General Biological Resources Assessment
Gilman Springs Mine

April 5, 2019

Prepared for:

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ENVIRONMENTAL, INC

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1.0 INTRODUCTION

This report provides the County of Riverside (County; California Environmental Quality Act [CEQA] lead agency), resource agencies, and public with current biological data to satisfy review of the Chandler Aggregates' proposed Gilman Springs Mine expansion project located in unincorporated Riverside County, California. The report describes sensitive biological resources (including vegetation communities, plants, and animals detected in the survey area) and potential direct and indirect project impacts, and proposes mitigation measures to offset impacts where required.

Consistency with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; Dudek and Associates [Dudek] 2003) is also addressed. The proposed 54.5-acre mine expansion area is located in Subunit 1, Gilman Springs/Southern Badlands, in the San Jacinto Valley Area Plan of the MSHCP. It is within Criteria Cells 1687 and 1784 in Cell Group B.

1.1 PROJECT LOCATION AND PROPERTY DESCRIPTION

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 in Cell Group B) 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 proposed mine expansion area was defined to be within this survey area to avoid impacting Riparian/Riverine habitats that are present to the east.

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 and jurisdictional features 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).

1.2 PROJECT DESCRIPTION

The proposed project specifically involves increasing the area for mining by adding 54.5 acres in Cell Group B to the 150.44 currently permitted acres, resulting in a total permitted acreage of 204.94 acres. As part of the project, 430.01 acres are proposed to be placed in the MSHCP Conservation Area (Figure 2). Any additional expansion of the mine would go through additional JPR review in the future.

The project would involve the mining of granite and limestone that would be processed on site and the use of an average of 57 trucks per day. The Gilman Springs mine is currently permitted for 1,000,000 tons per year, or approximately 150 trucks per day. The current project will maintain the annual limit of 1,000,000 tons per year and the corresponding daily estimated truck trips. As such, there will be no increase in truck trips from the current operation.

Operations at the site are currently permitted 24 hours per day, Monday-Saturday (excluding Holidays). The proposed project would add Sundays and Holidays, due to the remote nature of the property and the recent emphasis on nights/weekend/holiday infrastructure work from Government agencies. While currently permitted for 24 hours/day, the site is not presently operating at night. Night operations, while anticipated in the future to provide materials to State infrastructure construction projects, are expected to be infrequent. There may also be other infrequent nighttime jobs, as well, requiring the mined materials. Lighting would be provided for nighttime mining, but it would be limited to that necessary for safety in the work. No lights will be installed on the access road, speed limits of 10 MPH will be imposed on all roads, and operational lighting at the facility will be shielded and focused to reduce impacts to wildlife.

The life of the proposed mine expansion is expected to last 45 years, followed by a five-year reclamation window. 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 proposed mine expansion will require a Determination of Biologically Equivalent or Superior Preservation (DBESP) assessment for proposed impacts to Riparian/Riverine resources.

2.0 METHODS

Evaluation of the survey area involved a literature review, on-site habitat assessments, and various surveys. The methods used are addressed in this section.

2.1 NOMENCLATURE AND LITERATURE REVIEW

Nomenclature for this report generally follows Baldwin et al. (2012) and the California Native Plant Society (CNPS) online database (2017) for plants and the MSHCP (Dudek 2003) for vegetation community classifications, with additional vegetation community information taken Holland (1986). Animal nomenclature generally follows Emmel and Emmel (1973) for butterflies, Crother (2001) for reptiles and amphibians, American Ornithological Society (2017) for birds, and Baker et al. (2003) for mammals. Sensitive plant and animal status is taken from the CNPS online database and California Department of Fish and Wildlife (CDFW; 2017), respectively. Sensitive plant species habitats and blooming periods are taken from the MSHCP (Dudek 2003) and/or CNPS (2017). Soils classifications are obtained from Knecht (1971). The California Natural Diversity Database (CNDDB) and U.S. Fish and Wildlife Service (USFWS) database were searched to obtain a list of sensitive plant and animal species with potential to occur.

2.2 FIELD SURVEYS

Alden Environmental, Inc. (Alden) and/or its subcontracted biologists conducted biological studies of the survey area (which excluded the active mine) from mid-July 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 and are presented in Appendices A and B.

2.2.1 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. (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).

2.2.2 Jurisdictional Delineation

A delineation of potential jurisdictional features was conducted on October 25, 2017. 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 U.S. Army Corps of Engineers (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.

2.2.3 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 were observed.

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

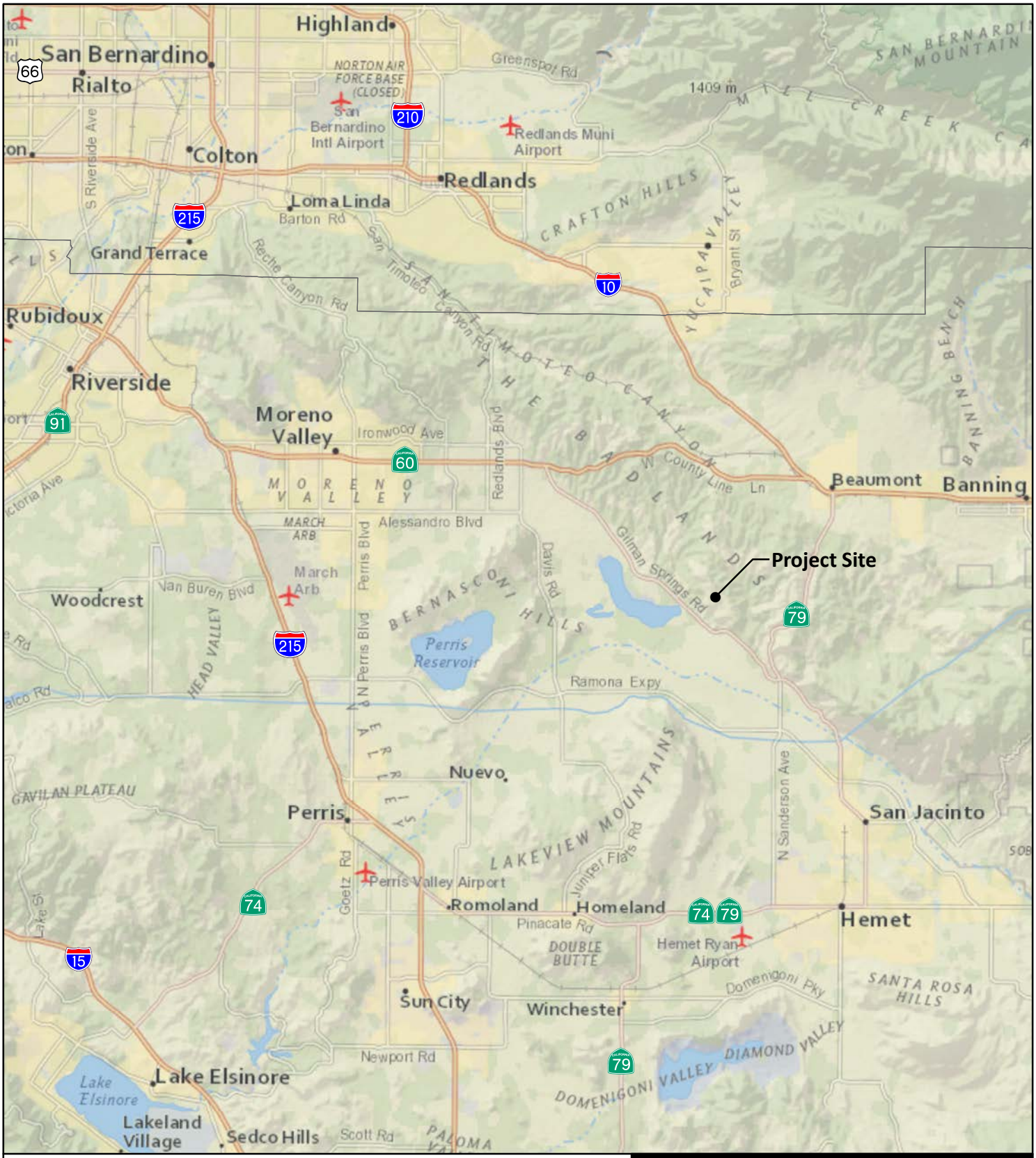

Figure 1

Regional Location

GILMAN SPRINGS MINE

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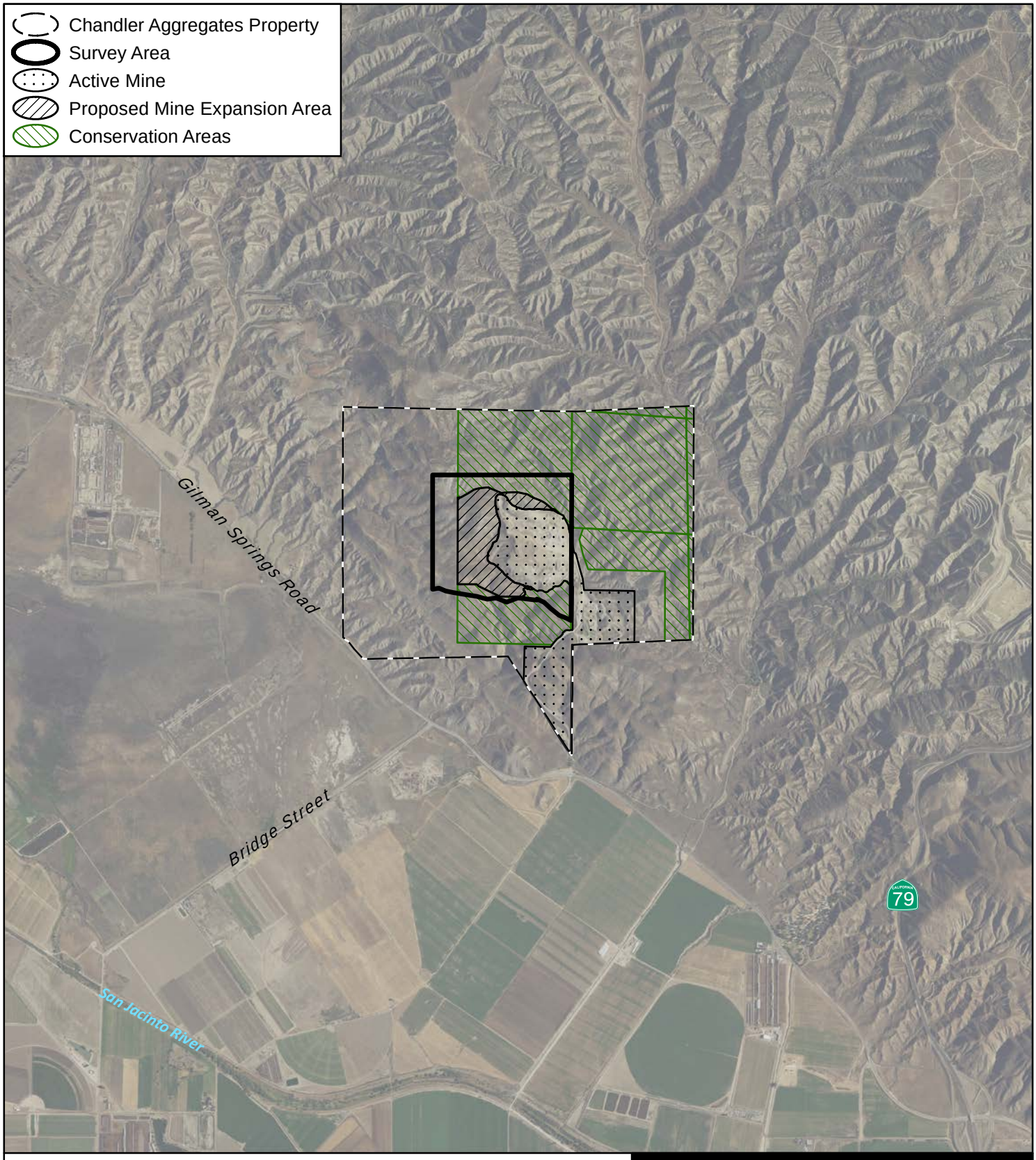

Figure 2

Project Vicinity Map
(Aerial Photograph)

