# Determination of Biologically Superior or Equivalent Preservation

## Gilman Springs Mine

April 5, 2019

Prepared for:

**Chandler Aggregates**
P.O. Box 77850
Corona, CA 92877

Prepared by:

**Alden Environmental, Inc.**
3245 University Avenue, #1188
San Diego, CA 92104

ALDEN
ENVIRONMENTAL, INC

| | |
|---|---|
| **Report Date:** | April 5, 2019 |
| **Title:** | Determination of Biologically Superior or Equivalent Preservation for the Gilman Springs Mine |
| **Project Location:** | The Gilman Springs Mine is located northeast of the intersection of Gilman Springs Road and Bridge Street in unincorporated Riverside County, west of the City of Beaumont. It is in an area of Riverside County named The Badlands, which is a mountain range that separates the cities of Beaumont and Moreno Valley. |
| **Assessor Parcel Numbers:** | Assessor Parcel Numbers for the affected portion of the property are: 422240003, 422240007, 422240008, 423240018, 423240019, and 423240023. |
| **Owner/Applicant:** | Chandler Aggregates<br>P.O. Box 77850<br>Corona, CA 92877<br>(951) 277-9110 |
| **Principal Investigator:** | Greg Mason<br>Alden Environmental, Inc.<br>3245 University Avenue, #1188<br>San Diego, CA 92104<br>(619) 284-3815 |
| **Report Summary:** | The proposed mine expansion area includes Riparian/Riverine resources that would be impacted. The project will ensure that biological functions and values of Riparian/Riverine resources are maintained through mitigation of impacts to these resources at a 3:1 ratio in an approved mitigation bank with Riparian/Riverine resources that will be at least biologically equivalent to the resources being impacted by the proposed mine expansion. |

# Gilman Springs Mine
# Determination of Biologically Superior or Equivalent Preservation

## TABLE OF CONTENTS


| Section | Title | Page |
|---|---|---|
| 1.0 | INTRODUCTION | 1 |
| 2.0 | DEFINITION OF THE PROJECT AREA | 2 |
| 3.0 | PROJECT DESCRIPTION | 2 |
| 4.0 | METHODS | 3 |
| | 4.1 Vegetation Mapping | 3 |
| | 4.2 Jurisdictional Delineation | 3 |
| | 4.3 Riparian/Riverine and Vernal Pool Habitat Assessment | 4 |
| 5.0 | RIPARIAN/RIVERINE RESOURCES | 7 |
| 6.0 | NEPSSA AND CASSA SPECIES | 9 |
| 7.0 | IMPACTS | 9 |
| 8.0 | AVOIDANCE, MINIMIZATION, AND MITIGATION | 10 |
| 9.0 | CONCLUSTION | 12 |
| 10.0 | CERTIFICATION | 13 |
| 11.0 | REFERENCES | 14 |


## LIST OF FIGURES


| No. | Title | Follows Page |
|---|---|---|
| 1 | Regional Location | 2 |
| 2 | Project Vicinity Map (Aerial Photograph) | 2 |
| 3 | Project Vicinity Map (USGS Topography) | 2 |
| 4 | Riparian/Riverine Resources | 8 |


## LIST OF TABLES


| No. | Title | Page |
|---|---|---|
| 1 | Riparian/Riverine Resources in the Survey Area | 7 |

# 1.0 INTRODUCTION

The purpose of this Determination of Biologically Equivalent or Superior Preservation (DBESP) assessment is to summarize our analysis of the proposed Gilman Springs Mine, 54.5-acre mine expansion (project) and its compliance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; Dudek and Associates [Dudek] 2003). The proposed project is located in Subunit 1, Gilman Springs/Southern Badlands, in the San Jacinto Valley Area Plan of the MSHCP.

The project has not yet received its 404 permit from the U.S. Army Corps of Engineers (Corps), its Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW), or its 401 Water Quality Certification from the California Regional Water Quality Control Board (RWQCB).

MSHCP Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, states:

> *The purpose of the procedures described in this section is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that Habitat values for species inside the MSHCP Conservation Area are maintained.*

MSHCP Section 6.3.2, Additional Survey Needs and Procedures, states that existing information is not sufficient to consider the species shown in Section 6.3.2 adequately covered under the MSHCP. Surveys are required to provide additional information for these species. The goal in areas that have positive results for the target species and that have long-term conservation value is 90 percent avoidance.

The emphasis is on conservation of habitats capable of supporting MSHCP Covered Species, particularly within the identified Conservation Area. For projects that propose impacts to Riparian/Riverine or vernal pool resources or more than 10 percent of a population of Narrow Endemic Plant Species Survey Area (NEPSSA) or Criteria Area Species Survey Area (CASSA) species with long-term conservation value, a DBESP assessment must be completed to ensure that the proposed alternative provides for "replacement of any lost functions and values of Habitat as it relates to Covered Species." This DBESP analysis provides information necessary for the County of Riverside (County) to find that the project meets these objectives.

Biological surveys were conducted from mid July 2017 through mid April 2018, and general biological resources assessment report (Alden Environmental, Inc. [Alden] 2019) was prepared for the project. The information in that biological report was used to aid in preparation of this DBESP. This DBESP analysis provides information necessary for the County to determine if the project meets the MSHCP conservation objectives. In addition, Chandler Aggregates will coordinate with the Corps, CDFW, and RWQCB to ensure compliance with applicable permitting requirements.

## 2.0 DEFINITION OF THE PROJECT AREA

The Chandler Aggregates property is approximately 1,021.3 acres in size; the Criteria Cells in the 54.5-acre proposed mine expansion area (i.e., Criteria Cells 1687 and 1784) total 310.6 acres. The Assessor Parcel Numbers for the affected portion of the property are: 422240003, 422240007, 422240008, 423240018, 423240019, and 423240023.

