

**Appendix B:
Biological Resources Assessment**

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Redlands, CA 92373-4601
(909) 915-5900

February 17, 2017

Lilburn Corporation
Attn: Cheryl Tubbs
1905 Business Center Dr.
San Bernardino, CA 92408

RE: BIOLOGICAL RESOURCES ASSESSMENT
74-ACRE SITE LOCATED OFF AGUA MANSA RD.
CITY OF COLTON, COUNTY OF SAN BERNARDINO, CALIFORNIA

Dear Ms. Tubbs,

Jericho Systems, Inc. (Jericho) is pleased to provide the results of the general Biological Resources Assessment (BRA) of the 66-acre site (Site), located in Colton, California (Figure 1 and 2). The purpose of the BRA was to identify biological resources that occur within or adjacent to Site. This letter report is designed to identify designated critical habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) or species designated as sensitive by the California Department of Fish and Wildlife (CDFW, formerly California Department and Fish and Game) or the California Native Plant Society (CNPS).

The site was assessed for sensitive species known to occur locally, particularly those that have been documented in the Site vicinity, namely: Santa Ana River woollystar (*Eriastrum densifolium ssp. sanctorum*), Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*), San Bernardino kangaroo rat (*Dipodomys merriami parvus*), Southwestern willow flycatcher (*Empidonax traillii extimus*) and coastal California gnatcatcher (*Polioptila californica californica*), as well as burrowing owl (*Athene cunicularia*).

PROJECT LOCATION

The Site is specifically located in the City of Colton, on Agua Mansa Road, south of Interstate 10, west of S. Rancho Ave., east of S. Riverside Ave. The Site is identified on the *San Bernardino South* U. S. Geological Survey's (USGS) 7.5-minute topographic map in the southern portion of Section 25, Township 1 South, Range 5 West and Section 30, Township 1 South, Range 4 West. The project area includes parcel numbers 0260-072-08, 0260-072-12, 0260-072-13, 0260-072-14, 0275-041-07, 0275-041-08, 0275-041-09, 0275-041-27, 0275-041-28, 0275-041-29, 0275-041-30, 0275-041-31.

ENVIRONMENTAL SETTING

The City of Colton is subject to both seasonal and annual variations in temperature and precipitation. The local climatic conditions in the project area are characterized by warm summers, mild winters, infrequent rainfall, and dry humidity. The average annual temperature is 70°F, ranging between 41-96°F. The rainy season begins in November and continues through April, with the quantity and frequency of rain varying from year to year. The average annual rainfall is approximately 16.35 inches.

Soils in this area consist of four different types:

- Psamments are comprised of sand derived from alluvium. This soil type is somewhat excessively drained and is considered farmland of statewide importance.
- San Emigdio fine sandy loam. These soils are derived from alluvium and contains loamy fine sand, sandy loam and fine sandy loam. These soils are well drained and considered prime farmland if irrigated.
- San Emigdio gravelly sandy loam. These soils are derived from alluvium derived from sedimentary and contain gravelly sandy loam and stratified sandy loam to loam. These soils are well drained and considered prime farmland if irrigated.
- Tujunga gravelly loamy sand. These soils are derived from alluvium derived from granite and contain gravelly loamy sand and gravelly sand. These soils are somewhat excessively drained and are not considered prime farmland.

Hydrologically, the City of Colton is located within the Riverside Hydrologic Sub-Area (HSA 801.27) which comprises a 50,190-acre drainage area within the larger Santa Ana River (HUC 18070203).

The project site is located within the developed area of the City of Colton, surrounded by a mixture of residential development, a park, railway and disturbed undeveloped land. The site is bordered on the north by a mining operation, on the east and west by industrial and residential developments, and on the south by the Santa Ana River (SAR).

SPECIAL STATUS SPECIES REGULATIONS

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to the continued existence and existing knowledge of population levels.

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) administers the federal ESA of 1973. The ESA provides a legal mechanism for listing species as either threatened or endangered, and a process of protection for those species listed. Section 9 of the ESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. "Take" can include adverse modification of habitats used by a threatened or endangered species during any portion of its life history. Under the regulations of the ESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act. Take authorization can be obtained under Section 7 or Section 10 of the act.

California Endangered Species Act

The CDFW, formerly Fish and Game, administers the State CESA. The State of California considers an endangered species one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. And a rare species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. Rare species applies to California native plants. Further, all raptors and their nests are protected under Section 3503.5 of the California Fish and Game Code. Species that are California fully protected include those protected by special legislation for various reasons, such as the California condor. Species of Special Concern (SSC) is an informal designation used by CDFW for some declining wildlife species that are not proposed for listing as threatened or endangered. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFW.

The Migratory Bird Treaty Act

Nesting birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711). The MBTA provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA prohibits take of nearly all native birds. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFW administers the MBTA. CDFW's authoritative nexus to MBTA is provided in FGC Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

Jurisdictional Waters

In addition to potential impacts to designated critical habitats and special status species, potential impacts to jurisdictional waters must be considered. Impacts to jurisdictional waters typically require regulatory approvals from one or more of the following regulatory agencies: U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or CDFW.