GILMAN SPRINGS MINE

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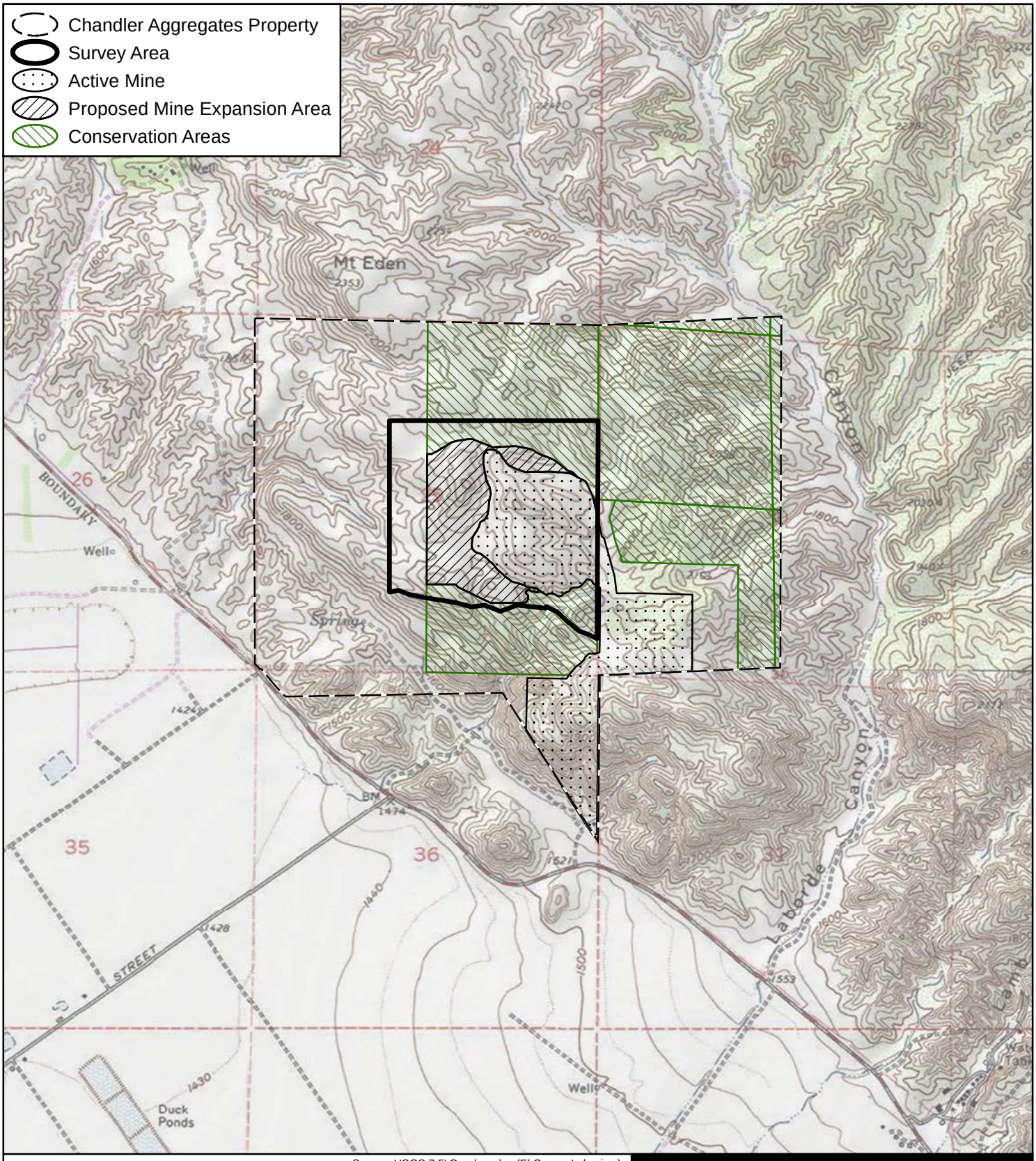

Source: USGS 7.5' Quadrangles (El Casco, Lakeview);
Copyright:© 2013 National Geographic Society, i-cubed

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Figure 3

Project Vicinity Map
(USGS Topography)

GILMAN SPRINGS MINE

The Riparian/Riverine habitats in the survey area support two disjunct patches of tamarisk scrub (0.5-acre total and dominated by French tamarisk [*Tamarix ramossisima*]), ephemeral streams, and an unvegetated pond (ephemeral basin). None of the Riparian/Riverine habitats in the survey area has the necessary habitat size, vegetative components, or structure required to support these avian species.

Prior to conducting the fieldwork, existing soils maps, topographic maps, historic aerial photographs, and habitat maps were reviewed for evidence of vernal pools or suitable conditions for vernal pools to occur. Vernal pools typically occur in flat areas on soils with a high clay content and/or an impermeable barrier. During the fieldwork, flatter areas were surveyed for evidence of water holding depressions that could be considered to be vernal pool habitat. Specifically, these areas were searched for depressions, areas of cracked mud, standing water, vernal pool plant endemic plant species, and other features suggestive of ephemeral aquatic habitat (vernal pools).

Fairy Shrimp

There are three species of sensitive fairy shrimp that occur in western Riverside County: Riverside fairy shrimp (*Streptocephalus woottoni*), Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), and vernal pool fairy shrimp (*Branchinecta lynchi*). The survey area was surveyed for habitat that could support fairy shrimp (such as vernal pools or ephemeral ponds). Indicators of potential fairy shrimp habitat that were searched for included basins, ruts, cracked mud, algal mats, and drift lines. No suitable habitat occurs within the survey area for these species, and no focused surveys for them were conducted or are required.

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 (ephemeral basin), tamarisk scrub, and area with a discontinuous ordinary high water mark (see Section 3.4 of this document; 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.

2.2.4 Narrow Endemic Plant Species Survey

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

2.2.5 Criteria Area Species Survey

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

2.2.6 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 (Appendix C).

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.

2.2.7 Small Mammal 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.

3.0 RESULTS

Research and survey results are reported here, with their relevance addressed in later sections of this document.

3.1 SOILS

The MSHCP shows eight sensitive soil types as occurring within the Plan Area (Altamont, Auld, Bosanko, Claypit, Domino, Porterville, Traver, and Willows). None of these soils occurs in the survey area. Four soil types are mapped in the survey area as follows: Badland, San Timoteo loam, Friant rocky fine sandy loam, and Rockland (Figure 4). None of the four soil types in the survey area is clay.

3.2 VEGETATION COMMUNITIES

A total of 11 vegetation communities occur in the survey area as listed in Table 1 and shown on Figure 5.

Table 1 VEGETATION COMMUNITIES IN THE SURVEY AREA		
CLASSIFICATION[1]		ACREAGE
Collapsed	**Uncollapsed**	
Riparian Scrub, Woodland, Forest	Tamarisk scrub	0.5
Chaparral	Chamise chaparral	48.1
	Chamise chaparral-disturbed	0.4
	Chamise chaparral/Riversidean sage scrub, *Encelia farinosa*-dominated[2]	0.8
	Scrub oak chaparral[2]	<0.1
Coastal sage scrub	Riversidean sage scrub	1.8
	Riversidean sage scrub, *Artemisia californica*-dominated	5.6
	Riversidean sage scrub, *Encelia farinosa*-dominated	42.5
	Riversidean sage scrub, *Encelia farinosa*-dominated-disturbed	2.5
Grassland	Non-native grassland	25.3
Developed/Disturbed land	Disturbed habitat[2]	6.5
	TOTAL	**134.0**

[1]Collapsed and uncollapsed vegetation communities are terms from MSHCP Table 2-1.
[2]Not a listed MSHCP vegetation community.

3.2.1 Tamarisk Scrub

Tamarisk scrub is typically comprised of shrubs and/or small trees of exotic tamarisk species (*Tamarix* spp.) but may also contain willows (*Salix* spp.), salt bushes (*Atriplex* spp.), catclaw acacia (*Acacia greggii*), and salt grass (*Distichlis spicata)*. This habitat occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it may rapidly displace native species within a drainage (Holland 1986). In the survey area, tamarisk scrub consists essentially of a monoculture of French tamarisk and occurs in two disjunct patches with a total area of 0.5 acre.

3.2.2 Chaparral

This habitat in the survey area is represented by: 1) two types of chamise chaparral, 2) one ecotone between chamise chaparral and Riversidean sage scrub, and 3) scrub oak chaparral.

Chaparral generally consists of broad-leaved sclerophyll shrubs usually between one to three meters tall with occasional patches of bare soil or sage scrub, often with an accumulation of litter. Chaparral is well adapted to repeated fires as many species respond by stump sprouting. Where chaparral has been disturbed, it contains a preponderance of non-native, weedy species.

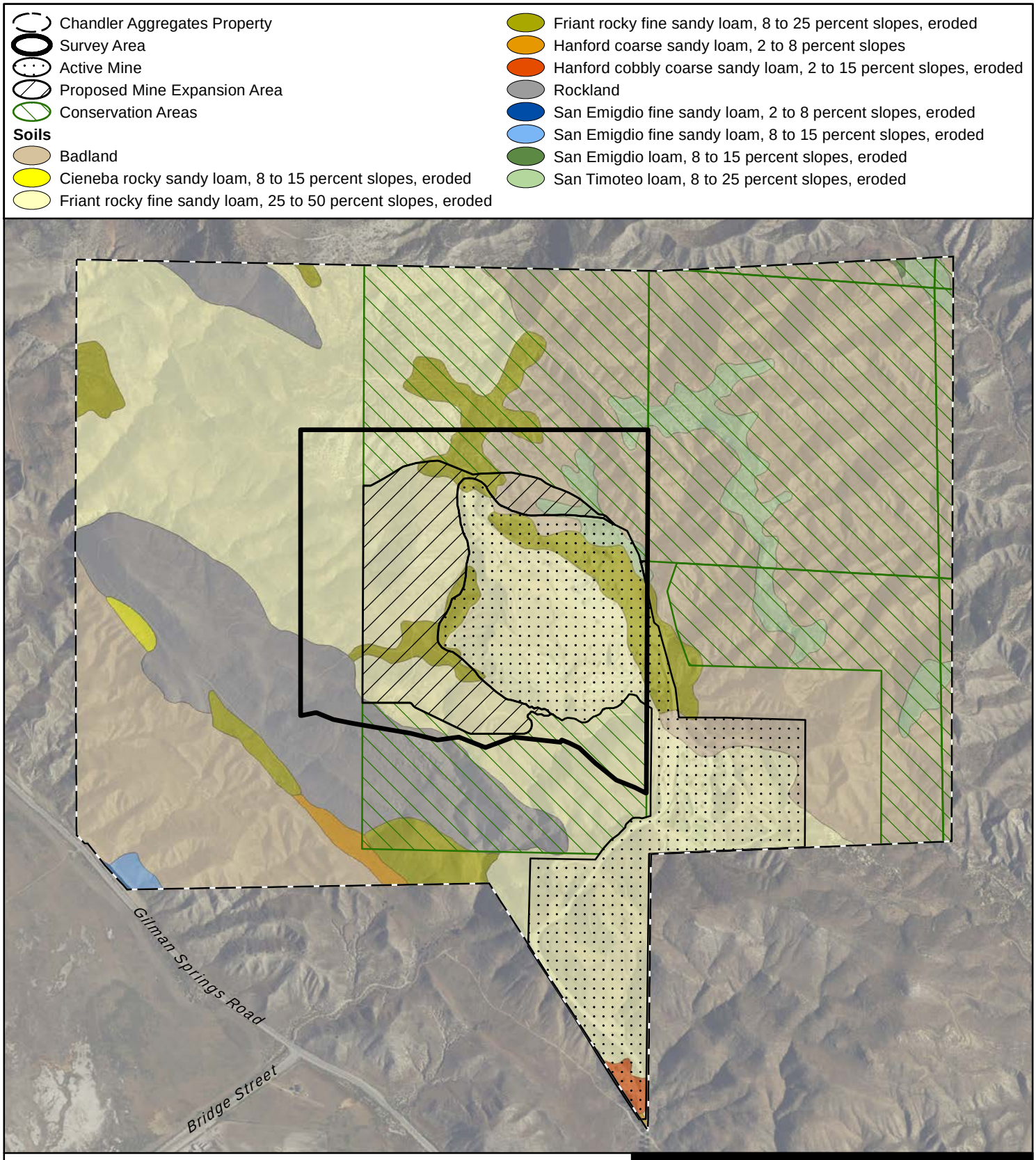

Figure 4

Soils

GILMAN SPRINGS MINE

N
W E
S

0 600 1,200 Feet

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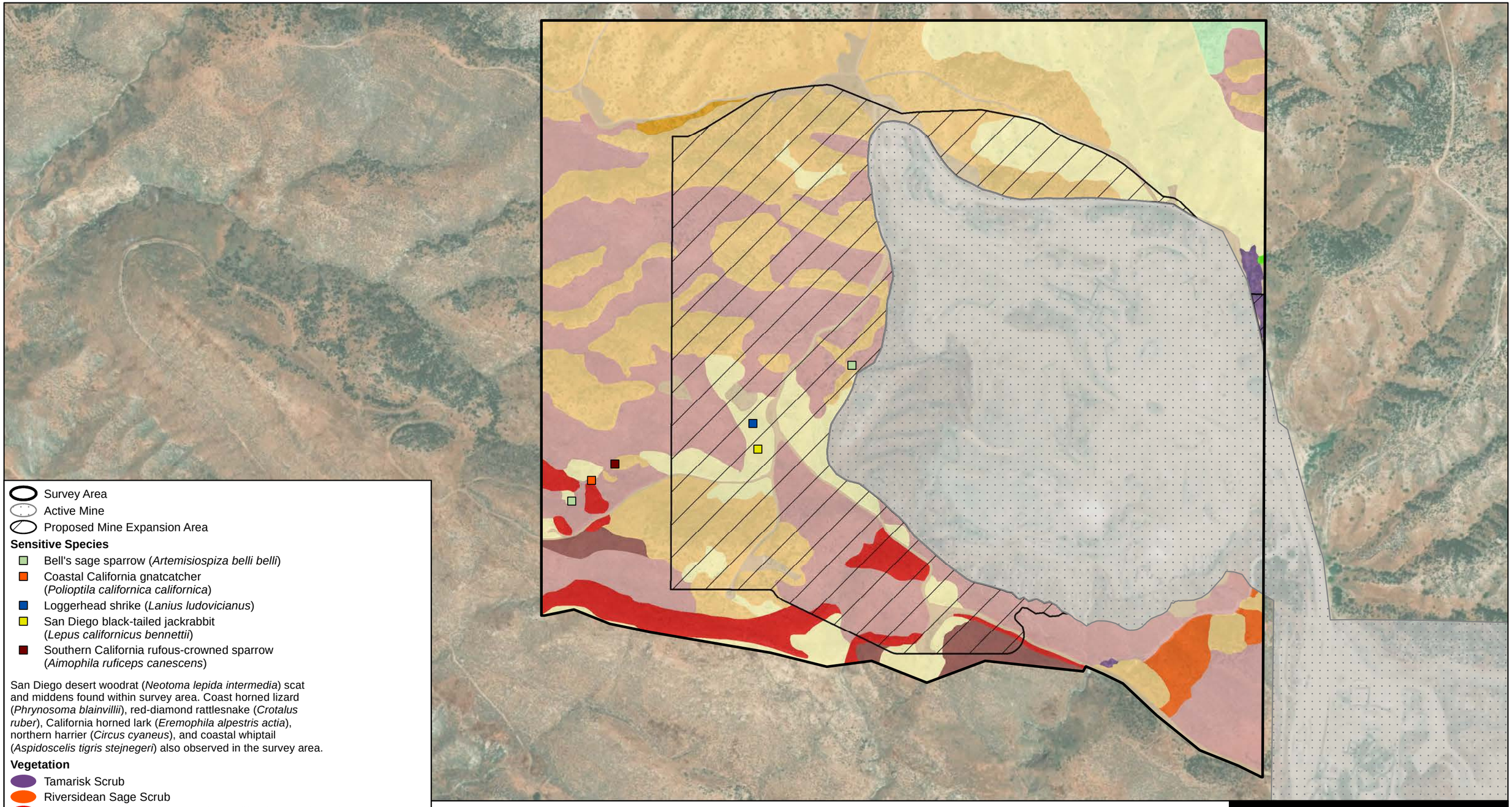

Figure 5

Biological Resources

GILMAN SPRINGS MINE

Chamise chaparral in the survey area is dominated by chamise (*Adenostoma fasciculatum*). Chamise chaparral/Riversidean sage scrub in the survey area is dominated by chamise and brittlebush (*Encelia farinosa*), the latter of which is a dominant species in the Riversidean sage scrub. Scrub oak chaparral in the survey area is dominated by scrub oak (*Quercus berberidifolia*).

