Baker, California, adjacent to Interstate 15 (I-15). The site is accessed via the Bailey Road interchange on I-15. The mine is located within the southern portion of the Clark Mountain Range, approximately four miles southeast of Clark Mountain.

Molycorp contracted with Lilburn Corporation to conduct a Biological Resources Assessment (BRA) to identify habitats in the modification areas and any sensitive species associated with those habitats. The BRA identified approximately 34 acres of black brush scrub habitat, less than one acre of desert wash habitat, and 34 acres of disturbed areas within the footprints of the proposed modifications. No other impacts to any new undisturbed areas are expected that have not been previously reviewed and approved on July 8, 2004 by the County Planning Commission as part of the 2004 Reclamation Plan (#2004M-02), Conditional Use Permit (CUP #SAMR02//DN953-681N/07533SM2), and the associated "EIR for Molycorp Inc. Mountain Pass Mine 30-Year Plan" (County of San Bernardino, 2004).

The proposed modification areas will have a low possibility to impact desert tortoise, a low to moderate possibility to impact sensitive plants, and will impact less than one acre of State of California jurisdictional drainages. The EIR and the CUP's Conditions of Approval include numerous mitigation measures and conditions to reduce biological impacts to less than significant. These mitigation measures and conditions are included in Section 10.0 to be implemented prior to disturbance of the new undisturbed 35 acres in order to minimize potential biological impacts.

Note that the elimination of the construction of the northwest evaporation ponds will eliminate previously evaluated potential impacts to approximately 133 acres, roughly four times the 35-acre area that will be impacted under this proposed modification.

1.0 INTRODUCTION

1.1 PROJECT LOCATION

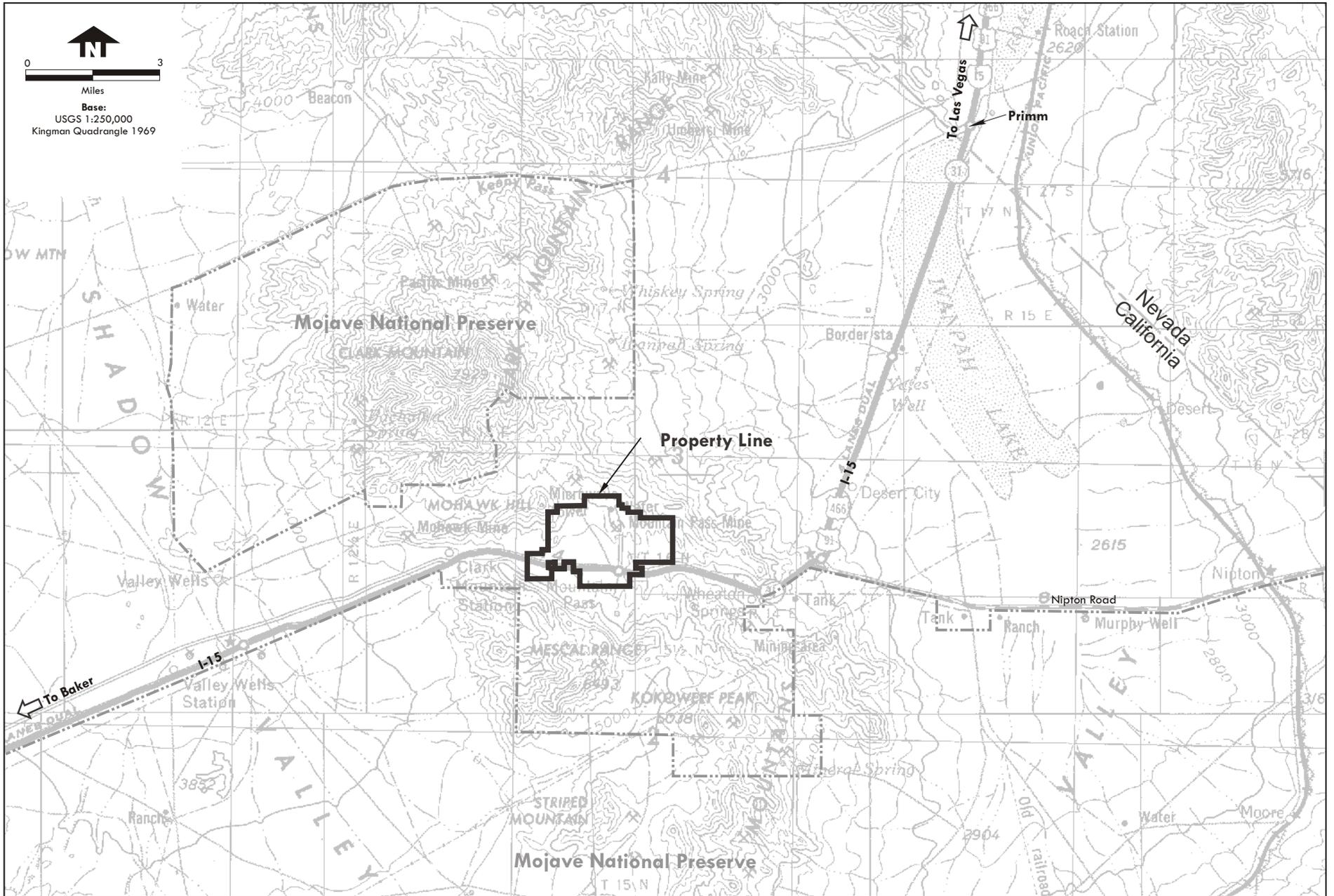
Molycorp Minerals, LLC (Molycorp) operates a mining and mineral recovery facility known as the Mountain Pass Mine, on approximately 2,222 acres located in northeastern San Bernardino County. The site is approximately 15 miles southwest of the Nevada-California state line and 30 miles northeast of Baker, California, adjacent to Interstate 15 (I-15) (see Figures 1 and 2). The site is accessed via the Bailey Road interchange on I-15. The mine is located within the southern portion of the Clark Mountain Range, approximately four miles southeast of Clark Mountain. Mine elevations range from 4,500 feet to 5,125 feet above mean sea level (amsl) with most of the site within the 4,600- to 4,900-foot amsl range.

1.2 PLAN MODIFICATIONS

Molycorp has a vested right to conduct surface mining operations pursuant to the California Surface Mining and Reclamation Act, Public Resources Code Section 2776 (SMARA) and the San Bernardino County Development Code Section 812.22020. Molycorp and its predecessors have mined the lanthanide ore body at Mountain Pass since 1951. On July 8, 2004, the County of San Bernardino Planning Commission approved a Conditional Use Permit (CUP) (#SAMR02//DN953-681N/07533SM2) for the new tailings storage area and additional onsite evaporation ponds and a revised Reclamation Plan (Plan) (#2004M-02); and certified the associated “EIR for Molycorp Inc. Mountain Pass Mine 30-Year Plan” (County of San Bernardino, 2004) for ongoing mining, stockpiling, and mineral recovery operations.

Molycorp is currently applying to the County to modify its current approved operations and facilities to allow the following (see Figure 3):

- Construction of updated vested mineral recovery facilities on an approximate 36-acre facilities’ pad located to the east of the existing mineral recovery facilities of which approximately 18 acres are considered undisturbed;
- Relocation of the crusher plant and stockpiles to an 13-acre partially disturbed area to the north of the pit and south of the planned North Overburden Stockpile (NOS) of which approximately 6 acres are considered undisturbed;
- Construction of an improved access road extending on-site from near the site entrance to the planned new warehouse on the east side of the existing mineral recovery plant area on approximately 20 acres of which approximately 11 acres are considered undisturbed;
- Elimination of the planned ponds on the 133-acre Northwest Evaporation Pond (NWEP) area currently authorized for the construction of 13 evaporation ponds. (With planned design improvements, additional evaporative capacity is not needed and no additional evaporative ponds are planned to be constructed. The 133 acres will remain mostly undisturbed; however, roads and pipelines serving the existing evaporation ponds will continue to be used);



Vicinity Location

Mountain Pass Mine
C-8
San Bernardino County, California



Source: Molycorp 2010



Mountain Pass Proposed Modifications

Molycorp Minerals, LLC.
Mountain Pass Mine, San Bernardino County, CA

- Construction of a products warehouse, tank farm, and gas meter on approximately 3 acres of the closed and filled products ponds (no new acreage disturbed);
- Construction addition to the central shop adjacent to the existing mobile shop and a paved parking area (no new acreage disturbed);
- Construction of a products warehouse, tank farm, and gas meter on approximately 3 acres of the closed and filled products ponds (no new acreage disturbed);
- Construction of two mill leach buildings on approximately 2.5 acres within the existing mineral recovery plants area (no new acreage disturbed); and
- Revision of its 30-year operational time span to 2012 through 2042 and a ten-year reclamation period from 2043 through 2053.

The above proposed revisions will not change the project boundary or any of the vested mining and milling activities. The planned crusher relocation areas, facilities' pad, and the access road are concentrated in and adjacent to the existing mineral recovery facilities in the central area and would impact approximately 35 acres of generally undisturbed to partially disturbed areas. This BRA focuses on these 35 acres of planned new disturbance.

No other impacts to any new undisturbed areas that have not been previously reviewed and approved as part of the 2004 Reclamation Plan and CUP are expected. The EIR and the CUP's Conditions of Approval include numerous mitigation measures and conditions to reduce biological impacts to less than significant. These mitigation measures and conditions are included in the BRA in Section 10 to be implemented prior to disturbance of the new 35 acres in order to minimize potential biological impacts.

Note that the elimination of the NWEF will eliminate previously evaluated potential impacts to approximately 133 acres, roughly four times the 35-acre area that will be impacted under this proposed modification. Following the termination of mining, Molycorp will reclaim the site in conformity with SMARA and the revised Reclamation Plan (see Figure 3 Mine Plans).

1.3 PURPOSE OF BIOLOGICAL RESOURCES ASSESSMENT

The purpose of this Biological Resources Assessment is to:

- Identify sensitive habitats in the project area;
- Identify sensitive species in the Project area;
- Identify if the planned project area is within a wildlife corridor; and
- Identify any Habitat Conservation Plans or Natural Community Conservation Plans that are associated with this project.