The survey area for this report is approximately 134.0 acres in size and is located northeast of the intersection of Gilman Springs Road and Bridge Street in unincorporated Riverside County, west of the City of Beaumont. It is in an area of the County named The Badlands, which is a mountain range that separates the cities of Beaumont and Moreno Valley (Figures 1 and 2). Access to the mine and survey area is off of Gilman Springs Road south of Bridge Street via a paved, gated, private road.

The survey area includes land surrounding the northwestern portion of the existing, active mine (i.e., the permitted disturbance area). The survey area is within Section 25, Township 3 South, Ranges 1 and 2 West, as shown on the U.S. Geological Survey (USGS) 7.5-minute El Casco quadrangle map (Figure 3).

The predominant soil in the survey area consists of Friant rocky fine sandy loam. Three other soil types are also mapped in the survey area including Badland, San Timoteo loam, and Rockland. Riparian/Riverine habitats occur in the survey area. Elevations in the survey area range from approximately 1,878 to 2,202 feet above mean sea level.

The survey area (which does not include the active mine) is undeveloped. A few dirt roads are present. Immediate, surrounding land uses to the survey area include undeveloped land throughout the remainder of the Chandler Aggregates property. Outside the property to the west lies Gilman Springs Road. Undeveloped land lies outside the remainder of the Chandler Aggregates property to the north, south, and east (Figure 2).

## 3.0 PROJECT DESCRIPTION

The proposed project specifically involves increasing the area for mining by adding 54.5 acres to the 150.44 currently permitted acres, resulting in a total permitted acreage of 204.9 acres. As part of the project, 430.0 acres are proposed to be placed in the MSHCP Conservation Area (Figure 2). The proposed mine expansion area was located within the defined survey area in order to avoid impacting more numerous Riparian/Riverine resources that are present outside the survey area to the east.