3.2.3 Coastal Sage Scrub

Riversidean sage scrub is a subcategory of coastal sage scrub, a dominant shrub community of California. In the survey area, Riversidean sage scrub is dominated by a mix of low-growing shrubs such as buckwheat (*Eriogonum* spp.), California sagebrush (*Artemisia californica*), and brittlebush. In some locations in the survey area, however, Riversidean sage scrub is dominated by just one species such as California sagebrush or brittlebush. Where Riversidean sage scrub that is dominated by brittlebush has been disturbed, the vegetation community also contains a preponderance of non-native, weedy species.

3.2.4 Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered, native, annual forbs. Characteristic species often include oats (*Avena* spp.), red brome (*Bromus madritensis*), ripgut (*B. diandrus*), short-pod mustard (*Hirschfeldia incana*), and other mustards (*Brassica* spp.). Non-native grassland in the survey area occurs in small patches in a mosaic with sage scrub and chaparral.

3.2.5 Disturbed Habitat

Disturbed habitat is generally made up of areas that exhibit signs of recent disturbance. They usually support little vegetation; however, when there is vegetation present it consists of mostly non-native, weedy species. Disturbed habitat in the survey area includes dirt roads and areas adjacent to dirt roads.

3.3 JURISDICTIONAL DELINEATION

Potential Corps and CDFW jurisdictional features occur in the survey area and include non-wetland WUS, CDFW riparian habitats and CDFW streambed/lake features as described in the following sections.

3.3.1 Federal Jurisdiction

Areas under potential Corps jurisdiction in the survey area consist of 1.13 acres of non-wetland WUS (Figure 6; Table 2).

Table 2 WATERS OF THE U.S. IN THE SURVEY AREA		
POTENTIAL JURISDICTIONAL FEATURE	**AREA** (acres)	**LENGTH** (feet)
Non-Wetland		
Ephemeral stream	1.10	13,211
Unvegetated pond (ephemeral basin)	0.03	--
TOTAL	**1.13**	**13,211**

3.3.2 State Jurisdiction

Areas under potential CDFW jurisdiction in the survey area consist of 1.63 acres of riparian habitats and streambed/lake features (Figure 6; Table 3).

Table 3 CDFW JURISDICTIONAL FEATURES 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 (ephemeral basin)	0.03	--
Features with discontinuous OHWM	--	725
TOTAL	**1.63**	**13,936**

3.4 RIPARIAN/RIVERINE AND VERNAL POOL HABITAT ASSESSMENT

Riparian/Riverine resources are the same as CDFW jurisdictional features in the survey area. The Riparian/Riverine resources in the survey area total 1.63 acres as shown in Table 3 and on Figure 6. There is no Vernal Pool habitat in the survey area.

Riparian/Riverine habitats are 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.

3.4.1 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.

Survey Area
Active Mine
Proposed Mine Expansion Area

CDFW Riparian
Tamarisk Scrub

CDFW Streambed/Lake
Ephemeral Stream
Discontinuous OHWM
Unvegetated Pond

Corps Non-wetland Waters of the U.S.
Ephemeral Stream
Unvegetated Pond

MSHCP Riparian/Riverine
Tamarisk Scrub
Unvegetated Pond
Ephemeral Stream
Discontinuous OHWM

N
W E
S
0 225 450
Feet

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Figure 6

Riparian/Riverine Habitats and Potential Jurisdictional Features

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.

3.4.2 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).

The 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 6) 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, vernal pool vegetation) were observed. Therefore, there are no

features present that would support fairy shrimp in the survey area or the proposed mine expansion area.

3.4.3 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.

3.4.4 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.

3.4.5 Riparian/Riverine Plant Species

The survey area is not within a NEPSSA.

3.5 MULTIPLE SPECIES HABITAT CONSERVATION PLAN FOCUSED SURVEYS

3.5.1 Burrowing Owl Habitat Assessment and Survey

Non-native grassland in the survey area is potentially suitable burrowing owl habitat based on the Burrowing Owl Survey Instructions for the Western Riverside MSHCP. In addition, a small amount of habitat mapped as Riversidean sage scrub, *Encelia farinosa*-dominated also represents potentially suitable habitat for the burrowing owl in the survey area. These areas fit the definition of shrub lands with low density cover or interstitial grassland within shrublands. Step II of the Survey Instructions, which includes Part A: Focused Burrow Surveys and Part B: Focused Burrowing Owl Surveys, were conducted to comply with the MSHCP in March and April 2018 (Appendix C).

3.5.2 San Bernardino Kangaroo Rat and Los Angeles Pocket Mouse Assessment

San Bernardino Kangaroo Rat

The habitat of the San Bernardino kangaroo rat is described as being confined to primary and secondary alluvial fan scrub habitats, with sandy soils deposited by fluvial (water) rather than Aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs.

The San Bernardino kangaroo rat is confined to inland valley scrub communities, and more particularly, to scrub communities occurring along rivers, streams, and drainages. Most of these drainages have been historically altered as a result of flood control efforts, and the resulting increased use of river resources including mining, off-road vehicle use, and road and housing development. This increased use of river resources has resulted in a reduction in both the amount and quality of habitat available for the San Bernardino kangaroo rat.

The closest current documented population of San Bernardino kangaroo rat is within the confines of the San Jacinto River. There is no suitable habitat for this species in the survey area (Vergne 2017).

Los Angeles Pocket Mouse

The southwestern parcels of the Chandler Aggregates property are within the MSHCP survey area for the Los Angeles pocket mouse. However, the proposed mine expansion (and the mine expansion survey area) is not within the survey area for the species. Therefore, a survey for the species is not required. The habitat of the Los Angeles pocket mouse is described as being confined to lower elevation grasslands and coastal sage scrub habitats in areas with soils composed of fine sands. The species is documented as occurring on land adjacent to the Chandler Aggregates property and in Laborde Canyon, the latter of which is approximately 3,000 feet east of the survey area. This species is highly likely to occur within the unnamed drainages and adjacent sandy areas in the survey area (Vergne 2017).

3.6 OTHER SENSITIVE SPECIES

A search of the CNDDB was conducted for sensitive plant and animal species that have potential to occur in the survey area and within one mile of the Chandler Aggregates property. Additionally, species that could occur in the survey area based on its location and habitat types have also been considered for their potential to occur. Those that have not already been mentioned in this general biological resources assessment are addressed below.

3.6.1 Plants

No sensitive plant species have been observed in the survey area to date. There is one sensitive plant species that has been reported to the CNDDB in the vicinity of the Chandler Aggregates property (besides smooth tarplant, vernal barley, mud nama and San Jacinto Valley crownscale addressed in Section 3.4.5 of this document). That one species is Plummer's mariposa lily (*Calochortus plummerae*). The survey area is not in an MSHCP survey area for the species.

3.6.2 Animals

Eleven sensitive animal species were observed in the survey area: coast horned lizard (*Phrynosoma blainvillii*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), red-diamond rattlesnake (*Crotalus ruber*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Artemisiospiza belli belli*), northern harrier (*Circus cyaneus*), California horned lark (*Eremophila alpestris actia*), loggerhead shrike (*Lanius ludovicianus*), coastal California gnatcatcher (*Polioptila californica californica*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and San Diego desert woodrat (*Neotoma lepida intermedia*; Figure 5).

Additionally, Stephens' kangaroo rat (*Dipodomys stephensi*) has been reported to the CNDDB in close proximity to the western and northeastern boundaries of the Chandler Aggregates property, and the coastal cactus wren (*Campylorhynchus brunneicapillus cousei*) has been reported to the CNDDB south of the property, each report is outside the survey area. These species are addressed in Table 4. Other sensitive species listed in Table 4 are included because they may have potential to occur in the survey area based on CNDDB records within one mile of the

Chandler Aggregates property, habitats present, elevation and/or latitude, soil types, and/or location relative to the coast.

Table 4
POTENTIAL FOR MSHCP-COVERED, LISTED, AND SENSITIVE ANIMAL SPECIES TO OCCUR IN THE SURVEY AREA

SPECIES	MSHCP DESIGNATION	SENSITIVITY*	HABITATS	POTENTIAL
Invertebrates				
Quino checkerspot butterfly (*Euphydryas editha quino*)	MSHCP Covered	FE SSC	Open areas, sparse vegetation, flowers and larval host plants (primary is *Plantago* spp.).	Survey area not within the potential range of the species (USFWS 2014).
Reptiles				
Orange-throated whiptail (*Aspidoscelis hyperythra*)	MSHCP Covered	SSC	Chaparral, sage scrub, grassland, woodland, riparian areas.	High. Suitable habitat present.
Coastal whiptail (*Aspidoscelis tigris stejnegeri*)	MSHCP Covered	SSC	Open rocky areas with sparse vegetation usually scrub or grassland.	**Present**
Red-diamond rattlesnake (*Crotalus ruber*)	MSHCP Covered	SSC	Heavy brush, boulders, can use a variety of habitats. Prey density a determining factor.	**Present**
Coast horned lizard (*Phrynosoma blainvillii*)	MSHCP Covered	SSC	Grassland, scrub, chaparral, woodland.	**Present**
Coast patch-nosed snake (*Salvadora hexalepis virgultea*)	Not covered	SSC	Coastal and desert scrub, chaparral, washes. A generalist.	High. Suitable habitat present.
Birds				
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	MSHCP Covered Planning Species	WL	Hillsides, with grassland, sage scrub, or chaparral.	**Present**
Grasshopper sparrow (*Ammodramus savannarum*)	Additional conservation required to become adequately covered	SSC	Grassland with some shrubs and patchy, bare ground.	Moderate. Some suitable habitat present.
Bell's sage sparrow (*Artemisiospiza belli belli*)	MSHCP Covered Planning Species	BCC WL	Evenly spaced sage scrub.	**Present**

Table 4 POTENTIAL FOR MSHCP-COVERED, LISTED, AND SENSITIVE ANIMAL SPECIES TO OCCUR IN THE SURVEY AREA (cont.)				
SPECIES	**MSHCP DESIGNATION**	**SENSITIVITY***	**HABITATS**	**POTENTIAL**
Birds (cont.)				
Burrowing owl (*Athene cunicularia*)	MSHCP Covered Planning Species	BCC SSC	Open land, including grassland, agriculture (e.g., dry-land farming and grazing areas), playa, and sparse coastal sage and desert scrubs.	Low. Neither the species nor evidence of its presence was observed during the Step II survey conducted in March and April 2018 (Appendix C).
Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)	MSHCP Covered Planning Species	BCC SSC	Scrub, desert thickets, and areas with large branching cacti.	Low. While cacti are present in the survey area, it is not a dominant component of the habitat, nor is it of suitable height for use by the species. Reported to the CNDDB in 2001 outside the survey area and south of the Chandler Aggregates property.
Northern harrier (*Circus cyaneus*)	MSHCP Covered	SSC	Meadows, grassland, scrub, rarely in woodland. Roosts on ground.	**Present**
California horned lark (*Eremophila alpestris actia*)	MSHCP Covered	WL	Grassland, agriculture fields, and disturbed fields.	**Present**
Loggerhead shrike (*Lanius ludovicianus*)	MSHCP Covered Planning Species	BCC SSC	Open ground, short vegetation, pastures, agriculture.	**Present**
Coastal California gnatcatcher (*Polioptila californica californica*)	MSHCP Covered	FT SSC	Coastal sage and other low scrub.	**Present**

Table 4 POTENTIAL FOR MSHCP-COVERED, LISTED, AND SENSITIVE ANIMAL SPECIES TO OCCUR IN THE SURVEY AREA (cont.)				
SPECIES	**MSHCP DESIGNATION**	**SENSITIVITY***	**HABITATS**	**POTENTIAL**
Mammals				
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	MSHCP Covered	SSC	Chaparral, coastal sage scrub (including Riversidean and Diegan coastal sage scrub), desert scrub, grassland, juniper woodland and scrub, and Riversidean alluvial fan sage scrub.	High. Documented on adjacent properties (Vergne 2017).
San Bernardino kangaroo rat (*Dipodomys merriami parvus*)	MSHCP Covered Planning Species	FE SSC	Riversidean alluvial fan sage scrub, Riversidean sage scrub, chaparral and grassland within and adjacent to the San Jacinto River.	Low. Not reported to the CNDDB within one mile of the Chandler Aggregates property. Main populations are in the San Jacinto River and Bautista Creek (Dudek 2003). There is no suitable habitat for this species in the survey area (Vergne 2017).
Stephens' kangaroo rat (*Dipodomys stephensi*)	MSHCP Covered Planning Species	FE ST	Open areas with sparse perennial cover and loose soil.	High (Vergne 2017). Reported to the CNDDB in 1991 on the western slopes of the Moreno Badlands (outside the survey area) and in 2003 on the east side of Laborde Canyon, 3.5 miles southwest of Beaumont, which is outside the survey area.
Western mastiff bat (*Eumops perotis californicus*)	Not covered	SSC	Rocky areas, cliff faces, known to roost in buildings.	Low. Suitable habitat lacking.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	MSHCP Covered	SSC	Primarily open scrub with short grasses.	Present

Table 4 POTENTIAL FOR MSHCP-COVERED, LISTED, AND SENSITIVE ANIMAL SPECIES TO OCCUR IN THE SURVEY AREA (cont.)				
SPECIES	**MSHCP DESIGNATION**	**SENSITIVITY***	**HABITATS**	**POTENTIAL**
Mammals (cont.)				
Bobcat (*Lynx rufus*)	MSHCP Covered Planning Species	None	Chaparral, coastal sage scrub, desert scrubs, grassland (annual, native, meadow, alkali playa), juniper woodland and scrub, Riversidean alluvial fan sage scrub, riparian habitats, woodlands and forests, and coniferous forests.	High. Survey area contains suitable habitat, and this species is widespread throughout the MSHCP Area.
San Diego desert woodrat (*Neotoma lepida intermedia*)	MSHCP Covered	SSC	Chaparral, coastal sage scrub (including Riversidean and Diegan coastal sage scrub), desert scrub, juniper woodland and scrub, and Riversidean alluvial fan sage scrub.	**Present**
Los Angeles pocket mouse (*Perognathus longimembris brevinasus*)	MSHCP Covered Planning Species	SSC	Primarily occurs in drainages with sandy soils associated with chaparral, coastal sage scrub (Riversidean sage scrub, Riversidean alluvial fan sage scrub, and Diegan coastal sage scrub), desert scrub, grassland, and vernal pools and playas.	High. Potential habitat in the survey area includes the unnamed drainages and adjacent sandy areas (Vergne 2017). There is a record for this species in the CNDDB within one mile of the Chandler Aggregates property at Eden Hot Springs (approximately 0.75 mile northwest of the survey area) from 1940, and in Laborde Canyon to the east.
American badger (*Taxidea taxus*)	Not covered	SSC	Upland grasslands, meadows, and fields.	Low. Potential habitat limited.