2.0 SENSITIVE SPECIES

2.1 LIST OF POTENTIALLY OCCURRING SENSITIVE PLANTS SPECIES

The following is a list of Rare, Threatened, or Endangered Species that have a potential to occur in the surrounding vicinity of the Mountain Pass Mine:

- *Achnatherum aridum* Mormon Needle Grass
- *Ageratina herbacea* Desert Ageratina
- *Aliciellla triodon* Coyote Gilia
- *Allium nevadense* Nevada Onion
- *Androstephium breveflorum* Small-flowered Androstephium
- *Arctomecon merriamii* White Bear Poppy
- *Asclepias nyctaginifolia* Mojave Milkweed
- *Astragalus cimae* var. *cimae* Cima Milkvetch
- *Astragalus tidesstromii* Tidestorm's Milkvetch
- *Astrolepis cochisensis* ssp. *Cochisensis* Scaley Cloak Fern
- *Coryphantha chlorantha* Desert Pincusion
- *Coryphantha vivipara* var. *rosea* Viviparous foxtail cactus
- *Cymopterus gilmanii* Gilman's Cymopterus
- *Cymopterus multinervatus* Purple-nerve Cymopterus
- *Enneapogon desvauxii* Nine-awned Pappus Grass
- *Erigeron uncialis* var. *uncialis* Limestone Daisy
- *Eriogonum umbellatum* var. *umbellatum* Juniper Sulpher-flowered Buckwheat
- *Erioneuron pilosum* Hairy Eerioneuron
- *Euphorbia exstipulata* var. *exstipulata* Clark Mountain Spurge
- *Galium proliferum* Desert Bedstraw
- *Galium wrightii* Wright's Bedstraw
- *Glossopetalon pungens* Pungent Glossopetalon
- *Grusonia parishii* Parish's Club Cholla
- *Hymenopappus filifolius* var. *eriopodus* Hairy –podded Fine-Leafed Hymenopappus
- *Ivesia jaegeri* Jaeger's Ivesia
- *Juncus nodosus* Knotted Rush
- *Leymus salinus* ssp. *Mojavensis* Hillside Wheat Grass
- *Linum puberulum* Plains Flax
- *Lotus argyraeus* var. *multicaulis* Scrub Lotus
- *Mendora scabra* Rough Mendora
- *Mentzelia polita* Polished Blazing Star
- *Mentzelia pterosperma* Wing-seed Blazing Star

- *Mirabilis cocinea* Red Four O’Clock
- *Muhlenbergia arsenei* Tough Muly
- *Munroa squarrosa* False Buffalo Grass
- *Oenothera cavernae* Cave Evening Primrose
- *Pellaea truncate* Spiny Cliff-brake
- *Penstemon bicolor ssp. Roseus* Rosy Two-tongued Beardtongue
- *Penstemon thompsoniae* Thompson’s Beardtongue
- *Penstemon utahensis* Utah Beardtongue
- *Phacelia anelsonii* Aven Nelson’s Phacelia
- *Phacelia barnebyana* Barneby’s Phacelia
- *Phacelia coerulea* Sky-blue Phacelia
- *Phacelia perityloides var. jaegeri* Jaeger’s Phacelia
- *Phacelia pulchella var. gooddingii* Goodding’s Phacelia
- *Physaria chambersii* Chamber’s Physaria
- *Piptatherum micranthum* Small-flowered Rice Grass
- *Polygala acanthoclada* Thorny Milkwort
- *Sanvitalia abertii* Albert’s Sanvitalia
- *Schkuhria multiflora var. multiflora* Many-flowered Schkuhria
- *Sclerocactus johnsonii* Johnson’s Bee-hived Cactus
- *Sphaeralcea rusbyi var. eremicola* Rusby’s Desert-mallow
- *Wislizenia refracta ssp. refracta* Jackass Clover
- *Woodsia plummerae* Plummer’s Woodsia

2.2 LIST OF POTENTIALLY OCCURRING SENSITIVE ANIMAL SPECIES

- *Corynorhinus townsendii* Townsend’s Big-eared Bat
- *Gopherus agassizii* Desert Tortoise State Threatened, Federally Threatened
- *Piranga rubra* Summer Tanager
- *Taxidea taxus* American Badger
- *Toxostoma bendirei* Bendire’s Thrasher
- *Vireo vicinior* Gray Vireo

3.0 REGULATORY BACKGROUND

3.1 State and Federal Sensitive Species Regulations

3.1.1 Endangered Species Act

The Endangered Species Act provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered in the U.S. or elsewhere. Provisions are made for listing species, as well as for recovery plans and the designation of critical habitat for listed species. The Act outlines procedures for federal agencies to follow when taking actions that may jeopardize listed species, and contains exceptions and exemptions.

Congress found that various species of fish, wildlife and plants in the U.S. have been rendered extinct and others depleted to the point of being in danger of or threatened with extinction. Congress declared that: depleted species are of aesthetic, ecological, educational, historical, recreational and scientific value; the U.S. has pledged to conserve various species facing extinction pursuant to several international treaties and agreements; encouraging states and other interested parties, through federal financial assistance and a system of incentives, to develop conservation programs meeting national and international standards is a key to meeting international commitments and to safeguarding the nation's heritage in fish, wildlife and plants.

The purposes of the Act are to: provide a means of conserving the ecosystems upon which endangered and threatened species depend; provide a program for conserving those species; take steps necessary to achieve the purposes of the international treaties and conventions. The policy of Congress is that federal agencies must seek to conserve endangered and threatened species and use their authorities in furtherance of the Act's purposes.

3.1.2 California Endangered Species Act

The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The California Department of Fish and Game will work with all interested persons, agencies and organizations to protect and preserve such sensitive resources and their habitats.

However, CESA also allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project caused losses of listed species.

3.1.3 California Environmental Quality Act

The California Environmental Quality Act (CEQA) is California's broadest environmental law. CEQA helps to guide the California Department of Fish and Game during issuance of permits and approval of projects. Courts have interpreted CEQA to afford the fullest protection

of the environment within the reasonable scope of the statutes. CEQA applies to all discretionary projects proposed to be conducted or approved by a California public agency, including private projects requiring discretionary government approval.

The purpose of CEQA is to:

- Disclose to the public the significant environmental effects of a proposed discretionary project, through the preparation of an Initial Study (IS), Negative Declaration (ND), or Environmental Impact Report (EIR).
- Prevent or minimize damage to the environment through development of project alternatives, mitigation measures, and mitigation monitoring.
- Disclose to the public the agency decision making process utilized to approve discretionary projects through findings and statements of overriding consideration.
- Enhance public participation in the environmental review process through scoping meetings, public notice, public review, hearings, and the judicial process.
- Improve interagency coordination through early consultations, scoping meetings, notices of preparation, and State Clearinghouse review.

California Public Resources Code Sections 21000-21004 generally state that:

- State agencies shall regulate the activities of private individuals, corporations, and other public agencies whose activities may affect the environment shall regulate to prevent environmental damage.
- State government agencies shall develop standards and procedures necessary to maintain, protect, rehabilitate and enhance environmental quality, including fish and wildlife populations and plant and animal communities.
- Projects carried out by public agencies shall be subject to the same level of review as private projects requiring approval by public agencies.
- No projects which would cause significant environmental effects should be approved as proposed if there are feasible alternatives or mitigation measures that would lessen those effects.
- Environmental impact reports (EIRs) shall be used to provide full public disclosure of the environmental impacts of a proposed project.
- EIRs shall include identification of all significant effects, alternatives, and potential mitigation measures.
- Local agencies should integrate CEQA with other environmental review, planning, and information gathering so as to cut costs and time and to apply the conservation of financial, governmental, physical, and social resources towards better mitigation.
- Identification of significant effects, alternatives and mitigation measures, as well as comments from the public and public agencies, and relevant information about significant effects should be made as early as possible in the process.

Failure to comply with CEQA to provide full disclosure of information during the CEQA process, which would result in relevant information not being presented to the public agency, would constitute prejudicial abuse of discretion leaving the project proponent open to possible lawsuits.

4.0 METHODOLOGY

4.1 LITERATURE SEARCH

A literature search was conducted to obtain information for this BRA. The following sources were used to gather species information, topographic data, resource value, federal and State jurisdictions, aeriels, and satellite images.

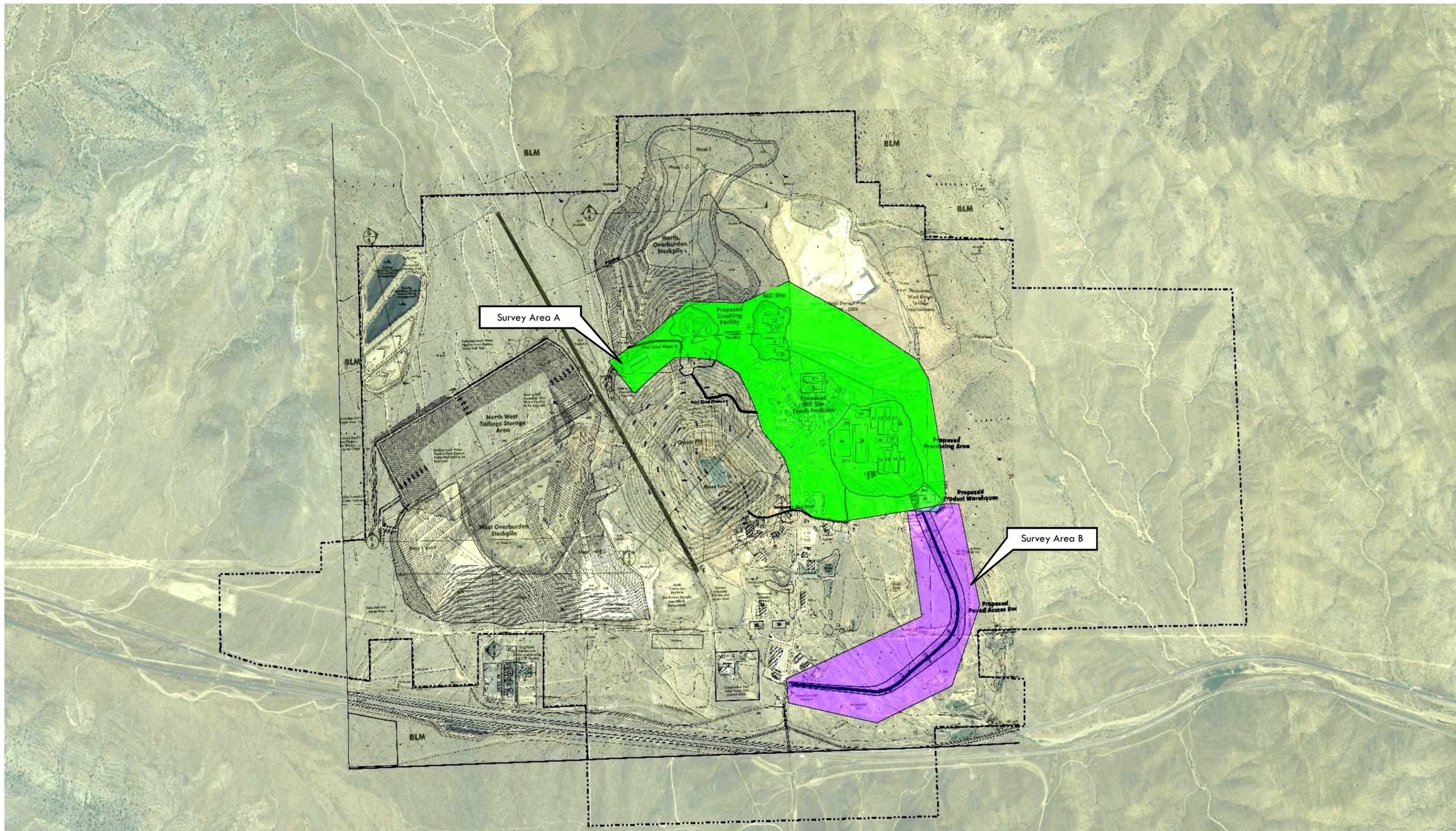
- California Natural Diversity Data Base; United States Geological Survey Topographic Quadrangles : Mescal Range, Clark Mountain, Valley Wells, Cow Cove, Cima Dome, Joshua, Mineral Hill, and Ivanpah Lake;
- Terraserver USA;
- Calflora;
- National Agricultural Imagery Program;
- Final EIR for Molycorp Inc. Mountain Pass Mine 30-Year Plan and its biological appendices (County of San Bernardino, July 2004); and
- Landsat 7 Color Imagery.