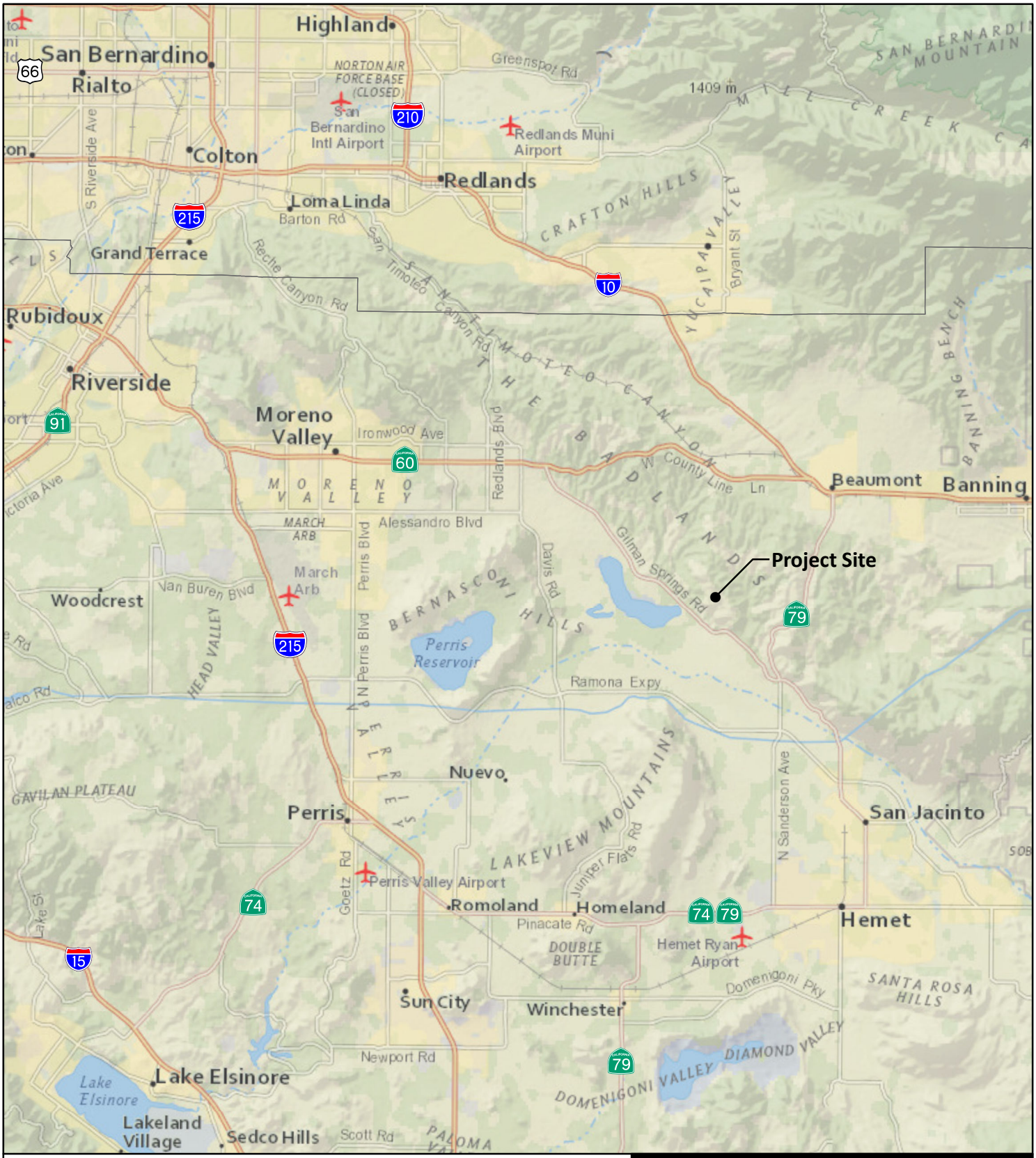
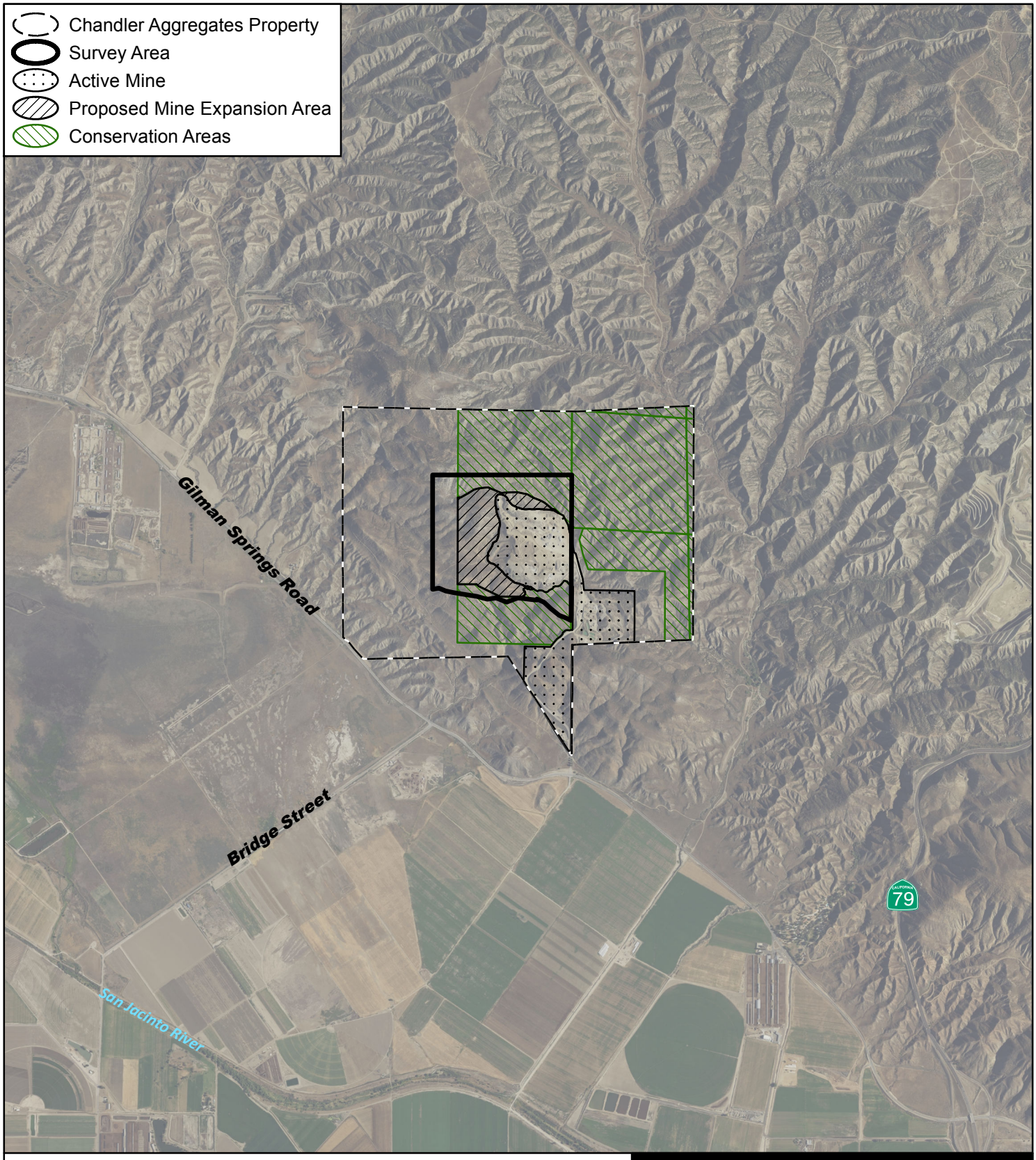