*Refer to Appendix D

4.0 REGULATORY CONTEXT

4.1 FEDERAL GOVERNMENT

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a "take" under the ESA. Section 9(a) of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

Sections 4(d), 7, and 10(a) of the federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of biological opinion, issued by the USFWS for non-marine related listed species issues. A Section 7 consultation is required when there is a nexus between federally listed species' use of the site and impacts to USACE jurisdictional areas. Section 10(a) allows issuance of permits for "incidental" take of endangered or threatened species. The term "incidental" applies if the taking of a listed species is incidental to and not the purpose of an otherwise lawful activity. The MSHCP is the Section 10(a) permit for this portion of Riverside County, including the survey area.

All migratory bird species that are native to the United States or its territories are protected under the Migratory Bird Treaty Act (MBTA), as amended under the MBTA of 2004 (Federal Register Document 05-5127). This law is generally protective of migratory birds from the direct physical take of the species.

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act (CWA). The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all WUS. Permitting for projects filling WUS (including wetlands and vernal pools) is overseen by the USACE under Section 404 of the CWA. Projects may be permitted on an individual basis or may be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. Individual Permits typically require substantial time (often longer than six months) to review and approve, while Nationwide Permits are pre-approved if a project meets appropriate conditions. A CWA Section 401 Water Quality Certification, which is administered by the State Water Resources Control Board, must be issued prior to any 404 Permit. The proposed mine expansion will require a Section 404 permit, but the type of permit (Individual or Nationwide) has yet to be determined.

4.2 STATE OF CALIFORNIA

The California ESA is similar to the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. Section 2081 of the California ESA authorizes the CDFW to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes. The MSHCP is the regional section 2081 for this portion of the County, including the subject property. Fully Protected species may not be taken or possessed at any time and no state licenses or permits may be issued for their take except for collecting these species necessary for scientific research and relocation of the bird species for the protection of livestock (Fish and Game Code Sections 3511, 4700, 5050, and 5515). There are no Fully Protected species with potential to occur in the survey area.

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in plants that are listed. The California ESA followed the NPPA and covers both plants and animals that are determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were designated threatened under the California ESA.

The California Fish and Game Code (Section 1600 et seq.) requires an agreement with CDFW for projects affecting riparian and wetland habitats (i.e., waters of the State) through issuance of a Lake or Streambed Alteration Agreement. The proposed mine expansion will require a 1602 Agreement with the CDFW.

Pursuant to California Fish and Game Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls and their active nests are protected by California Fish and Game Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that construction activities (particularly vegetation removal or construction near nests) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by CDFW and/or USFWS.

4.3 WESTERN RIVERSIDE MULTIPLE SPECIES HABITAT CONSERVATION PLAN

The MSHCP is a comprehensive multi-jurisdictional effort that includes Riverside County and multiple cities. Rather than address sensitive species on an individual basis, the MSHCP focuses on the conservation of 146 species, proposing a reserve system of approximately 500,000 acres and a mechanism to fund and implement the reserve system (Dudek 2003). Most importantly, the MSHCP allows participating entities to issue take permits for listed species so that individual applicants need not seek their own permits from the USFWS and/or CDFW. The MSHCP was adopted on June 17, 2003, by the Riverside County Board of Supervisors. The Incidental Take Permit was issued by both the USFWS and CDFW on June 22, 2004. The County is the lead agency/permittee. It should be noted that the existing mine was permitted and active prior to the establishment and implementation of the MSHCP.

The survey area is in Subunit 1, Gilman Springs/Southern Badlands, in the San Jacinto Valley Area Plan of the MSHCP. The entire survey area is within Criteria Cells, and those cells are part of Cell Groups A, B, and H. The survey area is entirely within Proposed Core 3 (Figure 7). The proposed mine expansion is required to show MSHCP compliance through specific habitat assessments, applicable biological surveys, and the provision of an MSHCP consistency analysis.

The proposed mine expansion, as well as acreage proposed to be added to the MSHCP Conservation Area within the survey area, are located within Criteria Cells and Cell Groups as follows in Table 5 (and shown on Figure 7). The Subunit and associated Cell Groups have specific planning species, biological concerns, and conservation criteria as addressed following Table 5.

Table 5
CELL GROUPS AND CRITERIA CELLS AFFECTED BY PROPOSED MINE EXPANSION AND HABITAT CONSERVATION

Cell Group (Acres)	Criteria Cell	Mine Expansion	MSHCP Conservation	Total Cell Acres	Conservation Goal	Conserved[1]
B (618.1)	1687	21.5	115.44	155.4	40-50%	45%
	1784	33.0	69.29	155.2		
C (635.6)	1591	-	7.21	158.3	20-30%	37%
	1688	-	155.84	155.9		
	1785	-	67.42	159.2		
D (794.8)	1592	-	1.07	162.0		
	1692	-	8.52	153.7	25-35%	59%
	1793	-	5.22	157.0		
TOTAL		**54.5**	**430.01**	**1,256.7**	-	-

[1] Refer to Table 6 for a more detailed discussion of conserved areas

Planning species are MSHCP covered species identified for which a given portion of the MSHCP Conservation Area habitat is specifically targeted to conserve.

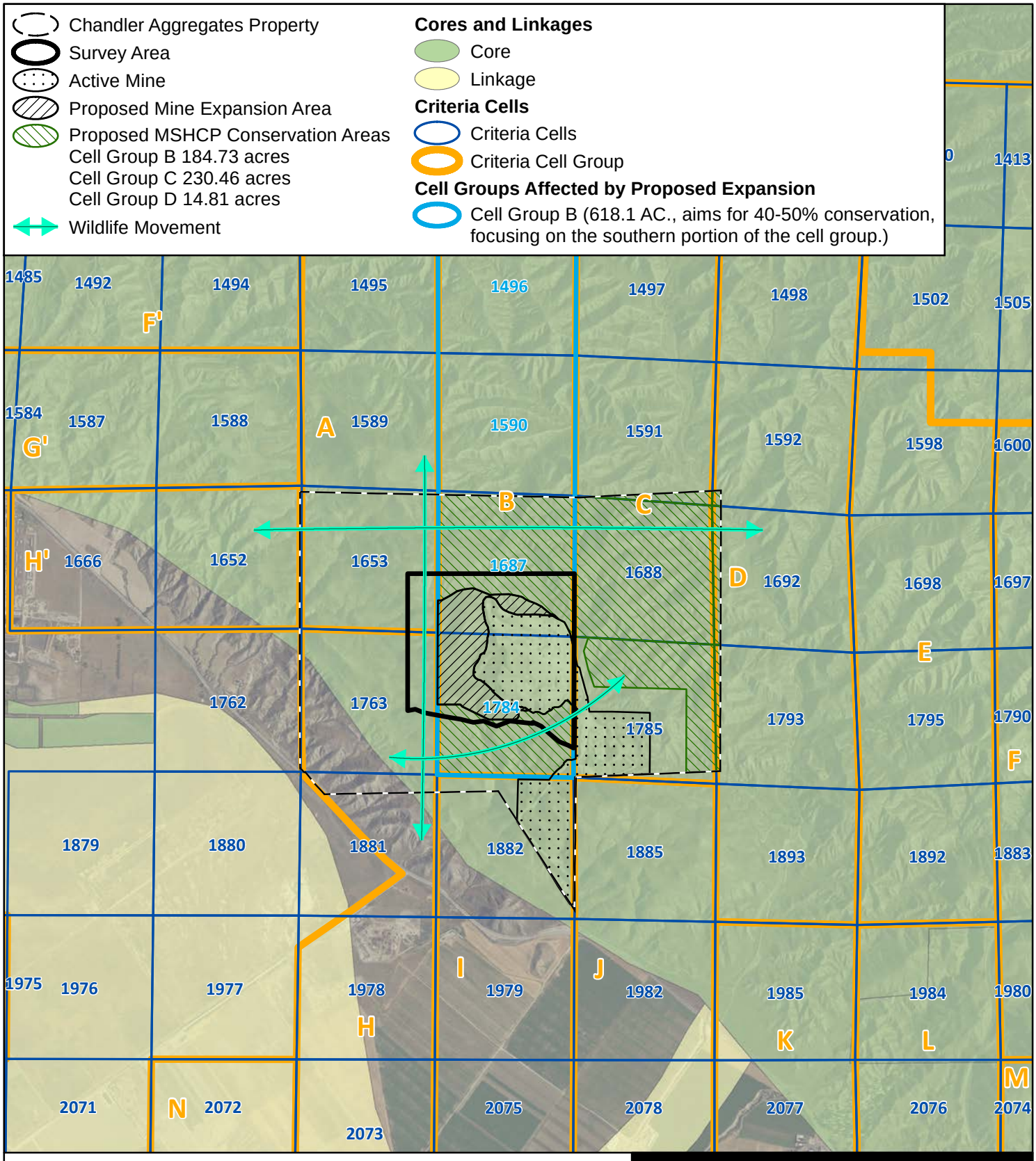


Figure 7

MSHCP Criteria Cells, Cores, and Linkages

GILMAN SPRINGS MINE

Planning species for Subunit 1 include:

- arroyo toad
- Bell's sage sparrow
- burrowing owl
- cactus wren
- loggerhead shrike
- mountain plover
- Southern California rufous-crowned sparrow
- white-faced ibis
- bobcat
- Los Angeles pocket mouse
- mountain lion
- San Bernardino kangaroo rat
- Stephens' kangaroo rat
- Coulter's goldfields
- Davidson's saltscale
- San Jacinto Valley crownscale
- spreading navarretia
- vernal barley
- Wright's trichocoronis

Biological issues and considerations for Subunit 1 include:

- Conserve Willow-Domino-Travers soils supporting sensitive plants such as spreading navarretia, San Jacinto Valley crownscale, Coulter's goldfields, Davidson's saltscale, vernal barley and Wright's trichocoronis.
- Conserve intact upland Habitat in the southern Badlands for the benefit of burrowing owl, Bell's sage sparrow, raptors and other species.
- Conserve open grasslands and sparse shrublands that support populations of Stephens' kangaroo rat, with a focus on suitable Habitat in the southern Badlands.
- Maintain Core Area for bobcat.
- Maintain Core and Linkage Habitat for mountain lion.
- Maintain Core Area for the San Bernardino kangaroo rat.
- Determine presence of potential Core Area for the Los Angeles pocket mouse along the San Jacinto River and its tributaries.

The criteria for conservation within Cell Group B, where proposed mine expansion would occur, would contribute to the assembly of Proposed Core 3 as listed in Table 6. The proposed mine expansion is consistent with the criteria for conservation as explained in Table 6. Furthermore, over the long term, all of the mined land will be reclaimed and revegetated.