4.2 FIELD SURVEY

A field survey was conducted on the project site on June 4, 2010 for the purpose of assessing habitat that is present within the project location and to establish the presence, or probability of presence of sensitive species or their habitat listed above. The project site was walked (using 30 foot transects) and dominant species of plants were recorded. Animals that were observed were also recorded. Representative photographs of the habitat were taken.

The survey area was divided into two survey areas which were oversized to observe adjacent habitat and wildlife: Survey Area A and Survey Area B (see Figure 4).

- **Survey Area A** is approximately 201 acres in size. This area is where the crushing facility, the processing area, and the product warehouse are proposed to be constructed. A large portion of Survey Area A has already been impacted by existing permitted mine operations and infrastructure; and
- **Survey Area B** is approximately 85 acres and is the area where the proposed paved access road will be constructed. The area is along the east end of the existing mining facility and turns south towards the existing mine entrance on Bailey Road.



Source: Molycorp 2010

5.0 RESULTS

June 4, 2010 conditions at 11:00 AM at the project location were: temperature 80° Fahrenheit, winds from the Northeast at 3-4 miles per hour, sunny skies.

5.1 VEGETATION HABITAT TYPES

5.1.1 Survey Area A

Survey Area A has approximately 60 acres of a vegetation type classified as black brush scrub. The dominant plant species in this classification are: black brush (*Coleogyne ramosissima*), Bladder sage (*Salasaria Mexicana*), Joshua tree (*Yucca brevifolia*), Banana yucca (*Yucca baccata*), Mojave yucca (*Yucca schioidigera*), Buckhorn cholla (*Opuntia acanthocarpa*), Turpentine broom (*Thamnosma Montana*), Mormon tea (*Ephedra* sp.), Green tea (*Ephedra viridis*), Virgin River encelia (*Encelia virginensis*), Nevada joint-fir or tea (*Ephedra nevadensis*), Matchweed (*Gutierrezia sarothrae*), Cheesebush (*Hymenoclea salsola*), Spiny menodora (*Menodora spinescens*), Bitterbrush (*Purshia glandulosa*), Wolfberry (*Lycium andersonii*), and Utah juniper (*Juniperus osteosperma*).

The survey area also has 141 acres of disturbed areas that either are bare soil or dominated by non-native invasive plant species such as *Bromis* sp., *Brassica*, sp. and *Tamarix* sp.

5.1.2 Survey Area B

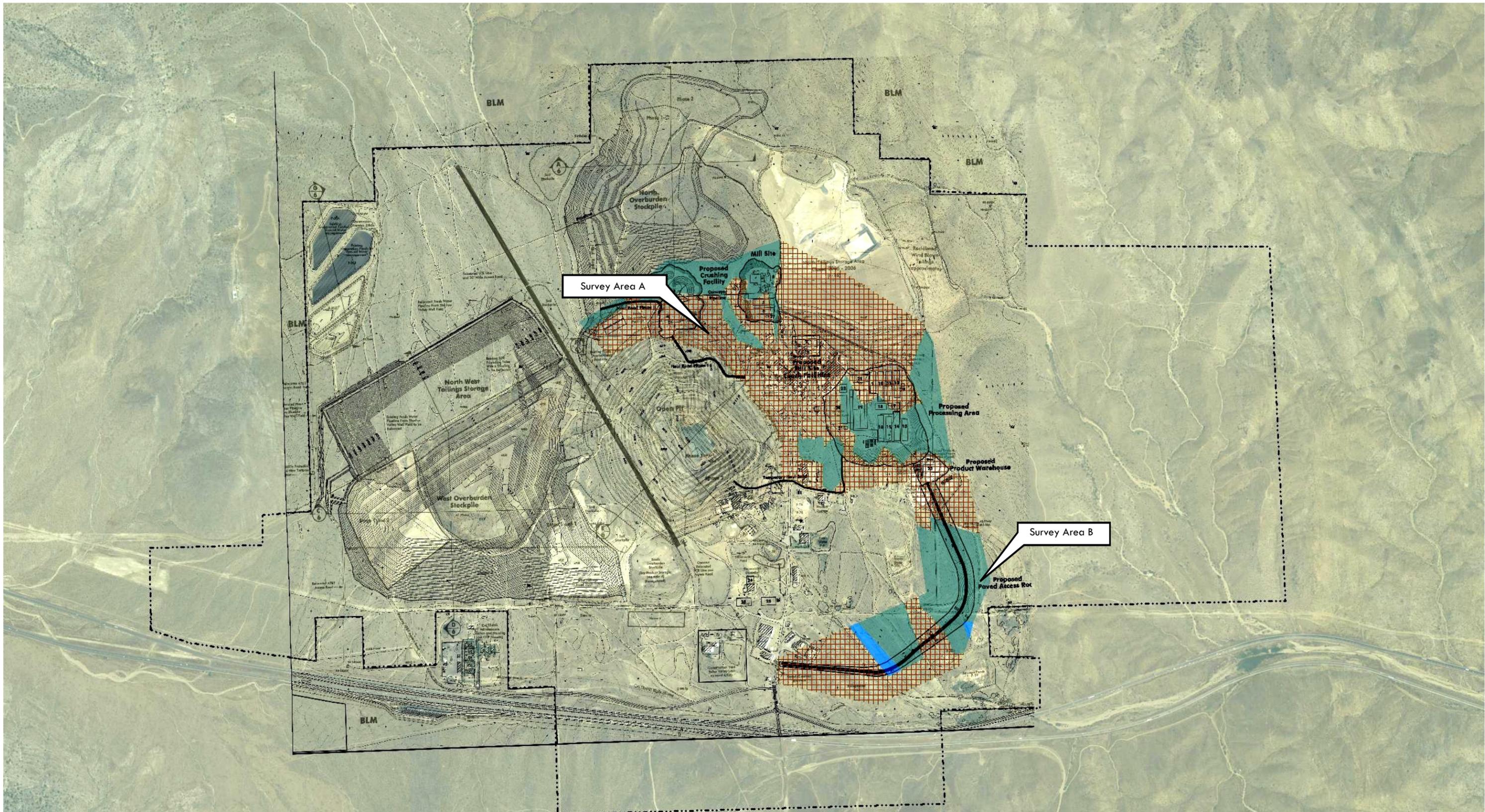
Survey Area B has approximately 35 acres of a vegetation type classified as black brush scrub. The dominant plant species in this classification are: black brush (*Coleogyne ramosissima*), Bladder sage (*Salasaria Mexicana*), Joshua tree (*Yucca brevifolia*), Banana yucca (*Yucca baccata*), Mojave yucca (*Yucca schioidigera*), Buckhorn cholla (*Opuntia acanthocarpa*), Turpentine broom (*Thamnosma Montana*), Mormon tea (*Ephedra* sp.), Green tea (*Ephedra viridis*), Virgin River encelia (*Encelia virginensis*), Nevada joint-fir or tea (*Ephedra nevadensis*), Matchweed (*Gutierrezia sarothrae*), Cheesebush (*Hymenoclea salsola*), Spiny menodora (*Menodora spinescens*), Bitterbrush (*Purshia glandulosa*), Wolfberry (*Lycium andersonii*), and Utah juniper (*Juniperus osteosperma*).

The eastern area contains approximately 3.7 acres of Mojave Desert Wash Habitat. Dominant species in this vegetation type are: four-wing saltbush (*Atriplex canescens*), Cheesebush (*Hymenoclea salsola*), and *Tamarix* sp.

The survey area also has approximately 46.2 acres of disturbed areas that either are bare soil or dominated by non-native invasive plant species such as *Bromis* sp., *Brassica*, sp. and *Tamarix* sp. Please see Figure 5 for a summary of vegetation types found in the areas surveyed.

5.2 RARE, ENDANGERED, OR SENSITIVE SPECIES AND HABITAT RESULTS

Sensitive species are those which have a federal designation as Threatened, or Endangered, a State designation of Rare, Threatened, or Endangered. The State also has Species of Special



Source: Molycorp 2010

Legend

-  Black Brush Scrub (95.1 Acres)
-  Disturbed Area (188 Acres)
-  Desert Wash Habitat (3.71 Acres)

Vegetation Map

Molycorp Minerals, LLC.
Mountain Pass Mine, San Bernardino County, CA



Figure 5

Concern (SC) which is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role;
- is listed as Federally but not State, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

A sensitive plant can also be designated by a classification system developed by the California Native Plant Society (CNPS). CNPS has created five "lists" in an effort to categorize degrees of concern. The CNPS lists are described as follows:

List 1A: Plants Presumed Extinct in California

The plants of List 1A (less than 30 taxa) are presumed extinct because they have not been seen or collected in the wild in California for many years. This list includes plants that are both presumed extinct in California, as well as those plants which are presumed extirpated in California. A plant is extinct in California if it no longer occurs in or outside of California. A plant that is extirpated from California has been eliminated from California, but may still occur elsewhere in its range.

All of the plants constituting List 1A meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to the California Environmental Quality Act (CEQA).

List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

The plants of List 1B are rare throughout their range with the majority of them endemic to California. Most of the plants of List 1B have declined significantly over the last century. List 1B plants constitute the majority of the plants in CNPS' Inventory with more than 1,000 plants assigned to this category of rarity.

All of the plants constituting List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

List 2: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

Except for being common beyond the boundaries of California, the plants of List 2 would have appeared on List 1B. From the federal perspective, plants common in other states or countries are not eligible for consideration under the provisions of the Endangered Species Act. Until 1979, a similar policy was followed in California. However, after the passage of the Native Plant Protection Act, plants were considered for protection without regard to their distribution outside the state.

With List 2, CNPS recognizes the importance of protecting the geographic range of widespread species. In this way, CNPS protects the diversity of the state's flora and helps maintain the evolutionary process and genetic diversity within species. All of the plants constituting List 2 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

List 3: Review List

The plants that comprise List 3 are united by one common theme - CNPS lack the necessary information to assign them to one of the other lists or to reject them. Nearly all of the plants remaining on List 3 are taxonomically problematic.