**Figure 1**

Regional Location

GILMAN SPRINGS MINE

ALDEN ENVIRONMENTAL, INC

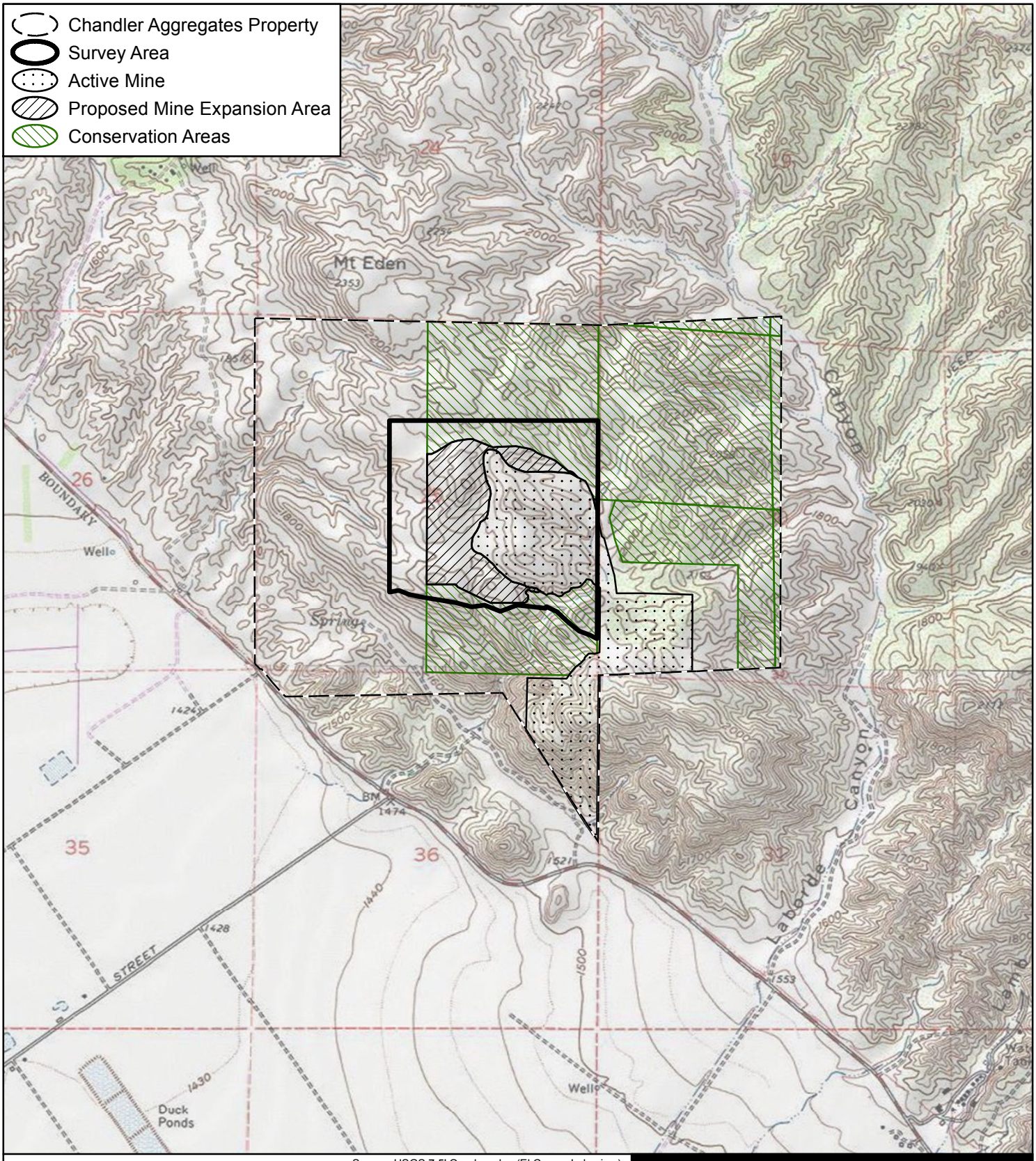



ALDEN ENVIRONMENTAL, INC

**Figure 2**

Project Vicinity Map
(Aerial Photograph)

GILMAN SPRINGS MINE




Source: USGS 7.5' Quadrangles (El Casco, Lakeview);
Copyright:© 2013 National Geographic Society, i-cubed

ALDEN ENVIRONMENTAL, INC

**Figure 3**

Project Vicinity Map
(USGS Topography)

GILMAN SPRINGS MINE

A reclamation and revegetation plan for the proposed mine expansion will be prepared that addresses such issues as:

- the methods to be used to reclaim the land including a detailed schedule of the sequence and timing of all stages of the reclamation;
- the manner in which derelict machinery, mining waste, and scraps will be removed from the reclaimed site and how contaminants will be controlled;
- the methods to be used to ensure that the site will contain stable slopes; and
- revegetation for soil stabilization, prevention of drainage and erosion problems.

Chandler Aggregates will be responsible for bonding for the reclamation of the proposed mine expansion area and for funding set aside to ensure the reclamation and revegetation is implemented.

The project will require a Habitat Evaluation and Acquisition Negotiation Strategy (HANS) for the lands proposed to be placed in the MSHCP Conservation Area.

# 4.0 METHODS

Alden and/or its subcontracted biologists conducted biological studies of the survey area (which excluded the active mine) from mid July 2017 through mid April 2018. These on-site studies included mapping vegetation, delineating jurisdictional resources, assessing Riparian/Riverine and Vernal Pool habitats, assessing habitat and surveying for the burrowing owl, and assessing habitat for the San Bernardino kangaroo rat (*Dipodomys merriami parvus*) and Los Angeles pocket mouse (*Perognathus longimembris brevinasus*). Observations of all plant and animal species noted during the field studies were recorded. The methods used to evaluate the biological resources present in the survey area are addressed below.

## 4.1 VEGETATION MAPPING

Vegetation mapping and an assessment of Riparian/Riverine and Vernal Pool habitats was initially conducted on July 18 and 19, 2017 by Alden and was completed October 16 through 18, 2017 by Leatherman BioConsulting, Inc. (because the survey area was altered after the July mapping). The vegetation communities were mapped in accordance with the MSHCP. Additional information on vegetation communities was obtained from Holland (1986).

## 4.2 JURISDICTIONAL DELINEATION

A delineation of potential jurisdictional features was conducted on October 25, 2017 by Rocks Biological Consulting. Areas were determined to be potential non-wetland waters of the U.S. (WUS) if there was evidence of regular surface flow (e.g., bed and bank), but neither the vegetation criterion nor soils criterion was met. The potential jurisdictional limits for these areas were defined by the ordinary high water mark (OHWM), which is defined in 33 Code of Federal

Regulations Section 329.11 as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas." The The Corps has issued further guidance on the OHWM (Riley 2005), which was also used for the delineation. The OHWM widths were measured to the nearest foot at various locations along each channel.