Table 6
CONSERVATION CRITERIA FOR MSHCP CELL GROUP B, C, AND D WHERE MINE EXPANSION AND HABITAT CONSERVATION ARE PROPOSED

Cell		Cell Group Conservation Criteria
Group	**Number**	
B	1496 (154.3 acres) 1590 (153.2 acres) 1687 (155.4 acres) 1784 (155.2 acres) Cells 1496 and 1590 are in the MSHCP Conservation Area (Figure 8)	Conservation within this Cell Group will contribute to assembly of Proposed Core 3. Conservation within this Cell Group will focus on chaparral and coastal sage scrub habitat. Areas conserved within this Cell Group will be connected to chaparral and coastal sage scrub habitat proposed for conservation in Cell Group C to the east and in Cell Groups A and H to the west and to chaparral, coastal sage scrub, grassland, riparian scrub, woodland and forest habitat proposed for conservation in Cell Group I to the south. Conservation within this Cell Group will range from 40%-50% of the Cell Group focusing in the southern portion of the Cell Group. The mapped Cell Group is 618.1 acres in size, including the existing mine that was permitted and active prior to the establishment and implementation of the MSHCP. Despite the presence of the active mine, the Cell Group conservation goal ranges from 247.24 acres to 309.05 acres (40%-50%) of the Cell Group, focused in the southern portion of the Cell Group. The remaining potential conservation area is 242.77 acres, which is less than the minimum conservation goal of 247.24 acres. The County owns the northern half (Cells 1496 and 1590) of the Cell Group (307.50 acres) and has identified all of this area to be conserved. This alone would essentially meet the upper end (50%) conservation goal for the Cell Group; however, the County has stated that the proposed mine expansion project could take none of this into account in its MSHCP Consistency Determination. The County has further stated that, while only occurring in approximately half of the Cell Group, the mine expansion project alone must meet the conservation goal for the entire Cell Group. As noted above, with the existing mine, the conservation goal in the southern half of the Cell Group is unattainable while still having a feasible project. Taking into account the existing mine and the mine expansion area, there are 184.73 acres available in the southern half of Cell Group B to count toward the conservation goal. The project applicant proposes to conserve the 184.73 acres within the southern half of Cell Group B and an additional 93.42 acres in adjacent Cell Groups C (78.61 acres) and D (14.81 acres), for a combined conservation total of 278.15 acres. There are no project impacts proposed within Cell Groups C or D, so this conservation would not be required for those Cell Groups. The conservation goal for Cell Group D has already been met so the 14.81 acres conserved for the project would not affect the conservation goals for the group. The project applicant also proposes to conserve an additional 151.86 acres within Cell Group C (conservation goal for Cell Group C will range from 20%-30% focusing in the southern portion of the Cell Group). This, combined with the 7.4 acres already conserved by the RCA, would provide for an overall 25% conservation of the Cell Group, well within the overall conservation goal for the group.

Table 6 CONSERVATION CRITERIA FOR MSHCP CELL GROUPS (cont.)		
Cell		**Cell Group Conservation Criteria**
C	1497 (162.1 acres) 1591 (158.3 acres) 1688 (155.9 acres) 1785 (159.2 acres) 7.4 acres of Cell 1785 is conserved by the Western Riverside County RCA.	Conservation within this Cell Group will contribute to assembly of Proposed Core 3. Conservation within this Cell Group will focus on chaparral and coastal sage scrub habitat. Areas conserved within this Cell Group will be connected to chaparral and coastal sage scrub habitat proposed for conservation in Cell Groups B to the west, D to the east and J to the south. Conservation within this Cell Group will range from 20%-30% of the Cell Group focusing in the southern portion of the Cell Group. The proposed mine expansion would not affect Cell Group C. Rather, 78.61 acres of Cell Group C is proposed to be added to the MSHCP Conservation Area as part of the proposed project and would contribute to the assembly of Proposed Core 3 (Figure 7) along with land conserved by the Western Riverside County RCA (Figure 8). An additional 158.88 acres (25%) of Cell Group C also would be conserved to ensure that the Conservation Goals for Cell Group C are met, separate from the area used to comply with the Cell Group conservation goal. This includes the 7.4 acres already conserved by the RCA in the southern end of the group. Consequently, the overall conservation of the group will surpass the 20%-30% conservation goal.
D	1498 (165.8 acres) 1592 (162.0 acres) 1692 (153.7 acres) 1793 (157.0 acres) 1893 (156.3 acres) 160.9 acres of Cell 1592 is owned by Riverside County. 145.2 acres of Cell 1692 is conserved by the Western Riverside County RCA and Riverside County. 151.8 acres of Cell 1793 is conserved by the Western Riverside County RCA.	Conservation within this Cell Group will contribute to assembly of Proposed Core 3. Conservation within this Cell Group will focus on chaparral, coastal sage scrub, grassland, riparian scrub, woodland and forest habitat. Areas conserved within this Cell Group will be connected to chaparral and coastal sage scrub habitat proposed for conservation in Cell Group E to the east and in Cell Groups C and J to the west and to chaparral, coastal sage scrub and grassland habitat proposed for conservation in Cell Group K to the south. Conservation within this Cell Group will range from 25%-35% of the Cell Group focusing in the southern portion of the Cell Group. The proposed mine expansion would not affect Cell Group D. Rather, 14.8 acres of Cell Group D is proposed to be added to the MSHCP Conservation Area and would contribute to the assembly of Proposed Core 3 (Figure 7) along with land conserved by the Western Riverside County RCA and Riverside County (Figure 8). As the conservation goal for this group has already been met, this will not affect Cell Group D or the MSHCP preserve assembly.

Proposed Core 3

Proposed Core 3 (Badlands/Potrero) is located in the northeast region of the MSHCP Area and includes the survey area (Figure 7). This Core consists mainly of private lands but also contains a few Public/Quasi-Public parcels including De Anza Cycle Park. The Core is connected to Proposed Linkage 12 (north San Timoteo Creek), Proposed Linkage 4 (Reche Canyon), Proposed Constrained Linkage 22 (east San Timoteo Creek), Existing Core H (Lake Perris), Existing Core K (San Jacinto Mountains), Proposed Linkage 11 (Soboba/Gilman Springs), and Proposed Constrained Linkage 21. The survey area is not within any of these linkages (Figure 7); however, the proposed project provides MSHCP "Live-In" Habitat and connectivity between

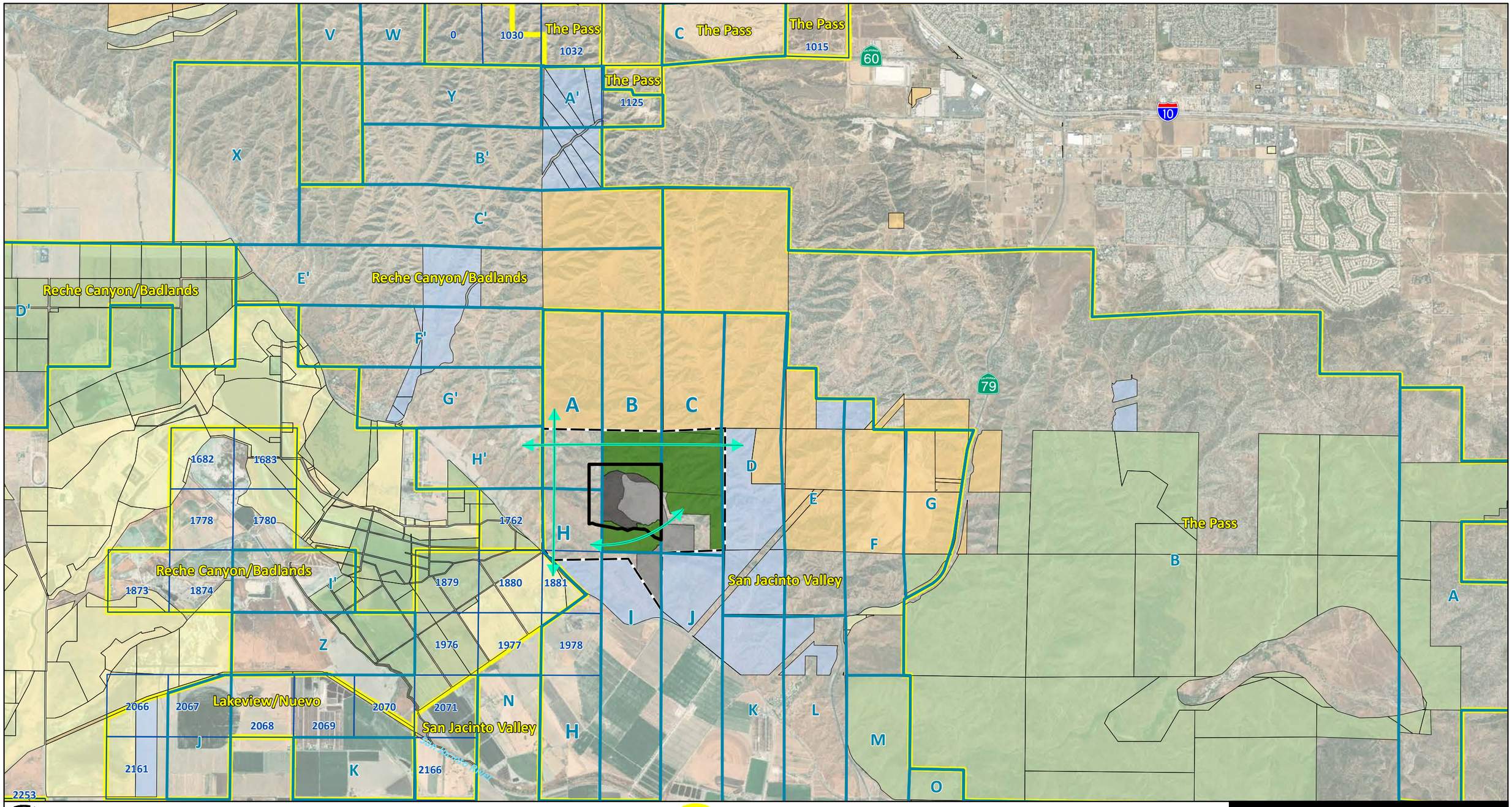
Cell Groups in Proposed Core 3 (Figures 7 and 8). A linkage is defined in the MSHCP as a "connection between Core Areas with adequate size, configuration and vegetation characteristics to generally provide for Live-In Habitat and/or provide for genetic flow for identified Planning Species."

The project proposes to place land in the MSHCP Conservation Area north, south, and east of the proposed mine expansion area, which permanently and formally protects habitat that connects County of Riverside MSHCP Conservation Area to the north and east to Western Riverside County Regional Conservation Authority MSHCP Conservation Area to the south and east of the mine (Figure 8), all of which are part of The Badlands.

The existing, active access road to the active mine already contains undercrossing pipes large enough for small animals such as rabbits, opossums, and racoons to travel through the pipes, and birds can fly over the access road. Larger animals such as coyote, mule deer, and mountain lion can walk across the road. The road, therefore, does not prevent a barrier to wildlife crossing. In order to avoid any future potential injury or mortality to wildlife, the proposed mine expansion project will post a 10-mile-per-hour speed limit on the road, and wildlife crossing signs warning drivers to be cautious will be installed along the road.

No blasting will occur at night (mining, however, is proposed to occur from 4:00 am to 4:00 pm as is allowed under the current mine permit), which could adversely affect wildlife movement in/around the mine. Also, the mine will have 3-strand, barbless wire, perimeter fencing that will not obstruct wildlife movement. Following its closure, the entire mine will be completely reclaimed and revegetated within five years, thereby restoring Live-In Habitat. The entire mine will also be placed in the MSHCP Conservation Area, thereby providing full connectivity between County of Riverside MSHCP Conservation Area to the north and east and Western Riverside County Regional Conservation Authority MSHCP Conservation Area to the south and east (Figure 8). Section 5.3 of this general biological resources assessment explains how the project conserves Live-In Habitat, Core Areas, and Linkages for the planning species of Subunit 1, Gilman Springs/Southern Badlands, in the San Jacinto Valley Area Plan of the MSHCP that were observed in the project survey area or have moderate to high potential to occur there.

Proposed Core 3 functions as a Linkage, connecting the San Bernardino National Forest to the southwest with San Bernardino County and other conserved areas to the north of the Core. With a total acreage of approximately 24,920 acres, Proposed Core 3 is one of the largest MSHCP Core Areas. In addition, the Core is contiguous with Existing Core H (Lake Perris/Mystic Lake) and Existing Core K (San Jacinto Mountains), thus greatly enlarging the functional area of the Core. The Core has both a large proportion of its area unaffected by edge (approximately 23,420 acres of the total 24,940 acres) and is only partially constrained by existing agricultural use. Within the Core, important Live-In and movement Habitat is provided for Bell's sage sparrow, loggerhead shrike, cactus wren, Stephens' kangaroo rat, southern California rufous-crowned sparrow, and mountain lion, which have key populations in The Badlands. Management of edge conditions will be necessary in The Badlands to maintain high quality Habitat for these species in areas which may be affected by covered facilities including Lambs Canyon Road, San Timoteo Canyon Road, and Gilman Springs Road. Bell's sage sparrow, loggerhead shrike, and southern California rufous-crowned sparrow were observed in the project survey area. Section 5.3 of this general biological resources assessment explains how the project conserves Live-In and movement Habitat for these species.



- Chandler Aggregates Property
- Survey Area
- Active Mine*
- Proposed Mine Expansion Area*
- Proposed MSHCP Conservation Area
- Wildlife Movement

Conserved Land Ownership

- County of Riverside
- Department of Fish and Game Wildlife Conservation
- State of California
- Western Riverside County Regional Conservation Authority

- MSHCP Plan Area Boundaries
- Criteria Cells
- Criteria Cell Group

* Active mine and proposed mine expansion areas will be reclaimed and revegetated.

N W E S

0 2,000 4,000 Feet

ALDEN ENVIRONMENTAL, INC

Figure 8

Regional MSHCP Map

GILMAN SPRINGS MINE

4.4 ADDITIONAL SURVEYS (MSHCP SECTION 6.3.2)

A Focused Burrow Survey (Step II, Part A of the Survey Instructions) and Focused Burrowing Owl Survey (Step II, Part B) were conducted in March and April 2018. Neither the species nor evidence of its presence was observed. See Appendix C for more details.

All project sites containing burrows or suitable habitat (based on Step I/Habitat Assessment), whether owls were found or not, require pre-construction surveys that shall be conducted within 30 days prior to ground disturbance to avoid direct take of burrowing owls (MSHCP Species-Specific Objective 6).

Otherwise, the survey area is not within a NEPSSA or CASSA, and there are no resources in the survey area with potential to support sensitive Riparian/Riverine (or Vernal Pool) species.

5.0 IMPACTS

This section describes potential direct and indirect impacts associated with the proposed mine expansion. Direct impacts immediately alter the affected biological resources such that those resources are eliminated temporarily or permanently. Indirect impacts consist of secondary effects of a project such as noise, decreased water quality (e.g., through sedimentation, urban contaminants, or fuel release), fugitive dust, colonization of non-native plant species, animal behavioral changes, and night lighting. The magnitude of an indirect impact can be the same as a direct impact; however, the effect usually takes a longer time to become apparent.