Some of the plants constituting List 3 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. The CNPS strongly recommends that List 3 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.

List 4: Plants of Limited Distribution - A Watch List

The plants in this category are of limited distribution or infrequent throughout a broader area in California, and their vulnerability or susceptibility to threat appears relatively low at this time.

Very few of the plants constituting List 4 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and few, if any, are eligible for state listing.

5.3 SENSITIVE PLANTS PRESENCE/ABSENCE

Mormon Needle Grass (*Achnatherum aridum*): A CNPS List 2 plant, Mormon needle grass is found in Joshua tree , and pinyon-juniper woodlands. It prefers limestone rock ridges. The project location lacks limestone rocky ridges so the plant is not present.

Desert Ageratina (*Ageratina herbacea*): A CNPS List 2 plant, the ageratina is found on rocky sites in pinyon-juniper woodlands. It prefers elevations of 5000' to 7,000'. The project site is not located within the preferred elevation range, and is composed of black brush scrub. The plant does not occur within the project location.

Coyote Gilia (*Aliciella triodon*): A CNPS List 2 plant, the gilia is found in great basin scrub, and pinyon-juniper woodlands. It prefers fine clay/sand or sand soils. The project site and area of impact does not contain pinyon-juniper woodlands. The project site is black brush scrub and soils are rocky. The plant does not occur within the project location.

Nevada Onion (*Allium nevadense*): A CNPS List 2 plant, the onion is found in pinyon-juniper woodland. It prefers sandy or gravel slopes in desert mountains. The project site does contain gravel slopes. However, the slopes are black brush scrub; the plant has a low potential to occur within the project boundaries.

Small-flowered Androstephium (*Androstephium breveflorum*): A CNPS List 2 plant. The androstephium prefers desert dunes in Mojave Desert scrub. No sand dunes occur within the project boundaries. The plant does not occur within the project location.

White Bear Poppy (*Arctomecon merriamii*): A CNPS List 2 plant. The poppy prefers scrub dominated by pigweed (*Chenopod* species) or Mojave Desert scrub. It is found on rocky slopes, calcareous soil, lose shale, or sandy washes. Due to the disturbed nature of the project where this plant may be found (Survey Areas A and B) this plant has a low potential to occur within the project location.

Mojave Milkweed (*Asclepias nyctaginifolia*): A CNPS List 2 plant. The milkweed can be found in Mojave Desert scrub and pinyon-juniper woodlands. The plant prefers elevations of 3000' to 5,600'. The project location is dominated by black brush scrub; however, this plant has been found numerous times north of the project location in the Ivanpah Lake area (approximately 20 miles away) within Mojave Desert scrub, which is at elevations lower than 4000'. Due to the lack of Mojave Desert scrub and the highly disturbed project area, the milkweed has a low potential to occur within the project location.

Cima Milkvetch (*Astragalus cimae* var. *cimae*): A CNPS List 1B plant. The milkvetch is found in Great Basin scrub, Joshua tree woodlands, and pinyon-juniper woodlands. It prefers mesas and rocky hillsides with calcareous soils. It usually grows under sagebrush. The project site lacks the necessary soils for this plant. The plant does not occur within the project location.

Tidestorm's Milkvetch (*Astragalus tidestromii*): A CNPS List 2 plant. This milkvetch is found in Mojave Desert scrub in washes and limestone soils. Survey Area B has a wash that might be suitable, but that area has been impacted heavily by mining activities. This milkweed has a low potential to occur within the project location.

Scaley Cloak Fern (*Astrolepis cochisensis* ssp. *Cochisensis*): A CNPS List 2 plant. The cloak fern is found in Joshua tree and pinyon-juniper woodlands. It prefers limestone slopes, and

crevices in desert mountains. The project location lacks limestone slopes and mountain crevices that can support the plant. The plant does not occur within the project location.

Desert Pincusion (*Coryphantha chlorantha*): A CNPS List 2 plant. The pincusion is found in Mojave Desert scrub, Joshua tree woodlands, pinyon-juniper woodlands on calcareous substrates or on rocky/gravelly soils. Survey Area A may have suitable habitat for this plant. The edge effects (effects from the mining activity that reduce the suitability of habitat to support sensitive plants) of the mining give this plant a low chance to occur in Survey Area A.

Viviparous foxtail cactus (*Coryphantha vivipara var. rosea*): A CNPS List 2 plant. This cactus prefers Mojave Desert scrub, and pinyon-juniper woodlands. It can be found in gravelly limestone soils, volcanic slopes, and black brush scrub hillsides. This species was found in the Clark Mountains. This species has a high probability to occur in Survey Area A.

Gilman's Cymopterus (*Cymopterus gilmanii*): A CNPS List 2 plant. A carbonate plant that requires soils rich in calcium carbonate, prefers rocky calcareous slopes in Mojave Desert scrub. The project property does not contain this type of habitat. The plant is not present within the project location.

Purple-nerve Cymopterus (*Cymopterus multinervatus*): A CNPS List 2 plant. This plant is found in Mojave Desert scrub, Joshua tree woodlands, and pinyon-juniper woodlands. It prefers sandy or gravelly soils. Survey Area A may have suitable habitat for this plant. The edge effects (effects from the mining activity that reduce the suitability of habitat to support sensitive plants) of the mining give this plant a low probability to occur in Survey Area A.

Nine-awned Pappus Grass (*Enneapogon desvauxii*): A CNPS List 2 plant. This plant is found in pinyon-juniper woodland on decomposed granite, or gravelly limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

Limestone Daisy (*Erigeron uncialis var. uncialis*): A CNPS List 1B plant. This species is found in Great Basin Scrub, subalpine coniferous forest, and pinyon-juniper woodland. It prefers crevices in limestone cliffs. The project location lacks suitable habitat. The plant is not present within the project location.

Juniper Sulpher-flowered Buckwheat (*Eriogonum umbellatum var. umbellatum*): A CNPS List 2 plant. This species is found in pinyon-juniper woodland and Mojave Desert scrub. It prefers sandy soil in canyon bottoms. The project location lacks suitable habitat. The plant is not present within the project location.

Hairy Eerionuron (*Erionuron pilosum*): A CNPS List 2 plant. This species is found in pinyon-juniper woodland. It prefers rocky or gravelly soils. This species can be considered a carbonate for its affinity to calcium carbonate soils. The project location lacks suitable habitat. The plant is not present within the project location.

Clark Mountain Spurge (*Euphorbia exstipulata var. exstipulata*): A CNPS List 2 plant. This species prefers rocky slopes in Mojave Desert scrub. Survey Area A may have suitable habitat

for this species. The edge effects (effects from the mining activity that reduce the suitability of habitat to support sensitive plants) of the mining give this plant a low probability to occur in Survey Area A.

Desert Bedstraw (*Galium proliferum*): A CNPS List 2 plant. This plant is found in Mojave Desert scrub, Joshua tree woodlands, and pinyon-juniper woodlands. It prefers rocky, limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

Wright's Bedstraw (*Galium wrightii*): A CNPS List 2 plant. This plant is found in pinyon-juniper woodlands and lower coniferous forests. It prefers limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

Pungent Glossopetalon (*Glossopetalon pungens*): A CNPS List 1B plant. This plant is found in pinyon-juniper woodland and chaparral. It is restricted to limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

Parish's Club Cholla (*Grusonia parishii*): A CNPS List 2 plant. This plant is found in Mojave Desert scrub, Sonoran scrub, and Joshua tree woodland. It prefers sandy sites. The only area that may contain suitable habitat within the project location is the wash in Survey Area B. This area has been heavily disturbed. This species has a low potential to occur within the project location.

Hairy-podded Fine-Leafed Hymenopappus (*Hymenopappus filifolius* var. *eriopodus*): A CNPS List 2 plant. This plant is found in pinyon-juniper woodlands. It prefers carbonate soils. The project location lacks suitable habitat. The plant is not present within the project location.

Jaeger's Ivesia (*Ivesia jaegeri*): A CNPS List 1B plant. This plant is found in pinyon-juniper woodland and upper montane coniferous forest. It prefers limestone cliffs. It prefers carbonate soils. The project location lacks suitable habitat. The plant is not present within the project location.

Knotted Rush (*Juncus nodosus*): A CNPS List 2 plant. This plant is found in meadows, marshes, and swamps. The project location lacks suitable habitat. The plant is not present within the project location.

Hillside Wheat Grass (*Leymus salinus* ssp. *Mojavensis*): A CNPS List 2 plant. This plant is found in pinyon-juniper woodland. It prefers rocky soils. Survey Area A may have suitable habitat for this species. The edge effects (effects from the mining activity that reduce the suitability of habitat to support sensitive plants) of the mining give this plant a low potential to occur in Survey Area A.

Plains Flax (*Linum puberulum*): A CNPS List 2 plant. This species is found in Great Basin scrub, Mojave Desert scrub, Joshua tree woodlands, and pinyon-juniper woodlands. It prefers dry ridges. Survey Area A may have suitable habitat for this species. The edge effects (effects from

the mining activity that reduce the suitability of habitat to support sensitive plants) of the mining give this plant a low potential to occur in Survey Area A.

Scrub Lotus (*Lotus argyraeus* var. *multicaulis*): A CNPS List 1B plant. This plant is found in pinyon-juniper woodland on granite or volcanic substrate. Survey Area A may have suitable habitat for this species. The edge effects (effects from the mining activity that reduce the suitability of habitat to support sensitive plants) of the mining give this plant a low potential to occur in Survey Area A.

Rough Mendora (*Mendora scabra*): A CNPS List 2 plant. This species is found in Mojave Desert scrub, Joshua tree woodlands, and pinyon-juniper woodlands. It prefers rocky soils in canyons. Canyon bottom habitat is not present on the site, but Survey Area A may have marginal habitat for this species. This species has a low potential to occur in Survey Area A.

Polished Blazing Star (*Mentzelia polita*): A CNPS List 1B plant. This plant is found in Mojave Desert scrub and prefers carbonate soils. The project location lacks suitable habitat. The plant is not present within the project location.

Wing-seed Blazing Star (*Mentzelia pterosperma*): A CNPS List 2 plant. This plant is found in Mojave Desert scrub and prefers clay, gypsum soils. The project location lacks suitable habitat. The plant is not present within the project location.

Red Four O'Clock (*Mirabilis cocinea*): A CNPS List 2 plant. This plant is found in pinyon-juniper woodlands. Survey Section A has black brush scrub, which could be marginal habitat for this species. A specimen was found in Mountain Pass in 1977. This species has a moderate potential to occur in Survey Area A.

Tough Muly (*Muhlenbergia arsenei*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands. It prefers steep slopes and ridge tops with granite and limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

False Buffalo Grass (*Munroa squarrosa*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands. It prefers open, gravelly or rocky soils. Survey Area A has marginal habitat for this species. The habitat may not be open enough with the existing mine site adjacent to Survey Area A. This species has a low potential to occur in Survey Area A.