Potential CDFW jurisdictional boundaries were determined based on the presence of riparian vegetation or regular surface flow. Streambeds within potential CDFW jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). This definition for CDFW jurisdictional habitat allows for a wide variety of habitat types to be jurisdictional, including some that do not include wetland species (e.g., oak woodland and alluvial fan sage scrub). Streambed widths were measured to the nearest foot at various locations along each channel.

## 4.3 RIPARIAN/RIVERINE AND VERNAL POOL HABITAT ASSESSMENT

The MSHCP defines Riparian/Riverine and Vernal Pool habitats as:

- Riparian/Riverine areas are lands that contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year. Riparian/Riverine areas that met this definition were mapped in the survey area.
- Vernal pools are seasonal wetlands that occur in depression areas that have wetland indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology must be made on an individual basis. Such determinations should consider the length of time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, the uses to which the area has been subjected, and weather and hydrologic records. No vernal pools were mapped in the survey area as none was observed.

The Riparian/Riverine habitats in the survey area were assessed for their potential to support sensitive Vernal Pool or Riparian/Riverine species including species of fairy shrimp, least Bell's vireo (*Vireo belli pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*).

**Riparian/Riverine and Vernal Pool Plants**

The MSHCP lists 23 sensitive plant species that have potential to occur in Riparian/Riverine and Vernal Pool habitats as follows.

- California black walnut (*Juglans californica* var. *californica*)
- Engelmann oak (*Quercus engelmannii*)
- Coulter's matilija poppy (*Romneya coulteri*)
- San Miguel savory (*Satureja chandleri*)
- spreading navarretia (*Navarretia fossalis*)
- graceful tarplant (*Holocarpha virgata* ssp. *elongata*)
- California Orcutt grass (*Orcuttia californica*)
- prostrate navarretia (*Navarretia prostrata*)
- San Diego button-celery (*Eryngium aristulatum* var. *parishii*)
- Orcutt's brodiaea (*Brodiaea orcuttii*)
- thread-leaved brodiaea (*Brodiaea filifolia*)
- Fish's milkwort (*Polygala cornuta* var. *fishiae*)
- lemon lily (*Lilium parryi*)
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*)
- ocellated Humboldt lily (*L. humboldtii* ssp. *ocellatum*)
- Mojave tarplant (*Deinandra mohavensis*)
- vernal barley (*Hordeum intercedens*)
- Parish's meadowfoam (*Limnanthes gracilis* var. *parishii*)
- slender-horned spineflower (*Dodecahema leptoceras*)
- Santa Ana River woolly-star (*Eriastrum densifolium* spp. *sanctorum*)
- Brand's phacelia (*Phacelia stellaris*)
- mud nama (*Nama stenocarpum*)
- smooth tarplant (*Centromadia pungens*)

Riparian/Riverine habitats in the survey area consist of ephemeral stream, unvegetated pond, tamarisk scrub, and area with a discontinuous ordinary high water mark (there is no Vernal Pool habitat). The potential for these species to occur within those types of habitats that are largely unvegetated in the survey area (with the exception of tamarisk scrub) is low. The potential for these species to occur in tamarisk scrub in the survey area is also low because the tamarisk scrub is essentially of a monoculture of one species, French tamarisk. None of these species was observed in the survey area.

**Narrow Endemic Species Survey Area and Criteria Area Species Survey Area Species**

The survey area is not within a Narrow Endemic Plant Species Survey Area (NEPSSA); therefore, no survey for Narrow Endemic plant species was conducted.

The survey area is not within a Criteria Area Species Survey Area (CASSA); therefore, no survey for Criteria Area species was conducted.

**Burrowing Owl Habitat Assessment and Survey**

A burrowing owl habitat assessment is required for the survey area per the MSHCP. The habitat assessment was conducted July 18-19 and October 16-18, 2017 following Step I the Burrowing Owl Survey Instructions for the Western Riverside MSHCP.

To conduct the habitat assessment, all accessible roads were driven to view habitat, and ridges and trails were walked to view habitat in areas where no roads exist. All grassland habitats were walked. Potentially suitable shrublands exhibiting low shrub cover were also walked or evaluated from accessible ridgelines. Because of the steep slopes and rugged terrain in some areas, a buffer zone of approximately 500 feet was scanned to evaluate potentially suitable habitat and search for sign of burrowing owl presence.

The Survey Instructions identify burrowing owl habitat as "native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas." Even though burrowing owls prefer flat lands or gently sloping hills and valleys, no reference to topography is made in the Survey Instructions that can be used to include or exclude potentially suitable habitat areas.

Since grassland habitat is present in the survey area, as well as low-density shrubland with a few potentially suitable burrows, a Focused Burrow Survey (Step II, Part A of the Survey Instructions) and Focused Burrowing Owl Survey (Step II, Part B) was conducted to comply with the MSHCP. These surveys were conducted in March and April 2018 per the Survey Instructions.

The Step II survey was conducted by walking transects at intervals of approximately 15 meters where possible within the suitable habitat areas as well as suitable habitat within a 500-foot buffer. A GPS track was recorded for the survey routes taken. The survey area was searched for burrows, artificial refugia, or perches that could be used by the owl, as well as for burrowing owls and owl sign. See Appendix C for more details.

**San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Habitat Assessment**

The survey area is outside of the MSHCP survey areas for the San Bernardino kangaroo rat and Los Angeles pocket mouse; however, there is a designated MSHCP survey area for the Los Angeles pocket mouse southwest of the survey area on the Chandler Aggregates property. Survey area for the San Bernardino kangaroo rat lies outside the property to the east. Therefore, a habitat assessment for potential San Bernardino kangaroo rat and Los Angeles pocket mouse habitat in the survey area was conducted on October 13, 2017 by Small Mammal Specialist, Philippe Vergne.