According to Appendix G of the CEQA Guidelines, project impacts to biological resources would be considered significant if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any special status species in local or regional plans, policies, or regulations, or by the CDFW and/or USFWS.

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.1 VEGETATION COMMUNITIES

The proposed mine expansion would directly impact 54.5 acres that occur in Cell Group B. As explained previously in Table 6, these impacts do not exceed acreages that would conflict with the criteria for conservation for this Cell Group, and the project proposes to place 430.01 acres in the MSHCP Conservation Area in Cell Groups B, C, and D, thereby contributing to the assembly of Proposed Core 3. Therefore, the impacts would be less than significant.

The proposed mine expansion would impact six vegetation communities as presented in Table 7.

Table 7
IMPACTS TO VEGETATION COMMUNITIES

Vegetation Community	Acreage Impacted
Tamarisk scrub	0.15
Chamise chaparral	19.5
Chamise chaparral-disturbed	--
Chamise chaparral/Riversidean sage scrub, *Encelia farinosa*-dominated	--
Scrub oak chaparral	--
Riversidean sage scrub	--
Riversidean sage scrub, *Artemisia californica*-dominated	1.4
Riversidean sage scrub, *Encelia farinosa*-dominated	20.3
Riversidean sage scrub, *Encelia farinosa*-dominated-disturbed	0.8
Non-native grassland	8.9
Disturbed habitat	3.4
TOTAL	**54.5[1]**

[1]Total reflects rounding.

5.2 JURISDICTIONAL WATERS

Impacts to waters that are under federal and/or State jurisdiction are summarized below.

5.2.1 Federal Jurisdictional Waters

The proposed mine expansion would impact 0.21 acre (3,620 linear feet) of ephemeral stream that is non-wetland WUS (Figure 6). This impact is considered significant. A Section 404 CWA permit will be required, but the type of permit (Individual or Nationwide) has yet to be determined.

5.2.2 CDFW Jurisdictional Waters

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 that are CDFW streambed habitats, as well as 0.15 acre of tamarisk scrub riparian habitat (Figure 6). These impacts are considered significant. Impacts to CDFW jurisdictional habitats will require a section 1602 Lake and Streambed Alteration Agreement with the CDFW.

MSHCP Riparian/Riverine habitat impacts are identical to the CDFW jurisdictional habitat impacts (Figure 6), are considered significant, and would require a DBESP.

5.3 MULTIPLE SPECIES HABITAT CONSERVATION PLAN IMPACTS/ CONSISTENCY

As noted earlier in Section 4.3.1, the survey area is located within Subunit 1, Gilman Springs/Southern Badlands, in the San Jacinto Valley Area Plan of the MSHCP. The conservation consideration related to the Criteria Cells in Subunit 1 is that Subunit 1 contains a portion of Proposed Core 3.

Of all the planning species for Subunit 1 listed in Section 4.3.1, the following species have been observed in the survey area or have moderate to high potential to occur there.

- Bell's sage sparrow
- burrowing owl
- loggerhead shrike
- Southern California rufous-crowned sparrow
- bobcat
- Los Angeles pocket mouse
- Stephens' kangaroo rat

Each of the biological issues and considerations for Subunit 1 is addressed below.

- Conserve Willow-Domino-Travers soils supporting sensitive plants such as spreading navarretia, San Jacinto Valley crownscale, Coulter's goldfields, Davidson's saltscale, vernal barley and Wright's trichocoronis.

  Willow-Domino-Travers soils are not present in the survey area.

- Conserve intact upland Habitat in the southern Badlands for the benefit of burrowing owl, Bell's sage sparrow, raptors and other species.

  As explained in Table 6, the proposed mine expansion is consistent with the criteria for conservation for the Cell Group being impacted, and the project proposes to place 430.01 acres in the MSHCP Conservation Area in Proposed Core 3 (Figure 7). This includes 278.15 acres to meet the Cell Group conservation goals and 151.86 acres to meet the Cell Group C goals. Furthermore, over the long term, all of the mined land will be reclaimed and revegetated.

- Conserve open grasslands and sparse shrublands that support populations of Stephens' kangaroo rat, with a focus on suitable Habitat in the southern Badlands.

  Stephens' kangaroo rat presence is documented to the east, west, north, and south of the survey area mostly along open ridge lines and in low-lying, flatter, disturbed, annual grasslands. Therefore, it has high potential to occur in non-native grassland in the survey area (Vergne 2017). The proposed mine expansion would impact 8.9 acres (35 percent) of the non-native grassland in the survey area, but the impact is consistent with the criteria for conservation for the Cell

Group as explained in Table 6. Furthermore, over the long term, all of the mined land will be reclaimed and revegetated.

- Maintain Core Area for bobcat.

  The proposed mine expansion is consistent with the criteria for conservation for the Cell Group being impacted.

- Maintain Core and Linkage Habitat for mountain lion.

  The proposed mine expansion is consistent with the criteria for conservation for the Cell Group being impacted.

- Maintain Core Area for the San Bernardino kangaroo rat.

  There is no suitable habitat for this species in the survey area (Vergne 2017).

- Determine presence of potential Core Area for the Los Angeles pocket mouse along the San Jacinto River and its tributaries.

  The survey area is not along the San Jacinto River or its tributaries.

The survey area occurs at the southwestern portion of Proposed Core 3 (Figure 7). The proposed mine expansion will not exceed the allowable impacts in Cell Group B such that conservation may occur consistent with the MSHCP that would contribute to the assembly of Proposed Core 3. As part of the project, 430.01 acres are proposed to be placed in the MSHCP Conservation Area in Proposed Core 3 (Figure 7). Therefore, the proposed mine expansion is consistent with the conservation goals of Subunit 1 of the San Jacinto Valley Area Plan. Furthermore, over the long term, all of the mined land will be reclaimed and revegetated.

5.3.1 Consistency with MSHCP Section 6.1.2

The proposed mine expansion complies with the policies of Section 6.1.2 that protect species associated with Riparian/Riverine and Vernal Pool Habitats. None of the plant or animal species listed in Section 6.1.2 was observed or is expected to occur in the survey area.

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."

Section 6.1.2 of the MSHCP focuses on protection of Riparian/Riverine areas and Vernal Pool Habitats capable of supporting MSHCP Covered Species, particularly within the identified Conservation Area. The functions of the ephemeral streams in the survey area 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 Section 6.1.2.

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 that are CDFW streambed habitats, as well as 0.15 acre of tamarisk scrub riparian habitat (Figure 6). The proposed mine expansion area was designed to occur west of the northwestern portion of the active mine in order to avoid impacting Riparian/Riverine habitats that are more numerous to the east of the active mine. A report on the delineation of potential jurisdictional features that was conducted will be submitted under separate cover for County and resource agency approval.

Impacts to Riparian/Riverine resources are proposed to be mitigated by off-site purchase of credits from an approved Mitigation Bank. A DBESP will be submitted under separate cover for County and resource agency approval.

5.3.2 Consistency with MSHCP Section 6.1.3

In compliance with Section 6.1.3, the proposed mine expansion would not affect any Narrow Endemic Plant Species, since no such species are expected to occur in the survey area. The survey area is not within a NEPSSA.

5.3.3 Consistency with MSHCP Section 6.1.4

The following measures will be implemented by the proposed project to minimize potential indirect impacts to MSHCP Conservation Area.

- Drainage. The proposed mine expansion will incorporate measures required the through National Pollutant Discharge Elimination System (NPDES). 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 within the MSHCP Conservation Area.

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

- Lighting. All 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. Lighting would be provided for nighttime mining, but it would be limited to that necessary for safety in the work. No lights will be installed on the access road, and operational lighting at the facility will be shielded and focused to reduce impacts to wildlife.

- Noise. During the day, noise from the proposed mine expansion will essentially be the same as noise generated in the current active mining area, which is adjacent to Western Riverside County Regional Conservation Authority MSHCP Conservation Area (Figure 8). The proposed mining will limit blasting to between 9:00 AM and 5:00 PM, and extraction activities will be conducted between 5:00 AM and sunset to minimize noise impacts on the Conservation Area. Operations at the mine are currently permitted 24 hours per day, Monday-Saturday (excluding Holidays). The proposed mine expansion would add Sundays and Holidays, due to the remote nature of the property and the recent emphasis on nights/weekend/holiday infrastructure work from Government agencies. While currently permitted for 24 hours/day, the site is not presently operating at night. Night operations, while anticipated in the future to provide materials to State infrastructure construction projects, are expected to be infrequent. There may also be other infrequent nighttime jobs, as well, requiring the mined materials. However, those materials would be blasted and/or extracted only during the day. Therefore, potential noise impacts at night would be infrequent and minimized.

- Invasives. 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 anywhere in the survey area. 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.

- Barriers. The proposed mine expansion will have 3-strand, barbless wire, perimeter fencing that will not obstruct wildlife movement.

- Grading/Land Development. The proposed mine expansion has an impact footprint that is wholly outside of the areas proposed to be placed in the MSHCP Conservation Area (Figure 7).

- Fugitive Dust. To avoid/minimize the potential adverse effects of fugitive dust from mining activities on MSHCP Conservation Area or other open space lands, the following types of dust control measures will be implemented during active mining: the use soil stabilizers on unpaved roads and the application of water on mining surfaces, roads, and materials loaded into haul trucks. Speed limits of 10 MPH will be imposed on all roads.

The above measures will serve to minimize potential adverse, indirect effects of mining on conserved habitat.

5.3.4 Consistency with MSHCP Policy Section 6.3.2

In compliance with MSHCP Section 6.3.2, a Focused Burrow Survey (Step II, Part A of the Survey Instructions) and Focused Burrowing Owl Survey (Step II, Part B) were conducted in March and April 2018 (Appendix C).

All project sites containing burrows or suitable habitat (based on Step I/Habitat Assessment), whether owls were found or not, require pre-construction surveys that shall be conducted within 30 days prior to ground disturbance to avoid direct take of burrowing owls (MSHCP Species-Specific Objective 6).

Specifically:

A 30-day pre-construction survey for burrowing owls is required prior to initial ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, tree removal, site watering, construction) to ensure that no owls have colonized the site in the days or weeks preceding initial ground-disturbing activities. If burrowing owls have colonized the project site prior to the initiation of ground-disturbing activities, the project proponent will immediately inform the Wildlife Agencies and the Regional Conservation Authority (RCA), and will need to coordinate further with RCA and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance. If ground-disturbing activities occur but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure burrowing owl has not colonized the site since it was last disturbed. If burrow owl is found, the same coordination with the agencies and the RCA described above will be necessary.

5.3.5 Fuels Management (MSHCP Section 6.4)

There is no fuels management associated with the proposed mine expansion.

5.4 NESTING BIRDS

Clearing of habitat for the proposed mine expansion could disturb or destroy active migratory bird nests including eggs and young. Disturbance to or destruction of migratory bird eggs, young, or adults of any species protected by the MBTA and/or California Fish and Game Code is in violation of the MBTA and/or or California Fish and Game Code and is, therefore, considered to be a potentially significant impact.

5.5 SENSITIVE PLANTS

Plummer's mariposa lily has moderate potential to occur in the survey area as described in Section 3.6.1 of this document. If it is present, potential impacts to Plummer's mariposa lily could be significant. Plummer's mariposa lily is an MSHCP Covered Species that is not State or federally listed and has a CNPS Rare Plant Rank of 4.2.

Per the MSHCP, conservation for this species will be achieved by inclusion of at least 167,580 acres of suitable Conserved Habitat (Objective 1) and eight known localities within large blocks of habitat in the MSHCP Conservation Area (Objective 2). In addition, implementation of Objective 3 for this species will provide new data to guide Reserve Assembly, management and monitoring. The proposed mine expansion proposes to conserve 430.01 acres with potentially suitable chaparral and sage scrub habitat with rocky soils in Cell Groups B, C, and D (which are in the San Jacinto Mountains foothills) consistent with Objective 1 for conservation of the species (Figures 4, 5, and 7).

5.6 SENSITIVE ANIMALS

Coast horned lizard, coastal whiptail, red-diamond rattlesnake, southern California rufous-crowned sparrow, Bell's sage sparrow, northern harrier, California horned lark, loggerhead shrike, coastal California gnatcatcher, San Diego black-tailed jackrabbit, and San Diego desert woodrat were observed in the survey area (Figure 5). All of these species are covered under the MSHCP and do not require species-specific mitigation. The MSHCP does not, however, cover impacts to nesting birds that are protected under the MBTA and/or or California Fish and Game Code (see Section 5.4 of this document).

6.0 MITIGATION

6.1 RIPARIAN/RIVERINE

The proposed mitigation for Riparian/Riverine resources described below is also the proposed mitigation for the impacts to a total of 0.36 acre of CDFW jurisdiction (0.21 acre of ephemeral stream and 0.15 acre of tamarisk scrub). This mitigation will also cover the impacts to 0.21 acre of Corps non-wetland WUS that overlap with CDFW jurisdiction. The final mitigation for impacts to waters of the State and WUS will be determined by the appropriate agencies during the permitting process.

Impacts to Riparian/Riverine resources (ephemeral streambed and tamarisk scrub) 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 credits from the Riverpark Mitigation Bank, or other approved 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.

6.2 NESTING BIRDS

The clearing of vegetation shall occur outside of the bird breeding season (February 15 to August 31), unless a qualified biologist demonstrates to the satisfaction of the County that all nesting is complete through completion of a Nesting Bird Clearance Survey. A Nesting Bird Clearance Survey report shall be submitted to the County for review and approval prior to initiating clearing and grubbing during the breeding season. Clearing of vegetation outside of the avian breeding season will not require a Nesting Bird Clearance Survey.