Cave Evening Primrose (*Oenothera cavernae*): A CNPS List 2 plant. This species is found in Great Basin scrub, Mojave Desert scrub, and Joshua tree woodlands. It prefers limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

Spiny Cliff-brake (*Pellaea truncate*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands. It prefers granite boulders and fissures in granite cliffs. It also is associated with limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

Rosy Two-tongued Beardtongue (*Penstemon bicolor* ssp. *Roseus*): A CNPS List 1B plant. This plant is found in Mojave Desert scrub and Joshua tree woodland. It prefers rock or gravelly soils. Survey Area A may have suitable habitat for this species. The edge effects (effects from the mining activity that reduce the suitability of habitat to support sensitive plants) of the mining give this plant a low potential to occur in Survey Area A.

Thompson's Beardtongue (*Penstemon thompsoniae*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands. It prefers limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

Utah Beardtongue (*Penstemon utahensis*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands, Great Basin scrub, and Mojave Desert scrub. It prefers rocky soils. Survey Area A may contain habitat for this species. The edge effects (effects from the mining activity that reduce the suitability of habitat to support sensitive plants) of the mining give this plant a low potential to occur in Survey Area A.

Aven Nelson's Phacelia (*Phacelia anelsonii*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands and Mojave Desert scrub. It prefers shady places in nutrient-rich soils. Usually found at the base of limestone or sandstone cliffs. Also found among rocks in rocky areas or in washes. The project location lacks nutrient-rich shady areas. The plant has a low potential to occur within the project location.

Barneby's Phacelia (*Phacelia barnebyana*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands and Great Basin scrub. It prefers calcareous soils. The project location lacks suitable habitat. The plant is not present within the project location.

Sky-blue Phacelia (*Phacelia coerulea*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands, and Mojave Desert scrub. Survey Area A may contain habitat for this species. However, the edge effects (effects from the mining activity that reduce the suitability of habitat to support sensitive plants) of the mining give this plant a low potential to occur.

Jaeger's Phacelia (*Phacelia perityloides* var. *jaegeri*): A CNPS List 1B plant. This plant is found in pinyon-juniper woodland. It prefers rocky limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

Goodding's Phacelia (*Phacelia pulchella* var. *gooddingii*): A CNPS List 2 plant. This species is found in Mojave Desert scrub. It prefers clay soils and is often found on alkaline flats (dry lake bed). The project location lacks suitable habitat. The plant is not present within the project location.

Chamber's Physaria (*Physaria chambersii*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands. It prefers limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

Small-flowered Rice Grass (*Piptatherum micranthum*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands. It prefers limestone soils, gravel benches, rocky slopes, and

creek banks. Survey Area A may have marginal habitat for this species and a low potential to occur.

Thorny Milkwort (*Polygala acanthoclada*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands, and Joshua tree woodlands. Survey Area A may have a low potential for this species to occur.

Albert's Sanvitalia (*Sanvitalia abertii*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands. It prefers limestone soils. The project location lacks suitable habitat. The plant is not present within the project location.

Many-flowered Schkuhria (*Schkuhria multiflora* var. *multiflora*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands. It prefers sandy soils. Survey Areas A and Survey Area B may have suitable habitat. However, the edge effects (effects from the mining activity that reduce the suitability of habitat to support sensitive plants) of the mining give this plant a moderate potential to occur.

Johnson's Bee-hived Cactus (*Sclerocactus johnsonii*): A CNPS List 2 plant. This species is found in Mojave Desert scrub. It prefers granitic soils. The project location may have suitable habitat in granitic soils located in Survey Areas A, and B. Due to the high level of disturbance, this species has a moderate chance to occur within the project location.

Rusby's Desert-mallow (*Sphaeralcea rusbyi* var. *eremicola*): A CNPS List 1B plant. This plant is found in Mojave Desert scrub and Joshua tree woodland. It has been found in black brush scrub. The project location may have suitable habitat in granitic soils located in Survey Areas A, and B. Due to the high level of disturbance, this species has a moderate chance to occur on the project location.

Jackass Clover (*Wislizenia refracta* ssp. *refracta*): A CNPS List 2 plant. This species is found in playas, desert dunes, and alkaline flats. The project location lacks suitable habitat. The plant is not present within the project location.

Plummer's Woodsia (*Woodsia plummerae*): A CNPS List 2 plant. This species is found in pinyon-juniper woodlands. It is usually found at the base of granitic cliffs and boulders. The project location lacks suitable habitat. The plant is not present within the project location.

5.4 SENSITIVE ANIMAL PRESENCE/ABSENCE

Townsend's Big-eared Bat (*Corynorhinus townsendii*): A California SC species, this bat prefers mesic (moderately wet) habitat. It roosts in the open, hanging from rock wall our ceilings. This bat is extremely sensitive to human disturbance. Due to the high amount of disturbance at the mine site, this species would not be present.

Desert Tortoise (*Gopherus agassizii*): A State and federally Threatened species, the desert tortoise prefers desert scrub, desert wash, and Joshua tree habitat. It requires friable soil for burrowing and nest construction, creosote bush (*Larrea tridentate*) for shade and a large annual

wildflower blooms as a food source. The project area is composed of black brush scrub and disturbed areas. The few acres of desert wash present in the project area are too disturbed for a permanent population of desert tortoise. Due to the lack of preferred habitat and high disturbance a “low” potential exists for the desert tortoise to be present within the project boundaries.

Summer Tanager (*Piranga rubra*): A California SC species, this bird is a summer resident of desert riparian habitat along the lower Colorado River and the Mojave Desert. It requires Cotton-wood riparian habitat for nesting and foraging with older, denser stands of trees along the stream or river. No cottonwood-willow habitat exists on the property. This species is not present.

American Badger (*Taxidea taxus*): A California SC species, this mammal is most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. It preys on burrowing rodents, and prefers open areas. Due to the highly disturbed nature of the project location, there is a “low” potential for this species to be present.

Bendire’s Thrasher (*Toxostoma bendirei*): A California SC species, this migratory bird is a local spring and summer resident of flat, succulent shrub/Joshua tree habitats in the Mojave Desert. It nests in cholla, yucca, and small thorny shrubs or trees about 0.5 to 20 feet off the ground. Black brush scrub could be considered this type of habitat. The highly disturbed nature of the mine site makes the suitable habitat less than ideal. Still, there is a “moderate” potential for this species to be present within the project boundaries.

Gray Vireo (*Vireo vicinior*): A California SC species, this small bird is found in Mojave Desert Mountains. Likes stands of junipers and sagebrush and nests 1-5 feet above the ground. The undisturbed area in Survey Area A has a moderate potential for the presence of the vireo.

6.0 CRITICAL HABITAT

The project site does not fall within any federal critical habitat for endangered species.

7.0 POTENTIAL DRAINAGES

The California Department of Fish and Game (CDFG) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the law requires any person, state or local governmental agency, or public utility to notify the CDFG before beginning an activity that will substantially modify a river, stream, or lake. If the Department determines that the activity could substantially adversely affect an existing fish and wildlife resource, a Section 1602 Lake or Streambed Alteration Agreement is required.

Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;
- substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or

- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow

Survey Areas A and B were assessed for the potential to have State and federally protected streams. Drainage features were evaluated per federal and State protocols for the presence of hydrologic flow; a defined bed, bank or channel, and the presence of riparian vegetation. These totals only include drainages within the Survey Areas (see Figure 6).

7.1 SURVEY AREA A DRAINAGES

Survey Area A contained a total of 1.9 acres of State jurisdictional drainages of which approximately 0.7 acres of State jurisdictional drainages will be impacted.

7.2 SURVEY AREA B DRAINAGES

Survey Area B contained a total of 8.28 acres of State jurisdictional drainages of which 0.8 acres of State jurisdictional drainages will be impacted.

8.0 IMPACTS TO HABITAT

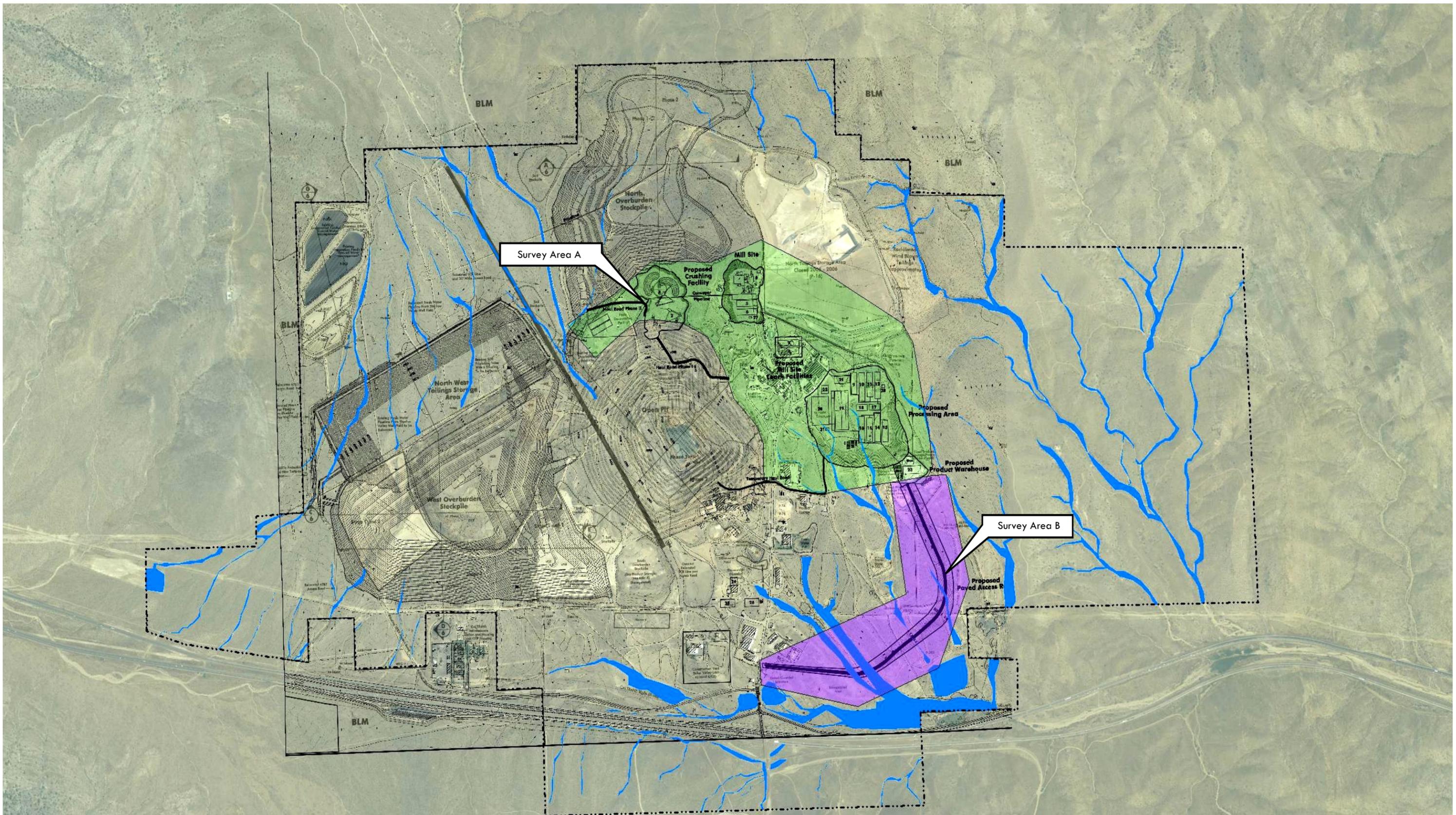
The proposed project will permanently impact a 69.1-acre area (see Figure 7). Of the 69-acre impact area, 34.3 acres will be in black brush scrub and 0.8 acres in Desert Wash Scrub. The remaining 34 acres have already been heavily disturbed by mining activity or existing mine infrastructure.