# 5.0 RIPARIAN/RIVERINE RESOURCES

The Riparian/Riverine resources in the survey area total 1.63 acres as shown in Table 1 and on Figure 4. There is no Vernal Pool habitat in the survey area.

**Table 1**
**RIPARIAN/RIVERINE RESOURCES IN THE SURVEY AREA**

| Potential Jurisdictional Feature | Area (Acres) | Length (Feet) |
|---|---|---|
| **Riparian Habitat** | | |
| Tamarisk scrub | 0.5 | -- |
| **Streambed/Lake** | | |
| Ephemeral stream | 1.10 | 13,211 |
| Unvegetated pond | 0.03 | -- |
| Features with discontinuous OHWM | -- | 725 |
| **TOTAL** | **1.63** | **13,936** |

Riparian/Riverine habitats were analyzed for potential to support, or be tributary to habitat that supports, Riparian/Riverine Covered Species, which are identified in MSHCP Section 6.1.2 and addressed in the following sections.

**Riparian/Riverine Plant Species**

The survey area is not within a NEPSSA.

**Invertebrates**

Vernal pool fairy shrimp occurs throughout the Central Valley and in several disjunct populations in Riverside County. This species exists in vernal pools and other ephemeral basins often located in patches of grassland and agriculture interspersed in Diegan coastal sage scrub and chaparral. Santa Rosa Plateau fairy shrimp are limited to the Santa Rosa Plateau. Riverside fairy shrimp occurs in Riverside, Orange, and San Diego counties, as well as in northern Baja California, Mexico. This species is typically found in deeper vernal pools and other ephemeral basins that hold water for long periods of time (30 or more days).

A review of range maps and the CNDDB for fairy shrimp species did not result in any locations occurring on or adjacent to the proposed project. Additionally, the majority of the site is very steep and does not support clayey soils known to support vernal pools and fairy shrimp species.

No vernal pools were observed in the survey area, and the one ephemeral basin (i.e., unvegetated pond; Figure 4) that could be deep enough for Riverside fairy shrimp occurs along an ephemeral stream and is subject to water flow/volume that is unsuitable for the species. This basin is within the survey area but is not within the proposed mine expansion area. Fairy shrimp occur in ephemeral basins that are not subject to regular flow/scouring that would remove their cyst/egg

bank from the soil. The unvegetated pond is within a larger drainage system and shows evidence of scouring and water flow following rainfall events. The underlying soil at this location is San Timoteo loam. This soil type is characterized as being well- to somewhat- excessively drained and formed in material weathered from shale, sandstone, and calcified weathered granite in upland situations. It does not have a significant clay component, nor is it recognized as being supportive of vernal pool habitat.

Vernal pools are depressions in areas where a hard-underground layer prevents rainwater from draining downward into the subsoils. When rain fills the pools in the winter and spring, the water collects and remains in the depressions. In the springtime, the water gradually evaporates until the pools become completely dry in the summer and fall. Vernal pools tend to have an impermeable layer that results in ponded water. The soil texture typically contains higher amounts of fine silts and clays with lower percolation rates. Pools that retain water for a sufficient length of time will develop hydric cells. Hydric cells form when the soil is saturated from flooding for extended periods of time and anaerobic conditions develop. None of these conditions (i.e., no depressions, hydric soils, etc.) were observed in the survey area, and all soils in the survey area are mapped as Badland, Rockland, San Timoteo loam (eight to 25 percent slopes, eroded), and Friant rocky fine sandy loam (eight to 50 percent slopes, eroded) that do not retain water. Aside from the ephemerally ponded area within the drainage channel noted above (outside of proposed mine expansion area), no standing water or other sign of areas that pond water (e.g., mud cracks, tire ruts, drainages) were observed. Therefore, there are no features present that would support fairy shrimp in the survey area or the proposed mine expansion area.

**Fish**

The Santa Ana sucker (*Catostomus santaanae*) is restricted to the Santa Ana River watershed with year-round flows. The streams in the survey area lack surface flow for most of the year. Therefore, this species is not expected to occur in the survey area.

**Amphibians**

No appropriate habitat for the three amphibian species (arroyo toad [*Anaxyrus californicus*], mountain yellow-legged frog [*Rana muscosa*], or California red-legged frog [*Rana aurora draytonii*]) listed under MSHCP 6.1.2 occurs in the survey area, and none of these species has any potential to occur there. The survey area lies outside of the MSHCP arroyo toad survey area.

**Birds**

The least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo are found in riparian habitats such as southern willow scrub, cottonwood forest, mule fat scrub, sycamore alluvial woodland, and arroyo willow riparian forest that typically feature dense cover. The riparian habitat in the survey area (0.5 acre of tamarisk scrub in two patches) was determined not to have potential to support least Bell's vireo and southwestern willow flycatcher. Western yellow-billed cuckoo habitat does not occur in the survey area.