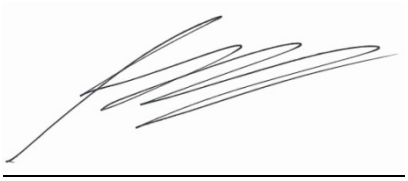
6.3 MITIGATION FEES

The MSHCP Local Mitigation Development Fee for industrial or commercial uses (from fee schedule for fiscal year 2019) is $7,164 per acre. In accordance with Resolution No. 2016-003, the applicant is requesting a fee waiver. The project complies with the standards identified in the resolution, that are presented below:

A. Proposed conservation land must be within Criteria Cells and contribute to Reserve Assembly;
B. Conservation land must be of a size, configuration and location such that it can be managed as part of the MSHCP Conservation Area;
C. Fuel modification/hazardous vegetation areas, manufactured slopes, storm drain or detention basin outfalls, constructed slope protection, and Best Management Practices (i.e. bioswales, infiltration trenches, basins) will be excluded from fee credits, waivers, and reductions and will not be accepted for management by the RCA.

7.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present 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.

Signed  Date April 5, 2019

Greg Mason

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Appendix A

Plant Species Observed

Appendix A
PLANT SPECIES OBSERVED

FAMILY	SCIENTIFIC NAME	COMMON NAME
DICOTYLEDONS		
Amaranthaceae	*Amaranthus albus*	white tumbleweed
Anacardiaceae	*Malosma laurina*	laurel sumac
	Rhus ovata	sugar bush
	Rhus trilobata	squaw bush
Apocynaceae	*Asclepias* sp.	milkweed
Asteraceae	*Ambrosia acanthicarpa*	annual bur-sage
	Ambrosia artemisiifolia	common ragweed
	Ambrosia dumosa	burrobush
	Ambrosia psilostachya	western ragweed
	Artemisia californica	California sagebrush
	Baccharis pilularis	coyote brush
	Baccharis salicifolia	mule fat
	Bebbia juncea var. *aspera*	sweetbush
	*Centaurea melitensis**	tocalote
	Corethrogyne filaginifolia	California aster
	Encelia farinosa	brittlebush
	Gutierrezia californica	California matchweed
	Helianthus annuus	annual sunflower
	*Lactuca serriola**	prickly lettuce
	*Logfia gallica [Filago gallica] **	daggerleaf cottonrose
	*Oncosiphon piluliferum**	stinknet
	Stephanomeria diegensis	San Diego wreath plant
	Tetradymia comosa	cotton thorn
	Uropappus lindleyi	silver puffs
Boraginaceae	*Amsinckia* sp.	fiddleneck
	Cryptantha intermedia	popcorn flower
Brassicaceae	*Brassica nigra**	black mustard
	*Brassica tournefortii**	Sahara mustard
	*Hirschfeldia incana**	short-pod mustard
	*Lepidium perfoliatum**	weedy peppergrass
Cactaceae	*Opuntia parryi*	Parry's cholla
Chenopodiaceae	*Atriplex* sp.	saltbush
	*Salsola tragus**	Russian thistle
Convulvulaceae	*Calystegia macrostegia*	morning-glory
Cucurbitaceae	*Cucurbita foetidissima*	buffalo gourd
	Cucurbita palmata	coyote melon
Cupressaceae	*Juniperus californica*	California juniper

Appendix A
PLANT SPECIES OBSERVED (cont.)

FAMILY	SCIENTIFIC NAME	COMMON NAME
DICOTYLEDONS (cont.)		
Euphorbiaceae	*Chamaesyce albomarginata*	rattlesnake weed
	Croton californica	croton
	Croton setigerus	doveweed
	Euphorbia nutans	spurge
	Stillingia linearifolia	linear-leaved stillingia
Fabaceae	*Acmispon glaber*	deerweed
	Acmispon strigosus	string-stemmed lotus
Fagaceae	*Quercus berberidifolia*	scrub oak
Geraniaceae	*Erodium cicutarium**	red-stemmed filaree
Hydrophyllaceae	*Eriodictyon trichocalyx*	yerba santa
Lamiaceae	*Salvia apiana*	white sage
	Salvia mellifera	black sage
Malvaceae	*Malacothamnus fasciculatus*	chaparral mallow
Nyctaginaceae	*Mirabilis laevis* ssp. *crassifolia*	wishbone bush
Polemoniaceae	*Gilia* sp.	gilia
Polygonaceae	*Eriogonum elongatum* var. *elongatum*	long-stemmed wild buckwheat
	Eriogonum fasciculatum	California buckwheat
	Eriogonum gracile	Graceful buckwheat
Rhamnaceae	*Ceanothus* sp.	ceanothus
	Rhamnus crocea	spiny redberry
Rosaceae	*Adenostoma fasciculatum*	chamise
Salicaceae	*Salix lasiolepis*	arroyo willow
Selaginellaceae	*Selaginella bigelovii*	Bigelow's mossfern
Solanaceae	*Datura wrightii*	Jimson weed
	Nicotiana glauca	tree tobacco
Tamaricaceae	*Tamarix ramosissima**	French tamarisk
MONOCOTYLEDONS		
Agavaceae	*Hesperoyucca whipplei*	Our Lord's candle
Liliaceae	*Yucca* sp.	yucca
Poaceae	*Avena barbata**	slender wild oats
	*Avena sativa**	cultivated oats
	*Bromus diandrus**	ripgut brome
	*Bromus hordeaceus**	soft chess
	*Bromus madritensis**	red brome
	*Schismus barbatus**	Mediterranean grass
	Stipa sp.	purple needlegrass

*Non-native species

Appendix B

Animal Species Observed or Detected

Appendix B
ANIMAL SPECIES OBSERVED OR DETECTED

SCIENTIFIC NAME	COMMON NAME
Reptiles	
Colubridae - Colubrids	
Pituophis melanoleucus	gopher snake (skin)
Iguanidae - Iguanas and their allies	
Uta stansburiana	side-blotched lizard
*Phrynosoma blainvillii**	coast horned lizard
Teiidae - Whiptails and their allies	
*Aspidoscelis tigris stejnegeri**	coastal whiptail
Viperidae - Vipers	
*Crotalus ruber**	red-diamond rattlesnake
Birds	
Accipitridae – Hawks, Old World vultures, kites, harriers, and eagles	
Buteo jamaicensis	red-tailed hawk
*Circus cyaneus**	northern harrier
Alaudidae - Larks	
*Eremophila alpestris actia**	California horned lark
Cathartidae – New World vultures	
Cathartes aura	turkey vulture
Columbidae – Doves and pigeons	
Zenaida macroura	mourning dove
Corvidae – Jays, magpies, and crows	
Aphelocoma californica	western scrub jay
Corvus brachyrhynchos	American crow
Corvus corax	Common raven
Cuculidae – Cuckoos and Relatives	
Geococcyx californianus	greater roadrunner
Emberizidae – Sparrows, longspurs, and Emberiza buntings	
*Aimophila ruficeps canescens**	southern California rufous-crowned sparrow
*Artemisiospiza belli belli**	Bell's sage sparrow
Melozone crissalis	California towhee
Passerculus sandwichensis	savannah sparrow
Sturnella neglecta	western meadowlark
Zonotrichia leucophyrs	white-crowned sparrow
Falconidae - Caracaras and falcons	
Falco sparverius	American kestrel
Fringillidae – Finches and allies	
Haemorhous mexicanus	house finch
Hirundinidae	Swallows
Hirundo pyrrhonota	cliff swallow
Laniidae – Shrikes	
*Lanius ludovicianus**	loggerhead shrike

Appendix B
ANIMAL SPECIES OBSERVED OR DETECTED (cont.)

SCIENTIFIC NAME	COMMON NAME
Birds (cont.)	
Mimidae – Thrashers, mockingbirds, tremblers	
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
Odontophoridae – Quails and pheasants	
Callipepla californica	California quail
Polioptilidae – Gnatcatchers	
*Polioptila californica californica**	coastal California gnatcatcher
Trochilidae –Hummingbirds	
Calypte anna	Anna's hummingbird
Troglodytidae - Wrens	
Salpinctes obsoletus	rock wren
Thryomanes bewickii	Bewick's wren
Turdidae - Thrushes	
Sialia sp.	bluebird
Tyrannidae - Tyrant flycatchers	
Tyrannus verticalis	western kingbird
Tytonidae - Barn owl	
Tyto alba	barn owl
Mammals	
Canidae - Canines	
Canis latrans	coyote
Cervidae – Deer	
Odocoileus hemionus	mule deer (3 does)
Cricetidae - Cricetine mice and rats	
Neotoma fuscipes	dusky-footed woodrat
*Neotoma lepida intermedia**	San Diego Desert woodrat
Peromyscus maniculatus	deer mouse
Geomyidae – Gophers	
Thomomys bottae	Botta’s pocket gopher
Leporidae – Rabbits and hares	
*Lepus californicus bennettii**	San Diego black-tailed jackrabbit
Sylvilagus audubonii	Audubon’s cottontail
Heteromyidae - Pocket mice and kangaroo rats	
Chaetodipus californicus	California pocket mouse
Dipodomys simulans	Dulzura kangaroo rat
Sciuridae - Squirrels, chipmunks and marmots	
Otopermophilus beecheyi	California ground squirrel

*Sensitive species

Appendix C

Burrowing Owl Survey Report

ALDEN ENVIRONMENTAL, INC
3245 University Ave, #1188 | San Diego, CA 92104 | **Phone/Fax:** 619.284.3815

Revised - April 5, 2019

Mr. Todd Pendergrass
Chandler Aggregates
P.O. Box 77850
Corona, CA 92877

Re: Burrowing Owl Habitat Assessment and Survey Report for the Gilman Springs Mine Project

Dear Mr. Pendergrass:

This letter presents the results of a Step I habitat assessment and Step II burrow/burrowing owl (*Athene cunicularia*) survey conducted during the 2018 nesting season survey for the burrowing owl by Alden Environmental, Inc. for the Gilman Springs Mine Project (project) in the county of Riverside (County; Figures 1 and 2). The habitat assessment and survey were conducted consistent with the *Burrowing Owl Survey Instructions for the Western Riverside MSHCP Area*.[1]

LOCATION AND SITE DESCRIPTION

The project is a proposed 54.5-acre mine expansion located in Subunit 1, Gilman Springs/Southern Badlands, in the San Jacinto Valley Area Plan of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The proposed mine expansion area is within Criteria Cells 1687 and 1784 in Cell Group B and is also within the MSHCP Burrowing Owl Survey Area.

The project 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 is off of Gilman Springs Road south of Bridge Street via a paved, gated, private road.

The survey area is undeveloped with the exception of the adjacent existing, active mine. A few dirt roads are also present. Immediate, surrounding land uses to the survey area include undeveloped land throughout the remainder of the Chandler Aggregates property. Outside the property boundaries to the west lies Gilman Springs Road. Undeveloped land lies outside the remainder of the property boundaries to the north, south, and west.

METHODS

A burrowing owl habitat assessment is required for the survey area per the MSHCP. The habitat assessment was conducted on foot in the survey area (Figure 3), but not in the active mine, on July 18-19 and October 16-18, 2017 consistent with Step I of the *Burrowing Owl Survey Instructions for the Western Riverside MSHCP Area*.

[1] County of Riverside. 2006. Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area. March 29.

Step I Habitat Assessment Results

Burrowing owls generally occur in drier, open areas that can include prairies, grasslands, and savannas. The burrowing owl can also be found in deserts, farmlands, pastures, cemeteries, airports, vacant lots, university campuses, golf courses, and other urban areas. Burrowing owls are dependent on the presence of fossorial mammals (primarily prairie dogs and ground squirrels), whose burrows are used for nesting and roosting. Potential burrowing owl habitat (i.e., non-native grassland and disturbed habitat) and California ground squirrels (*Otospermophilus beecheyi*) were found in the survey area during the habitat assessment; therefore, a Step II burrow/burrowing owl survey was conducted consistent with the *Burrowing Owl Survey Instructions for the Western Riverside MSHCP Area*.

The Step II survey consisted of a focused burrow survey and focused burrowing owl survey that occurred over four site visits during the breeding season (March 1 through August 31). The site visits occurred in the morning during the period one hour before sunrise to two hours after sunrise and during weather conducive to observing burrowing owls outside burrows and detecting burrowing owl sign (Table 1). The survey was conducted by walking transects at intervals of approximately 15 meters where possible within the potential habitat areas in the proposed mine expansion area, as well as potential habitat within area up to 500 feet of the proposed mine expansion area (Figure 3). The northern survey area polygons of potential habitat were large and very steep in places, making a grid transect pattern difficult to maintain. A GPS track was recorded for the general survey routes taken (Figure 3). The GPS track represents a single biologist, with another maintaining an approximately 15-meter parallel track.

Table 1
BURROWING OWL SURVEY INFORMATION

Visit Number	**Date**	**Biologist[1]**	**Time** (start/stop)	**Weather Conditions[2]** (start/stop)
1	3/16/18	BL, AD, GS, DK	0600/0930	85%, 39°F, wind 0 mph/ 50%, 60°F, wind 1-2 mph
2	3/30/18	BL, GS, DK, NL	0600/0930	0%, 61°F, wind 0 mph / 0%, 70°F, wind 0-2 mph
3	4/6/18	BL, AD, GS, DK	0600/0915	50%, 56°F, wind 0-2 mph / 100%, 59°F, wind 2-4 mph
4	4/13/18	BL, AD, GS, DK	0600/0930	0%, 48°F, wind 0-2 mph / 0%, 63°F, wind 8-12 mph

[1] BL-Brian Leatherman, NL-Nicole Leatherman, AD-Adam DeLuna, GS-Greg Stratton, DK-Dylan Karlowicz
[2] Estimated cloud cover, temperature, and wind speed

Potential habitat in the survey area was searched for potential burrows (potential burrows are mapped when found), artificial refugia, perches, rock crevices, debris piles, etc. that could be used by the owl, as well as searched for burrowing owls and owl sign. The determination of owl presence is made by direct owl observation or by owl sign such as, but not necessarily limited to, excavated soil, whitewash (excrement), castings (pellets), and/or feathers. Representative photographs were taken and are presented as Attachment A.