**Table 1
Summary of Impacts for Proposed Modifications**

Habitat Type	Habitat in Survey Areas (Acres)	Impact Area (Acres)
Black Brush Scrub	95.1	34.3
Desert Wash Scrub	3.7	0.8
Disturbed Areas	188.0	34.0
Totals	286.8	69.1

9.0 WILDLIFE CORRIDORS

The Mountain Pass Mine site lies between the Clark Mountain Range and the Ivanpah Mountain Range. The two mountain ranges do provide a linkage for wildlife species to contribute genetically between each area. The existing I-15 highway forms a barrier to this wildlife movement. The terrestrial animal species are confined to cross between ranges via culverts and bridges under the highway.



Source: Molycorp 2010

State Jurisdictional Drainages

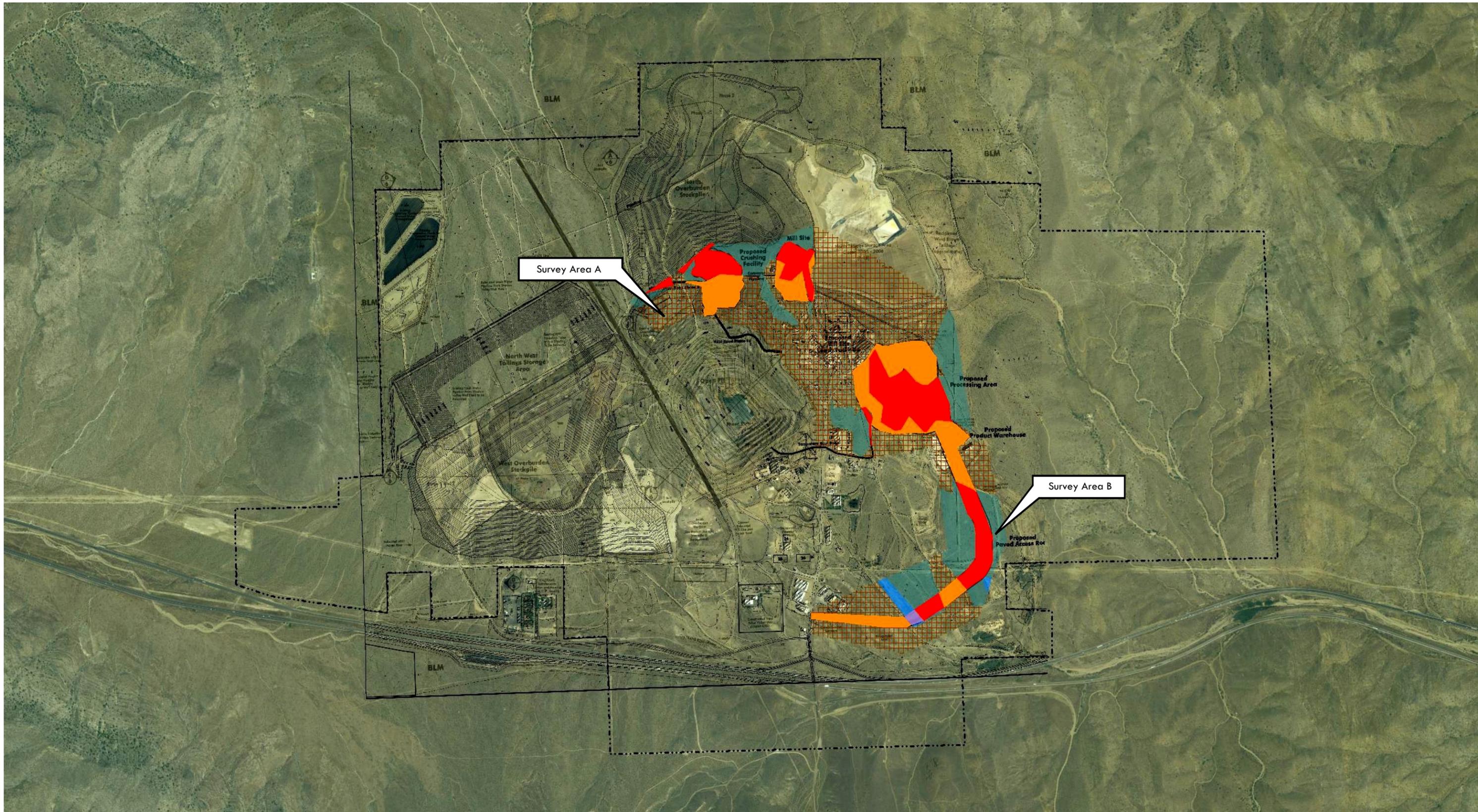
	Survey Area (Acres)	Area Impacted (Acres)
Survey Area A	1.9	0.7
Survey Area B	0.29	0.8



State Jurisdictional Drainage Map

Molycorp Minerals, LLC.
Mountain Pass Mine, San Bernardino County, CA

Figure 6



Project Impacts to Existing Habitat (Acres)

Black Brush Scrub	34.3
Desert Wash Habitat	0.80
Total	35.1
Existing Disturbed Areas	34.0
Total Impacts	69.1

Legend

-  Existing Disturbed
-  Desert Wash Habitat
-  Impacts to Already Disturbed Areas
-  Black Brush Scrub
-  Impacts to Black Brush Scrub
-  Impacts to Desert Wash Habitat



Source: Molycorp 2010

Area of Impact Map

Molycorp Minerals, LLC.
Mountain Pass Mine, San Bernardino County, CA

Figure 7

The mine site and the proposed project will not have any impacts on this wildlife movement to and from the Clark Mountain Range and the Ivanpah Mountain Range. The proposed project area is planned within the existing footprint of the operating mine. The mine has been operating since 1951 and no new areas beyond the permitted areas will occur.

10.0 PROPOSED RECOMMENDATIONS AND MITIGATION MEASURES

The proposed modifications on approximately 35 acres of undisturbed lands within the Mountain Pass Mine site are not expected to impact any listed plant or wildlife species. Potential impact to sensitive plants and wildlife including the desert tortoise, streambeds, and Black Brush Scrub and Desert Wash habitat will be minimized to a less than significant impact through implementation of the previously approved mitigation measures and conditions of approval required through the approval of the CUP, Reclamation Plan, and EIR referenced in Section 1.2 above.

Note that the elimination of the NWEF will eliminate previously evaluated potential impacts to approximately 133 acres of similar habitat, roughly four times the 35-acre area that will be impacted under this proposed modification.

The mitigation measures and conditions of approval from the CUP, Reclamation Plan, and EIR are to be implemented prior to disturbance of the new 35 acres in order to minimize potential biological impacts with several measures required during and after operations such as the revegetation of the site per the approved Reclamation Plan. The following mitigation measures and conditions of approval from the Mountain Pass Mine CUP and Reclamation Plan shall be implemented to mitigate potential biological impacts. Note that many of these measures and conditions are currently being implemented as part of ongoing mining and reclamation activities.

60. Molycorp will implement the Revegetation Plan to include the following components:
 - a) a long-term, site-wide non-native plant eradication and control program. The eradication and control program will include all disturbed portions of the mine site, as well as the many natural drainages in the south-central portion of the mine site, where non-native vegetation has become established. This program will begin within one year of project approval for the existing site and will continue in concert with development of the proposed evaporation pond expansion area and overburden stockpile expansion areas. Special attention will be paid to eliminating salt-cedar within and adjacent to the mine site where access is allowed by the landowner or manager. Eradication efforts will occur at least twice each year (late spring and late fall), and will focus on chemical and manual methods to control the growth and dispersal of established colonies and individual plants of invasive, non-native species listed by the California Department of Food and Agriculture (<http://pi.cdffa.ca.gov/weedinfo/>).

- b) a list of appropriate reference areas that will be used to collect baseline data against which revegetation success will be measured. The number of such baseline areas will be dependent upon two factors, the number of different habitats ultimately affected by the project and the variability of species diversity within each habitat. Molycorp will use the methodology discussed in the Revegetation Plan to sample an appropriate number of reference areas for each type of habitat requiring revegetation. Molycorp will determine the number of reference sites sampled for each affected habitat type based on the variability of species diversity for each reference site.
- c) a map and list of sites where plants will be transplanted and propagated, and a detailed outline of the transplantation/propagation procedures that will be followed,
- d) a detailed discussion of maintenance and monitoring requirements, including the number and locations of test plots.
- e) the seed mix to be collected and used at the site. The seed collection and maintenance will be performed by a qualified seed company that specializes in the collection of native seed from locally collected stock.

(EIR Mitigation Measure B-1)

- 61. The final revegetation effort for the activities covered by this EIR will be performed at an approximately 1:1 replacement ratio, i.e. one acre of habitat restored for each acre of habitat disturbed.

(EIR Mitigation Measure B-2)

- 62. Revegetation Monitoring will continue annually in a given area at the mine for 10 years after reclamation has been completed there. Following the first two years of qualitative monitoring, quantitative monitoring will be conducted. Monitoring will utilize methods appropriate to the areas under study based on discussions with the County. Beginning with the adoption of the final revision of the Reclamation Plan that encompasses all the needed changes to be consistent with the final conditions of project approval, and continuing until reclamation is completed at the mine, Molycorp will submit to the County annual monitoring reports. The reports will:

- a) describe revegetation actions undertaken in the reporting period;
- b) identify areas that have been disturbed;
- c) identify areas and acreage for which revegetation has been started;
- d) present results of investigations on species diversity and other measures of revegetation success in test and control or reference plots;
- e) describe successes and problems in the revegetation efforts for that year;
- f) describe steps taken to resolve problems or achieve revegetation success;
- g) describe disturbance and revegetation efforts planned for the next two years.