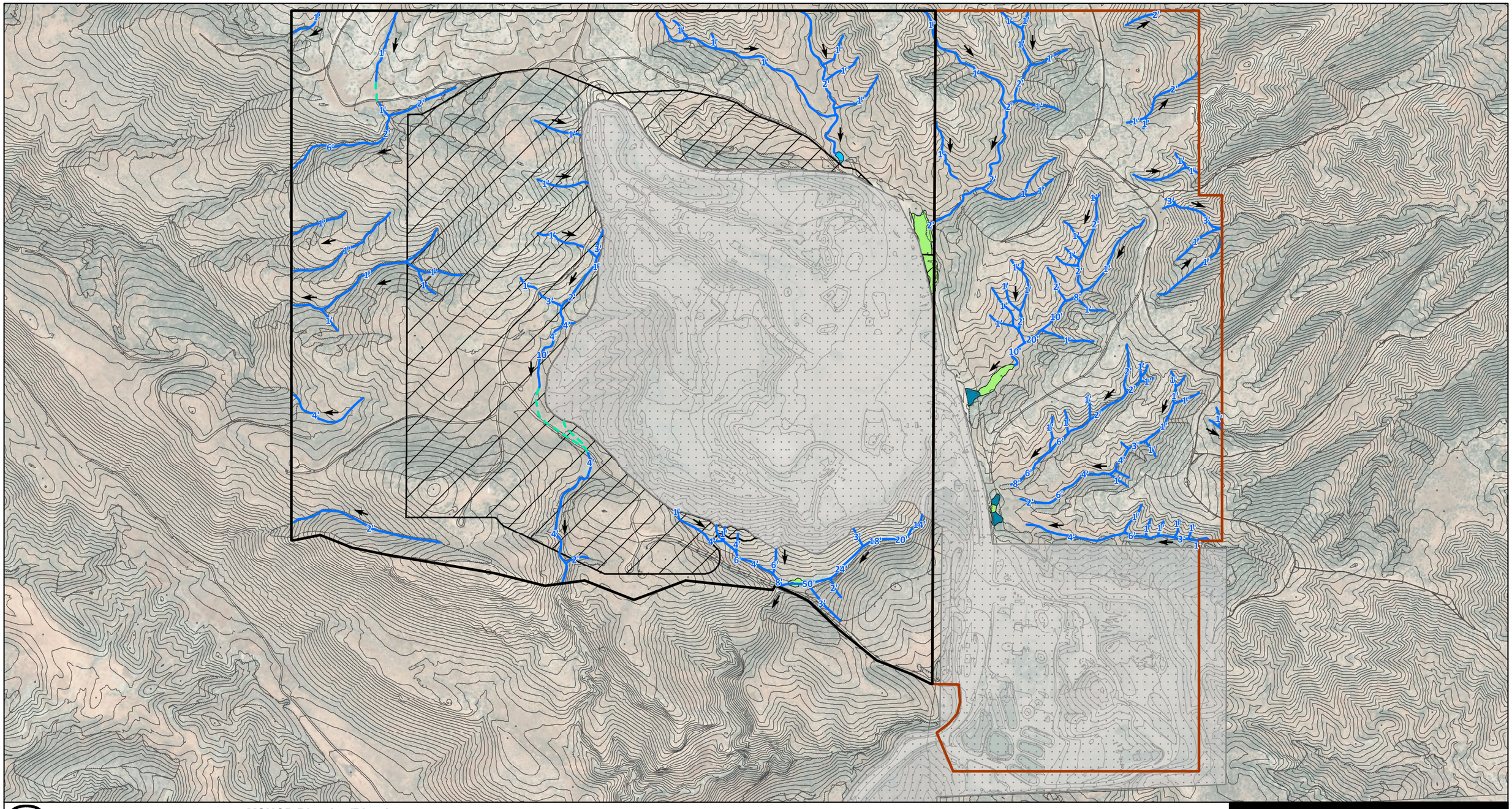



**Figure 4**

Riparian/Riverine Resources

GILMAN SPRINGS MINE

Both the bald eagle (*Haliaeetus leucocephalus*) and peregrine falcon (*Falco peregrinus*) occur primarily in and adjacent to open water habitats, with the falcon possibly occurring in riparian areas. No suitable habitat occurs in the survey area for the bald eagle (the unvegetated pond in the survey area is too small), and the patchy tamarisk scrub in the survey area are not likely to provide foraging habitat for the peregrine falcon. Potential nesting habitat for the falcon does not occur.

# 6.0 NEPSSA AND CASSA SPECIES

The survey area is not within a NEPSSA or CASSA, as such, no additional analysis is necessary for these areas.

# 7.0 IMPACTS

## RIPARIAN/RIVERINE HABITATS

As described above, the emphasis of the MSHCP's Riparian/Riverine and Vernal Pool policy on conservation of habitats capable of supporting MSHCP Covered Species. The goal of the DBESP process is to determine if the project has provided for a project alternative that results in biologically equivalent or superior preservation. The first priority for Riparian/Riverine habitats that have potential to contribute to the biological values of the MSHCP preserve is avoidance of direct impacts. The proposed mine expansion area was located within the defined survey area in order to avoid impacting more numerous Riparian/Riverine habitats that are present outside the survey area to the east (Figure 4).

The proposed mine expansion would impact 0.21 acre (3,620 linear feet) of ephemeral stream and 615 linear feet of features with discontinuous OHWM riverine habitats, as well as 0.15 acre of tamarisk scrub riparian habitat (Figure 4).

The functions of these ephemeral streams are primarily water conveyance, sediment transport, and energy dissipation (hydrologic regime and flood attenuation). These drainages are considered to have limited value because:

- They do not have habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend upon soil moisture from a nearby freshwater source;
- They are ephemeral in nature, flowing only during and immediately after storm events; and
- They do not support any of the species targeted for conservation under MSHCP Section 6.1.2.

# 8.0 AVOIDANCE, MINIMIZATION, AND MITIGATION

## AVOIDANCE

MSHCP Section 6.1.2 states:

> *The purpose of the procedures described in this section is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that Habitat values for species inside the MSHCP Conservation Area are maintained.*

The first priority for Riparian/Riverine habitats within Cell Criteria areas that have potential to contribute to MSHCP preserve biological values is avoidance of direct impacts.