STEP II SURVEY RESULTS

No burrowing owls, evidence of owl presence (casts, feathers, etc.), artificial refugia, perches, rock crevices, debris piles, or potential owl burrows were observed within the potential burrowing owl habitat in the survey area. Based on the lack of potential burrows and evidence of occupation, the survey area is not considered to be occupied by the burrowing owl.

Please contact me if you have any questions.

Sincerely,

Greg Mason
Senior Biologist

Enclosures:

Figure 1	Regional Location Map
Figure 2	Project Location Map
Figure 3	Burrowing Owl Survey Map
Attachment A	Representative Photographs

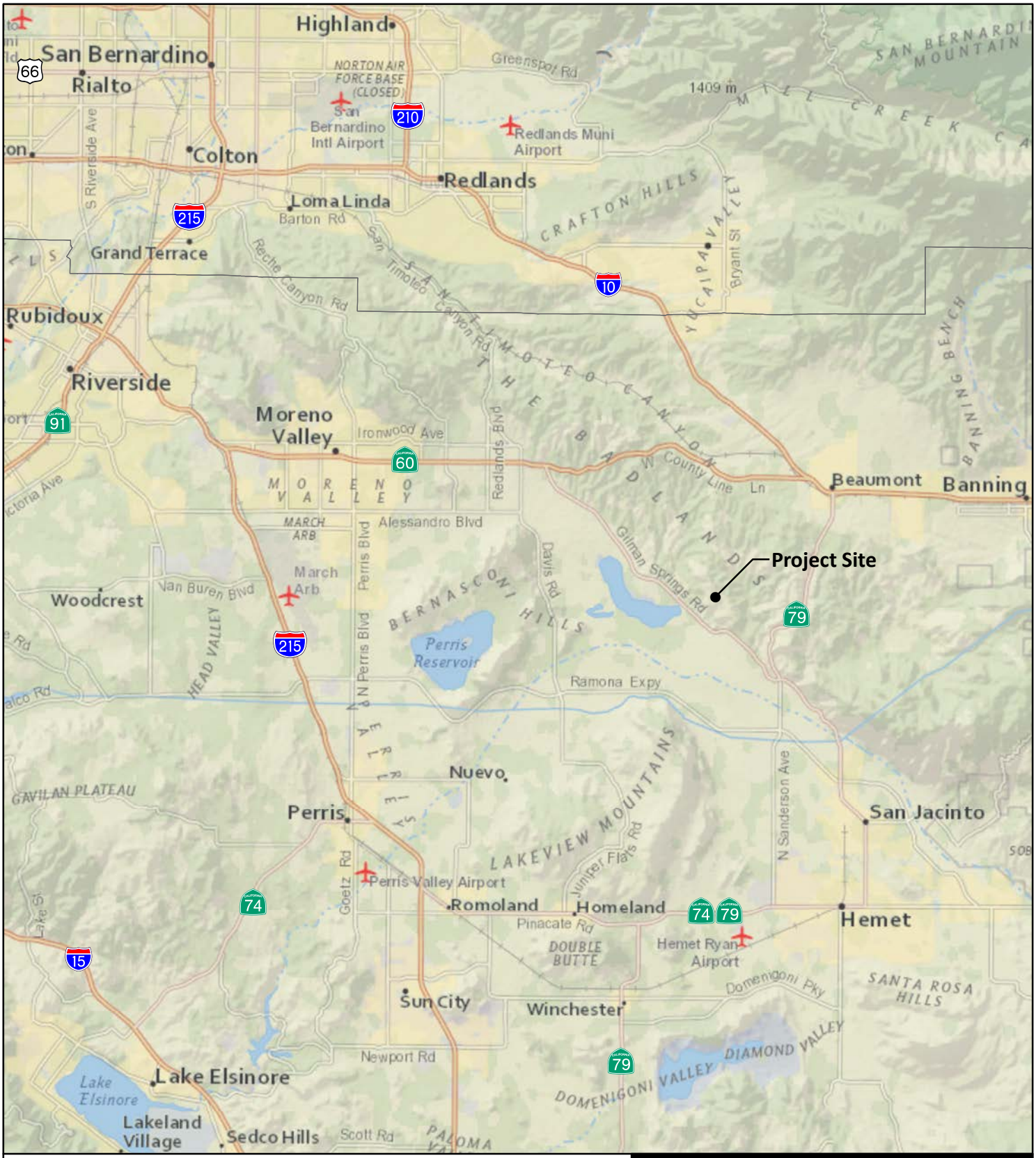


Figure 1

Regional Location

GILMAN SPRINGS MINE

ALDEN ENVIRONMENTAL, INC

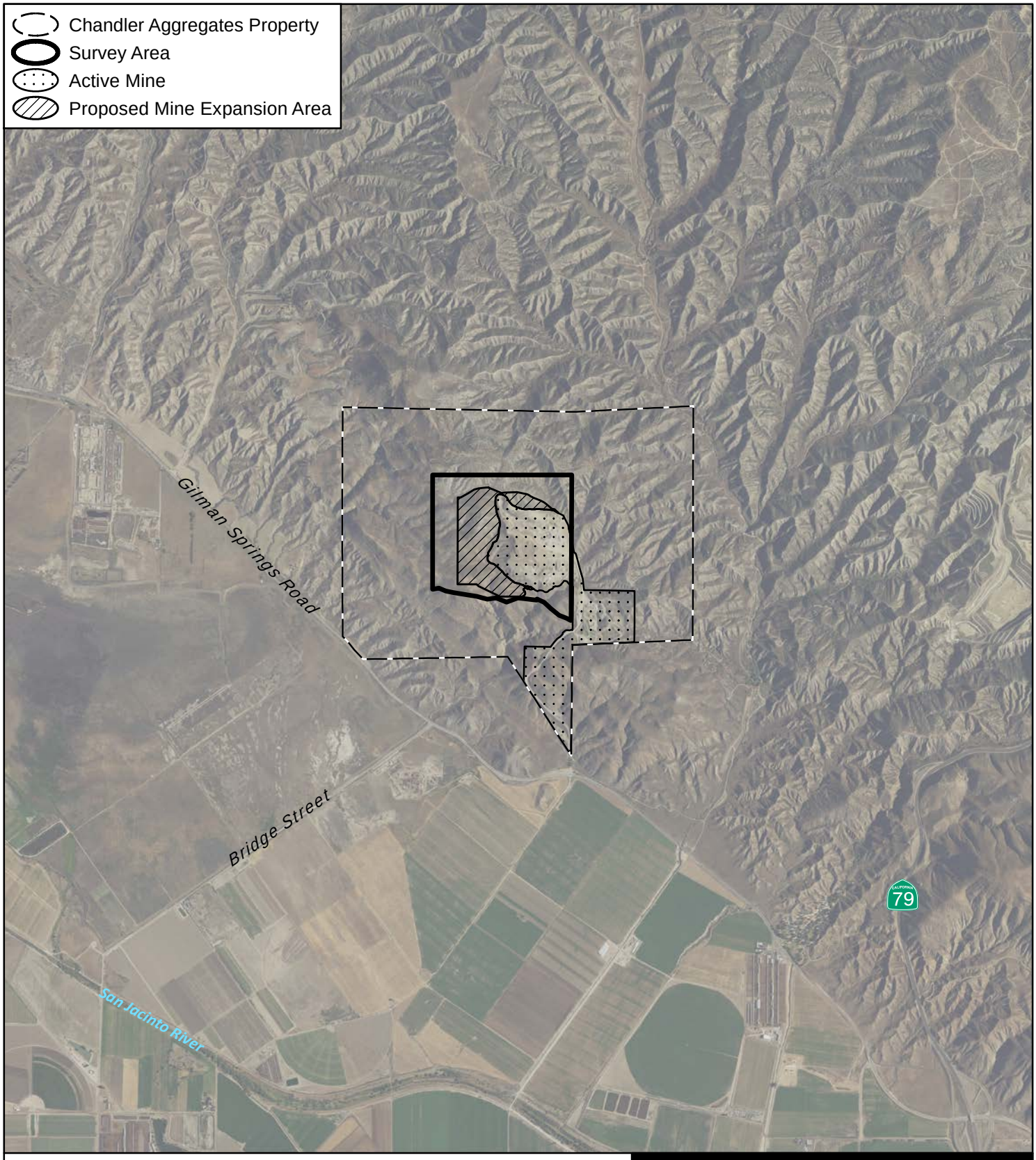
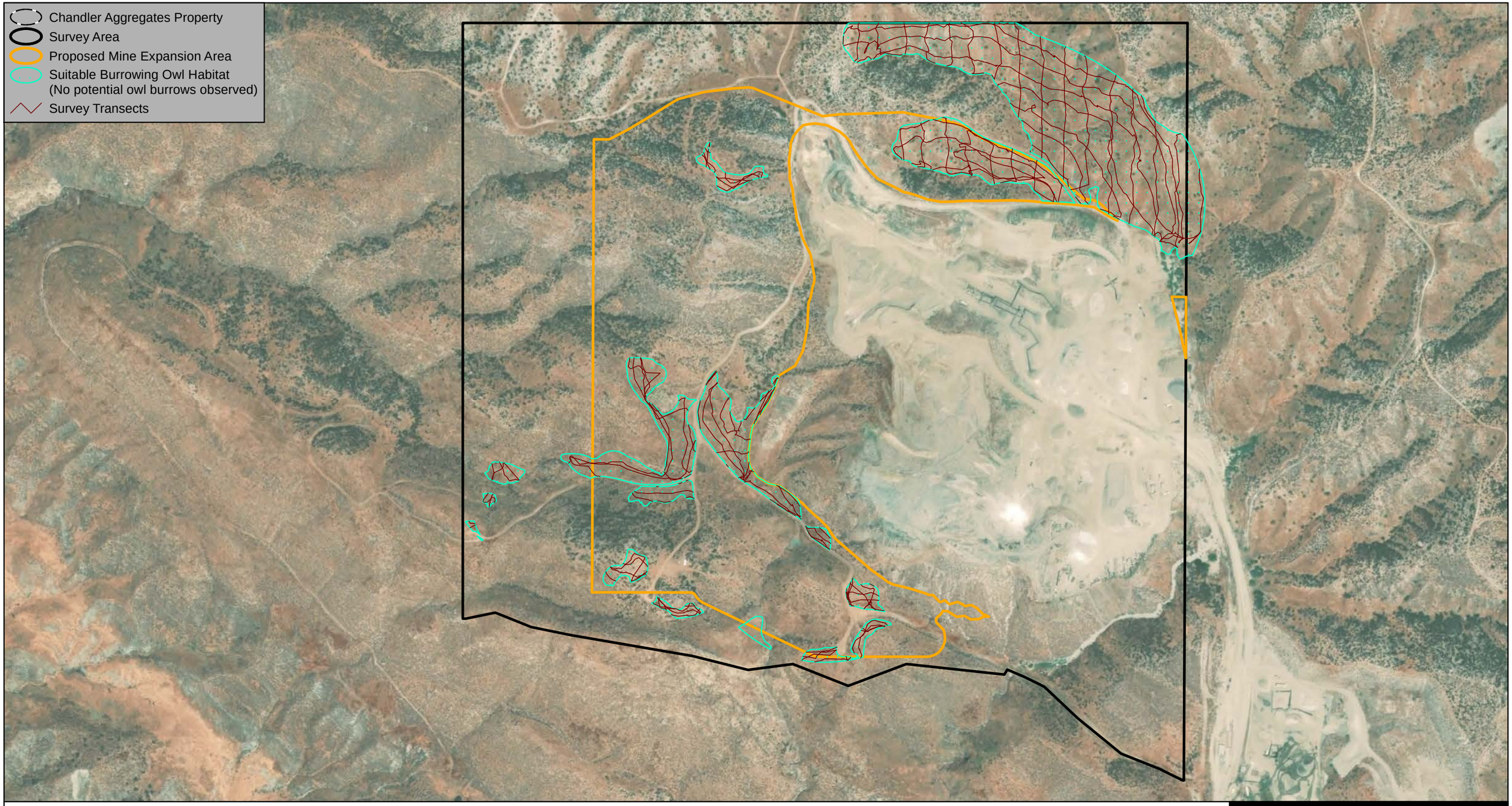


Figure 2

Project Location

GILMAN SPRINGS MINE

ALDEN ENVIRONMENTAL, INC



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ALDEN
ENVIRONMENTAL, INC

Figure 3

Burrowing Owl Survey Results

GILMAN SPRINGS MINE

Attachment A
Representative Photographs

Attachment A

REPRESENTATIVE PHOTOGRAPHS

Photo Point 1. Facing east from near center of mapped grassland.

Photo Point 2. Facing south from near north end of mapped grassland.

Photo Point 3. Facing west at very steep slope supporting grassland.

Photo Point 4. Facing east at grassland on south facing slope in expansion area.

Appendix D

Explanation of Status Codes for Plant and Animal Species

Appendix D
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

U.S. Fish and Wildlife Service (USFWS)

FE Federally listed endangered
FT Federally listed threatened
BCC Bird of Conservation Concern—Represents USFWS' highest conservation priorities and draw attention to species in need of conservation action.

California Department of Fish and Wildlife (CDFW)

SE State listed endangered
ST State listed threatened
SSC State species of special concern—Declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.
WL Watch list—Birds that are/were: a) not on the current list of species of special concern but were on previous lists and have not been State listed under the California Endangered Species Act; b) previously State or federally listed and now are on neither list; or c) on the list of "Fully Protected" species.
FP Fully Protected refers to all vertebrate and invertebrate taxa of concern to the California Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW.

California Native Plant Society (CNPS)

California Rare Plant Rank

1A = Presumed extirpated in California and either rare or extinct elsewhere.

1B = Rare, threatened, or endangered in California and elsewhere.

2A= Presumed extirpated in California but more common elsewhere.

2B= Rare, threatened, or endangered in California but more common elsewhere.

3 = More information is needed.

4 = A watch list for species of limited distribution.

Threat Rank

.1 = Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

.2 = Moderately endangered in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)

.3 = Not very threatened in California (less than 20 percent of occurrences threatened/ low degree and immediacy of threat or no current threats known)