(EIR Mitigation Measure B-3)

63. If revegetation is not successful, Molycorp will undertake the following actions:
- a) If, during the first two years of qualitative monitoring, revegetation is clearly not successful, Molycorp will reevaluate the revegetation methods and will discuss changes to these methods with the County. Molycorp will revise the Revegetation Plan, secure concurrence from the County for the changes, and begin implementing the new measures.
 - b) If the test plots do not meet the specified success criteria of the control plots after three years, Molycorp will make an assessment of the revegetation methods to identify any deficiencies contributing to planting failures. Corrective action shall be incorporated in follow-up testing.

If after five years, the revegetated areas (as measured by the results of the test plots) have not achieved these success criteria, Molycorp will immediately begin to implement the measures identified in a contingency plan.

(EIR Mitigation Measure B-4)

64. Prior to ground disturbance for each component of the proposed project, intensive, focused surveys will be conducted by a qualified biologist approved by the County for the special-status species previously and potentially found onsite at an appropriate time of year for maximum detectability, with particular emphasis on burrowing owls, desert tortoise, and nesting birds. Wildlife surveys will include diurnal transect surveys for special-status animals and likely bat roosts.

(EIR Mitigation Measure B-5)

65. Prior to ground disturbance for each component of the proposed project, a focused plant survey will be conducted by a qualified botanist at an appropriate time of year for maximum detectability in order to locate special-status species.

(EIR Mitigation Measure B-6)

66. Special-status plant populations that are adjacent to, but outside of, the proposed work areas and not slated for development, will be flagged and temporarily fenced to ensure that these plants are not inadvertently harmed.

(EIR Mitigation Measure B-7)

67. Special-status plants (as listed in County Development Code Section 89-0401 (et.al.), Desert Native Plant Protection, and those species identified/listed in Mitigation Measure B-6) and growing within the disturbed areas will be salvaged and/or propagules will be relocated to an appropriate location within the mine site that will not be disturbed by future mine activities. Prospective transplanting sites will be inspected and approved by a qualified botanist prior to removal of vegetation for the project. Transplanting efforts will be consistent with the revised Revegetation Plan.

(EIR Mitigation Measure B-8)

69. Special-status species identified in preconstruction surveys discussed in **Mitigation Measure B-5** shall be relocated prior to vegetation clearing or building removal. Prior to disturbance of native habitat, a qualified biologist, approved by the County, will make a diligent effort to remove special-status species from the areas to be disturbed. This effort will focus on wildlife species with limited mobility. All individuals captured will be relocated to the nearest appropriate habitat within the Molycorp site. Individuals that are relocated will be reported to CDFG on an annual basis. Mobile species that move out of the disturbance area will be noted as well, but no specific effort to relocate these species will be attempted.

(EIR Mitigation Measure B-10)

70. Clearance of previously undisturbed land will be scheduled outside of the nesting period for both migratory bird species and special-status bird species if nesting birds occur on the subject land.

(EIR Mitigation Measure B-11)

71. Prior to disturbing each wash, Molycorp will complete the following actions;
- a) submit a plan to the County that shows how much habitat will be affected, explains the habitat value of the affected habitat, and identifies measures to replace these habitat values with similar values and areas elsewhere (i.e., providing alternative areas with similar habitat values to the areas disturbed by the project, to compensate for the impacts of project activities on wash habitat areas);
 - b) initiate the implementation of the habitat value replacement actions;
 - c) establish a schedule for completion of the habitat value replacement activity including a monitoring and remedial program; and
 - d) concurrent with these activities Molycorp will secure from the U.S. Army Corps of Engineers (USACE) and California Department of Fish and Game (CDFG) a 404 and 1603 permit, respectively, if legally required.

(EIR Mitigation Measure B-12)

72. The attractiveness of the site to ravens will be minimized by preventing access to potential food sources, such as garbage. Mine personnel, including personnel constructing the new facilities and implementing the Reclamation Plan, will be educated about the importance of placing garbage in closed containers and keeping the mine site free from trash. Compliance with this measure will be monitored annually. Molycorp will fund a study to determine the potential impacts if the efforts are unsuccessful to prevent raven access to garbage or other on-site food sources. Prior to project implementation, Molycorp will submit a Raven Control Plan that addresses the following: measures to reduce water availability for the ravens, such as covering site

ponds, constructing vertical walls as pond edges, placing monofilament line or screening over the pond surface, and/or adding harmless but taste aversive chemicals to standing water sources. Depending on the outcome of these actions, additional measures to control raven impacts may be implemented. If measures to reduce the raven population are deemed necessary, Molycorp will obtain the appropriate permits from CDFG and/or USFWS.

(EIR Mitigation Measure B-13)

73. Fueling and maintenance of vehicles and other equipment shall occur at least 200 feet from any storm drain, riparian scrub habitat, water body, wash, or streambed, except at existing facilities with adequate spill control to prevent spills from affecting these resources. Molycorp shall ensure that contamination of these habitats, as well as upland habitats, does not occur during such operations. All spills of this nature will be promptly cleaned up and soil disposed of in an approved manner.

(EIR Mitigation Measure B-14)

11.0 REFERENCES

American Ornithologists' Union. 1983 (and supplements 1985, 1987, 1989, 1991, 1993, and 1995). *The A.O.U. Check-List of North American Birds*. 6th ed. Allen Press. Lawrence, Kansas.

Burt, W.H., and Grossenheider, R.P., 1980. *Peterson Field Guides, Mammals*. Houghton Mifflin Company. New York, New York.

CDFG (California Department of Fish and Game). 1988a. *California's wildlife, Volume I: Amphibians and Reptiles*. State of California Resources Agency. Sacramento, California.

CDFG (California Department of Fish and Game). 1988b. *California's Wildlife, Volume II: Birds*. State of California's Resource Agency. Sacramento, California.

CDFG (California Department of Fish and Game). 1988c. *California's Wildlife, Volume III: Mammals*. State of California Resources Agency. Sacramento, California.

CDFG (California Department of Fish and Game). 2009 (April). *Natural Communities List*. The Resources Agency of California, Department of Fish and Game, Natural Diversity Data Base. Sacramento, California.

CDFG (California Department of Fish and Game). 2009 (April). *Endangered and Threatened Animals List*. The Resources Agency of California, Department of Fish and Game, Natural Diversity Data Base. Sacramento, California.

CDFG (California Department of Fish and Game). 2009 (April). *Endangered Threatened and Rare Plants*. The Resources Agency of California, Department of Fish and Game, Natural Diversity Data Base. Sacramento, California.

CDFG (California Department of Fish and Game). 2009 (April). *Special Animals List*. The Resources Agency of California, Department of Fish and Game, Natural Diversity Data Base. Sacramento, California.

CDFG (California Department of Fish and Game). 2010. RareFind 3 personal computer program. Data Base Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species

County of San Bernardino, May 2004. *EIR for Molycorp Inc. Mountain Pass Mine 30-Year Plan* (County of San Bernardino, 2004).

County of San Bernardino, May 2004. *Conditional Use Permit (#SAMR02//DN953-681N/07533SM2) and Reclamation Plan (#2004M-02) for Molycorp Inc. Mountain Pass Mine 30-Year Plan*.

Department of the Army. 1986 (Nov 13). 33 CFR Parts 320 Through 330, Regulatory Programs of the Corps of Engineers; Final Rule. Federal Register 51(219):41206-41206.

Department of the Army. 2000 (Mar 9). 33 CFR Parts 320 Through 330, Regulatory Programs of the Corps of Engineers; Final Rule. Federal Register 65(47):12818-12899.

Department of the Army. 2002 (Jan 15). 33 CFR Parts 320 Through 330, Regulatory Programs of the Corps of Engineers; Final Rule. Federal Register 67(10):20020-2095.

Hickman, J.C. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press. Berkeley, California.

Holland, R.F. 1986 (updated 1996). *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Non-game Heritage Program. California Department of Fish and Game. Sacramento, California.

Molycorp, Inc. and Lilburn Corporation, March 2005. *Final Mine and Reclamation Plan for the Mountain Pass Mine*. San Bernardino, California.

Munz, P.A. 1974 *A Flora of Southern California*. University of California Press. Berkeley, California.

Reed, P.B. 1988. *National List of Plant Species That Occur in Wetlands: California (Region 0)*. National wetlands Inventory, US Fish and Wildlife Biological Report 88 (26.9).

Sawyer, J.O. and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society. Sacramento, California.

Stebbins, R.C. 2003. *A Field Guide to Western Reptiles and Amphibians*. 2nd ed. Houghton Mifflin Company. Boston, Massachusetts.

Tibor, D.P. 2001. *California Native Plant Society's Inventory of Rare and Endangered Plants of California*. California Native Plant Society. Special Publication, No. 1, 6th ed.

Udvardy, M.D. 1994. *National Audobon Society Field Guide to North American Birds*. Alfred A. Knopf, Inc. New York, New York.

USACE (United States Army Corps of Engineers). 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, Mississippi.

USACE (United States Army Corps of Engineers). 2006. *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. Ed, J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR. U.S. Army Engineer Research and Development Center. Vicksburg, Mississippi.

USDA (United States Department of Agriculture). 1979. *Soil Survey of Riverside County, California*. Department of the Interior. U.S. Government Printing Office. Washington, DC.

USGS (United States Geological Survey). *Beaumont, California 7.5-Minute Topographic Quadrangle Map*. Department of the Interior. U.S. Government Printing Office. Washington, D.C.

USFWS(United States Fish and Wildlife Service). 1993 (Sep 30). *Plant Taxa for Listing as Endangered or Threatened Species; Notice of Review*. Federal Register 50 CFR Part 17. U.S. Department of the Interior. Washington, D.C.

USFWS(United States Fish and Wildlife Service). 1994 (Nov 15). *Endangered or Threatened Wildlife and Plants; Animal Candidate Review for Listing as Endangered or Threatened Species*. Federal Register 50 CFR Part 17. U.S. Department of the Interior. Washington, D.C.

USFWS(United States Fish and Wildlife Service). 1997c (Oct. 31). *Endangered or Threatened Wildlife and Plants*. Federal Register 50 CFR Part 17. U.S. Department of the Interior. Washington, D.C.

12.0 CERTIFICATION

The report must include the certification statement within the body of the report as shown below:
CERTIFICATION: *“I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a nondisclosure or consultant confidentiality agreement with the project applicant or applicant’s representative and that I have no financial interest in the project.”*

\
DATE: _____
Report Author

SIGNED: _____

Include names and signatures for those performing fieldwork.

1) Fieldwork Performed By:

Name Name

2) Fieldwork Performed By:

Name Name

3) Fieldwork Performed By:

Name Name

4) Fieldwork Performed By:

Name Name

Check here _____ if adding any additional names/signatures, below or on other side of page.