The MSHCP states that:

> *…[f]or identified and mapped resources not necessary for inclusion in the MSHCP Conservation Area, applicable mitigation under CEQA, which may include federal and state regulatory standards related to wetland functions and values, will be imposed by the Permittees. To ensure that these standards are met, Permittees shall ensure that, through the CEQA process, project applicants develop project alternatives demonstrating efforts that first avoid, and then minimize direct and indirect effects to the mapped wetlands and shall review these alternatives with the Permittee. An avoidance alternative shall be selected, if feasible. If an avoidance alternative is selected, measures shall be incorporated into the project design to ensure the long-term conservation of the areas to be avoided.*
>
> *If an avoidance alternative is not feasible, a practicable alternative that minimizes direct and indirect effects to Riparian/Riverine areas and vernal pools and associated functions and values to the greatest extent possible shall be selected. Those impacts that are unavoidable shall be mitigated such that the lost functions and values as they relate to Covered Species are replaced as set forth below under the Determination of Biologically Equivalent or Superior Preservation.*

The first priority for sensitive habitats under the California Environmental Quality Act (CEQA) and under the MSHCP is avoidance of direct impacts. The project has been designed to avoid impacts to more numerous Riparian/Riverine resources that occur outside the survey area to the east (Figure 4).

## MINIMIZATION

Project measures to minimize indirect impacts to the MSHCP Conservation Area would also minimize potential indirect impacts to Riparian/Riverine resources that occur beyond the proposed mine expansion area. These measures are as follows.

- The project will incorporate measures required the through National Pollutant Discharge Elimination System. Stormwater systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes.

- The project will incorporate measures to ensure that potentially toxic materials (e.g., fuel, oil) do not discharge. Measures such as those employed to address drainage issues (listed above) will be implemented to minimize this potential indirect impact.

- All project lighting will be selectively placed, directed, and shielded away from habitats around the periphery of the mine. In addition, large spotlight-type lighting directed into areas outside the mine footprint will be prohibited.

- No plants included on the California Invasive Plant Council's list of invasive species (or in Table 6-2 of the MSHCP) will be used by the project. The proposed mine expansion requires a revised reclamation plan, which in turn, requires revegetation of reclaimed areas in conformance with an approved plant list. The approved plant list will comply with the restrictions on plant species prescribed in this measure.

- The proposed mine expansion area will have 3-strand, barbless wire, perimeter fencing, which will define the authorized project boundaries.

**MITIGATION**

Impacts to Riparian/Riverine resources (ephemeral streambed) are proposed to be mitigated at a 3:1 ratio. A total of 1.08 acres of mitigation is proposed to occur via off-site purchase of establishment credits from an approved mitigation bank. Mitigation for the unavoidable impacts to Riparian/Riverine resources will be at least biologically equivalent to the resources being impacted by the proposed mine expansion. That is, the credits being purchased are for wetland habitat that has already been created and, therefore, functions as wetland (e.g., it stores and purifies water, provides flood and erosion protection, and provides wildlife habitat including for Riparian/Riverine species targeted for conservation under the MSHCP). Those functions are at least biologically equivalent to, and probably greater than, the functions of the ephemeral streambeds being impacted (e.g., water conveyance, sediment transport, and flood attenuation).

The project proponent is proposing the purchase of credits at the Riverpark Mitigation Bank. This is a new bank that will have approximately 613 wetland credits to sell. The project is located approximately 6 miles east of the bank and is within its primary service area. The agency approval process for the mitigation bank is nearly complete, with final signoff anticipated in the next couple of months. If for some reason, purchase of Riverpark credits is infeasible, then other options to satisfy the mitigation obligation will be explored such as the In-lieu Fee Program of the Riverside-Corona Resource Conservation District (RCRCD). RCRCD's in-lieu-fee agreement is with the Corps, and the, RCRCD is authorized to sell mitigation "credits" to permittees to make up for important riparian and other "wet" areas that have been lost due to land use changes.

# 9.0 CONCLUSION

The project is being implemented consistent with Section 6.1.2 of the MSHCP based on the following:

- No plant species targeted for conservation in Section 6.1.2 are known or expected to occur within the Riparian/Riverine areas being impacted.

- The project has been designed to avoid more numerous Riparian/Riverine resources that occur outside the survey area to the east.

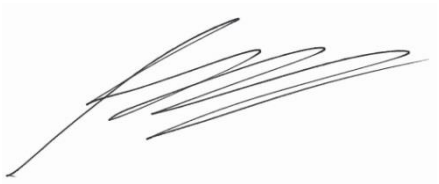
- Edge effects (for example, those from toxic materials, lighting, and invasive plant species) to Riparian/Riverine resources outside the proposed mine expansion area will be minimized by the measures described above (in Section 8.0, Minimization) in accordance with MSHCP Section 6.1.4.

- Mitigation for direct impacts will total 1.08 acres composed of the purchase of credits at an approved off-site mitigation bank. The credits will offset the loss of function and value (primarily water conveyance, sediment transport, and energy dissipation [hydrologic regime and flood attenuation]) of the Riparian/Riverine resources impacted.

Based on this DBESP assessment, the project is consistent with MSHCP Section 6.1.2.

## 10.0 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.

DATE: April 5, 2019 SIGNED: 

Greg Mason
Principal

# 11.0 REFERENCES

Alden Environmental, Inc. 2019. General Biological Resources Assessment for the Gilman Springs Mine. April.

Dudek and Associates (Dudek). 2003. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Final MSHCP Volume I. Prep. for County of Riverside, Transportation and Land Management Agency.

Holland R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, State of California, Department of Fish and Game, Sacramento. 156 pp.

Riley, D. 2005. Ordinary High Water Mark Identification. RGL No. 05-05. 7 December.