APPENDIX A
FLORA COMPENDIA

Flora Compendia

Gymnosperms

Cupressaceae

Juniperus osteosperma

Utah juniper

Ephedraceae

Ephedra nevadensis

Nevada joint-fir

Ephedra viridis

Green joint-fir

Angiosperms - Dicotyledons

Anacardiaceae

Rhus trilobata

Skunkbrush

Asclepiadaceae

Asclepias erosa

Desert milkweed

Apiaceae

Cymopterus multinervatus

Purple cymopterus

Lomatium nevadense

Wild parsley

Asteraceae

Acamptopappus sphaerocephalus

Golden head

Adenophyllum cooperi

Cooper's yellow comp

Ambrosia dumosa

Burrobush

Ambrosia eriocentra

Wooly burbush

Artemisia ludoviciana

Silver wormwood

Baileya multiradiata

Desert marigold

Baileya pauciradiata

Yellow marigold

Baileya pleniradiata

Many-rayed marigold

Brickellia arguta

Gold brickellbush

<i>Brickellia californica</i>	California brickellbush
<i>Brickellia desertorum</i>	Desert brickellbush
<i>Brickellia incana</i>	Woolly brickellbush
<i>Brickellia oblongifolia</i>	Pinyon brickellbush
<i>Chaenactis stevioides</i>	Desert pincushion
<i>Chaetopappa ericoides</i>	Bristle pappus
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush
<i>Chrysothamnus paniculatus</i>	Black-stem rabbitbrush
<i>Chrysothamnus teretifolius</i>	Rabbitbrush
<i>Cirsium neomexicanum</i>	Desert thistle
<i>Encelia actoni</i>	Yellow encelia
<i>Encelia frutescens</i>	Shrubby encelia
<i>Ericameria cooperi</i>	Cooper's goldenbush
<i>Ericameria cuneata</i>	Goldenbush
<i>Ericameria laricifolia</i>	Turpentine brush
<i>Erigeron breweri</i>	Fleabane
<i>Erigeron concinnus</i>	Daisy
<i>Erigeron divergens</i>	Daisy
<i>Eriophyllum ambiguum</i>	Woolly sunflower
<i>Gutierrezia microcephala</i>	Sticky snakeweed
<i>Gutierrezia sarothrae</i>	Broom snakeweed
<i>Hymenoclea salsola</i>	Cheese bush
<i>Machaeranthera canescens</i>	Hoary-aster
<i>Malacothrix incana</i>	Dunedelion

<i>Psilostrophe cooperi</i>	Paper-daisy
<i>Senecio multilobatus</i>	Many-lobed Ragwort
<i>Stephanomeria exigua</i>	Sticky wire-lettuce
<i>Stephanomeria parryi</i>	Parry's wire-lettuce
<i>Stephanomeria pauciflora</i>	Desert-straw
<i>Stylocline micropoides</i>	Nest straw
<i>Tetradymia stenolepis</i>	Horse brush
<i>Viguiera parishii</i>	Parish's viguiera
<i>Xylorhiza tortifolia</i>	Mojave-aster
Bigonaceae	
<i>Chilopsis linearis</i>	Desert-willow
Boraginaceae	
<i>Amsinckia menziesii</i>	Rancher's fireweed
<i>Amsinckia tessellata</i>	Devil's lettuce
<i>Cryptantha circumscissa</i>	Western forget-me-knot
<i>Cryptantha nevadensis</i>	Nevada forget-me-knot
<i>Cryptantha pterocarya</i>	Winged forget-me-knot
<i>Cryptantha tumulosa</i>	Pinyon forget-me-knot
<i>Pectocarya setosa</i>	Comb-bur
<i>Plagiobothrys arizonicus</i>	Popcorn-flower
Brassicaceae	
<i>Arabis perennans</i>	Rock cress
<i>Arabis pulchra</i>	Darwin rock cress
<i>Caulanthus cooperi</i>	Cooper's jewelflower

<i>Descurainia pinnata</i>	Tansy mustard
<i>Descurainia sophia</i>	Sophia's tansy mustard
<i>Guillenia lasiophylla</i>	California mustard
<i>Lepidium fremontii</i>	Desert alyssum
<i>Lepidium lasiocarpum</i>	Peppergrass
<i>Lesquerella tenella</i>	Bladderpod
<i>Sisymbrium irio</i>	London rocket
<i>Stanleya pinnata</i>	Prince's plume
<i>Streptanthella longirostris</i>	Small jewel flower
<i>Thysanocarpus curvipes</i>	Fringepod

Cactaceae

<i>Echinocactus polycephalus</i>	Clustered barrel cactus
<i>Echinocereus engelmannii</i>	Hedgehog cactus
<i>Echinocereus triglochidiatus</i>	Mojave hedgehog
<i>Escobaria vivipara</i>	Beehive cactus
<i>Ferocactus cylindraceus</i>	Barrel cactus
<i>Mammillaria tetrancistra</i>	Fish-hook cactus
<i>Opuntia acanthocarpa</i>	Golden cholla
<i>Opuntia basilaris</i>	Beavertail cactus
<i>Opuntia chlorotica</i>	Pancake prickly-pear
<i>Opuntia erinacea</i>	Mojave prickly-pear
<i>Opuntia parishii</i>	Mat cholla

Caryophyllaceae

Arenaria macradenia

Desert sandwort

Chenopodiaceae

Atriplex canescens

Four-wing saltbush

Chenopodium incanum

Goosefoot

Grayia spinosa

Spiny hopsage

Krascheninnikovia lanata

Winter fat

Salsola tragus (paulsenii)

Russian thistle

Cucurbitaceae

Cucurbita palmata

Coyote melon

Euphorbiaceae

Chamaesyce albomarginata

Rattlesnake weed

Euphorbia incisa

Mojave spurge

Fabaceae

Acacia greggii

Catclaw

Astragalus lentiginosus

Freckled milkvetch

Astragalus nuttallianus

Nuttall's milkvetch

Hoffmannseggia glauca

Pig-nut

Lotus humistratus

Lotus

Lupinus brevicaulis

Sand lupine

Lupinus concinnus

Bajada lupine

Geraniaceae

Erodium cicutarium

Filagree

Hydrophyllaceae

Eucrypta micrantha

Small flowered eucrypta

Phacelia crenulata

Notched phacelia

Phacelia distans

Purple phacelia

Phacelia fremontii

Fremont's phacelia

Phacelia vallis-mortae

Death Valley phacelia

Krameriaceae

Krameria erecta

Pima ratany

Lamiaceae

Marrubium vulgare

Horehound

Salazaria mexicana

Bladder sage

Salvia columbariae

Chia

Salvia dorrii

White sage

Salvia mohavensis

Mohave sage

Linaceae

Linum lewisii

Blue flax

Linum puberulum

Hairy flax

Loasceae

Mentzelia albicaulis

Blazing star

Malvaceae

Sphaeralcea ambigua

Apricot mallow

Nyctaginaceae

Allionia incarnata

Mirabilis bigelovii

Windmills

Wishbone plant

Mirabilis coccinea

Scarlet four-o'clock

Mirabilis multiflora

Many-flowered four-o'clock

Oleaceae

Menodora scabra

Menodora spinescens

Rough twinberry

Spiny twinberry

Onagraceae

Gaura coccinea

Oenothera californica

Oenothera primiveris

Wild honeysuckle

California evening primrose

Spring evening primrose

Orobanchaceae

Orobanche sp

Broom-rape

Papaveraceae

Eschscholzia californica

California poppy

Plantaginaceae

Plantago patagonica

Plantain

Polemoniaceae

Eriastrum diffusum

Eriastrum wilcoxii

Diffuse eriastrum

Wilcox's eriastrum

Gilia aliquanta

Gilia

<i>Linanthus demissus</i>	Linanthus
<i>Linanthus dichotomus</i>	Evening snow
Polygonaceae	
<i>Centrostegia thurberi</i>	Thurber's spineflower
<i>Eriogonum deflexum</i>	Flat-topped buckwheat
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Eriogonum heermannii</i>	Boulder buckwheat
<i>Eriogonum inflatum</i>	Desert trumpet
<i>Eriogonum nidularium</i>	Whisk broom
<i>Eriogonum pusillum</i>	Woolly buckwheat
<i>Eriogonum trichopes</i>	
<i>Eriogonum wrightii</i>	Wright's buckwheat
<i>Rumex hymenosepalus</i>	Wild-rhubarb
Ranunculaceae	
<i>Delphinium parishii</i>	Rose-flowered larkspur
Rosaceae	
<i>Coleogyne ramosissima</i>	Blackbrush
<i>Fallugia paradoxa</i>	Apache plume
<i>Prunus fasciculata</i>	Desert almond
<i>Purshia tridentata</i>	Antelope bush
Scrophulariaceae	
<i>Castilleja angustifolia</i>	Desert Indian paintbrush
<i>Castilleja linearifolia</i>	Thin leaf Indian paintbrush
<i>Penstemon bicolor</i>	Two-color beardtongue

Penstemon palmeri

Palmer's beardtongue

Solanaceae

Datura wrightii

Jimson weed

Lycium andersonii

Anderson's box thorn

Lycium cooperi

Peach-thorn

Physalis hederifolia

Ground-cherry

Verbenaceae

Aloysia wrightii

Oreganillo

Verbena gooddingii

Verbena

Zygophyllaceae

Larrea tridentata

Creosote bush

Angiosperms-Monocotyledons

Liliaceae

Calochortus kennedyi

Kennedy's mariposa lily

Dichelostemma capitata

Blue dicks

Yucca baccata

Banana yucca

Yucca brevifolia

Joshua tree

Yucca schidigera

Mojave yucca

Poaceae

Achnatherum hymenoides

Indian ricegrass

Achnatherum speciosum

Desert needlegrass

Aristida purpurea

Purple three-awn

Bouteloua curtipendula

Side-oats grama

Bouteloua eriopoda

Black grama

<i>Bromus sp. (rubens)</i>	Brome
<i>Elymus elymoides</i>	Squirreltail
<i>Erioneuron pulchellum</i>	Fluff grass
<i>Muhlenbergia porteri</i>	Mesquite grass
<i>Pleuraphis jamesii</i>	Galleta
<i>Pleuraphis rigida</i>	Big galleta
<i>Poa secunda</i>	One-sided bluegrass
<i>Poa sp.</i>	Bluegrass
<i>Sporobolus airoides</i>	Alkali sacaton
<i>Sporobolus contractus</i>	Spike dropseed
<i>Vulpia octoflora</i>	Six-week fescue

APPENDIX B
FAUNA LIST

Fauna List

BIRDS

ACCIPITRIDAE

Red-tailed Hawk

ODONTOPHORIDAE

Gambel's Quail

PHASIANIDAE

Chukar

APODIDAE

White-throated Swift

PICIDAE

Ladder-backed Woodpecker

Northern Flicker

TYRANNIDAE

Say's Phoebe

CORVIDAE

Common Raven

HIRUNDINIDAE

Violet-green Swallow

TROGLODYTIDAE

Bewick's Wren

Cactus Wren

Rock Wren

EMBERIZIDAE

Black-throated Sparrow

Dark-eyed Junco

FRINGILLIDAE

House Finch

REPTILES

Side-blotched Lizard

MAMMALS

Coyote (scat)

White-tailed Antelope Squirrel

Woodrat (midden)