ASSESSMENT METHODOLOGY

Literature Review

Data regarding biological resources on the project site were obtained through literature review and field investigations. Prior to performing the surveys, available databases and documentation relevant to the project site was reviewed for documented occurrences of sensitive species in the area. The USFWS threatened and endangered species occurrence data overlay, as well as the most recent versions of the California Natural Diversity Database (CNDDB) and California Native Plant Society Electronic Inventory (CNPSEI) databases were searched for sensitive species data on the *San Bernardino South* and *Fontana* USGS 7.5-minute series quadrangle. The Fontana Quad was included in this search due to the Site's proximity to that quad. These databases contain records of reported occurrences of State and federally listed species or otherwise sensitive species and habitats that may occur within the vicinity of the subject property. Other available technical information on the biological resources of the area was also reviewed including previous surveys and recent findings.

Field Study

Jericho biologists Shannon Dye and Eugene Jennings conducted a biological resources assessment of the entire 74-acre Site on February 9 and 10, 2017. The survey area encompassed both the proposed access point and project location. Wildlife species were detected during field surveys by sight, calls, tracks, scat, or other sign. In addition to species actually observed, expected wildlife usage of the site was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. The main focus of the faunal species surveys was to identify potential habitat for special status wildlife within the project area.

RESULTS – LITERATURE REVIEW

According to the CNDDDB, CNPSEI, and other relevant literature and databases, 55 sensitive species (29 animal species and 27 plant species) have been documented in the *San Bernardino South and Fontana* USGS 7.5-minute series quadrangle. This list of sensitive species and habitats includes any State and/or federally listed threatened or endangered species, CDFW designated SSC, and otherwise Special Animals. “Special Animals” is a general term that refers to all of the taxa the CNDDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of “species at risk” or “special status species.” The CDFW considers the taxa on this list to be those of greatest conservation need.

An analysis of the occurrence potential of all CNDDDB sensitive species documented in the *San Bernardino South and Fontana* quads are provided in Table 1. This analysis takes into account species range as well as documentation within the vicinity of the project area and includes the habitat requirements for each species and the potential for their occurrence on the site, based on required habitat elements and range relative to the current site conditions. According to the databases, critical habitat for the Southwestern willow flycatcher (*Empidonax traillii extimus*) [SWFL], does occur within the project site.

Special Status Species Background

San Bernardino kangaroo rat

The San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*) [SBKR] is one of several kangaroo rat species in its range. The Dulzura (*Dipodomys simulans*), the Pacific kangaroo rat (*D. agilis*) and the Stephens kangaroo rat (*D. stephensi*) occur in areas occupied by the SBKR, but these other species have a wider habitat range. The habitat of the SBKR 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 SBKR is confined to inland valley scrub communities, and more particularly, to scrub communities occurring along rivers, streams and drainage. The past habitat losses for SBKR and potential future losses prompted the emergency listing of the SBKR as an endangered species.

coastal California gnatcatcher

The coastal California gnatcatcher (*Polioptila californica californica*) [CAGN] is a resident (non-migratory) small songbird which typically nests and forages in coastal sage scrub vegetation in southern California year-round. CAGN occur in dynamic and successional sage scrub habitats and non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats. The CAGN was federally listed as Threatened in 1993 and critical habitat for this species was designated by the USFWS in 2000 and revised in 2007. The PCEs identified by the USFWS for CAGN consist of the following:

- (1) Dynamic and successional sage scrub habitats: Venturan coastal sage scrub, San Diegan coastal sage scrub, Riversidean sage scrub, maritime succulent scrub, Riversidean alluvial fan sage scrub (RAFSS), southern coastal bluff scrub, and coastal sage-chaparral scrub in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties that provide space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal and foraging; and
- (2) Non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats as described for PCE 1 above that provide space for dispersal, foraging, and nesting.

Southwestern willow flycatcher

The SWFL is a State and federally listed endangered species. This small passerine bird has a grayish-green back and wings, whitish throat, a light gray-olive breast, and pale yellowish belly. The SWFL is a neotropical migrant that breeds in the southwestern United States from mid-April to early-September. In the fall, it migrates south to its wintering grounds in portions of South America, Central America and Mexico. (60 FR 10694). The SWFL breeds in dense riparian habitats along rivers, streams, and other wetlands at elevations ranging from sea level to 8,500 feet (Sogge 1997). Plant species closely associated with the SWFL include willows (*Salix* sp.), boxelder (*Acer negundo*), seepwillow (*Baccharis* sp.), with an overstory of cottonwood (*Populus fremontii*) (62 FR 39129). Occupied habitat is generally dominated by shrubs and trees 13 to 23 feet or more in height, which provide dense lower and mid-story vegetation approximately 10 to 13 feet aboveground. This dense vegetation is often interspersed with open water, small openings, or sparse vegetation, creating a mosaic that is not uniformly dense (62 FR 39129). The SWFL was listed as federally endangered on February 27, 1995, under the ESA (60 FR 10694) and the USFWS has designated critical habitat for the species.

Santa Ana River woollystar

The State- and federally-listed as endangered Santa Ana River woolly-star (*Eriastrum densifolium* ssp. *Sanctorum*) [woollystar] is a short-lived, perennial subshrub of *Polemoniaceae* (phlox family). It has a basally branched, generally erect or spreading form, occasionally reaching 1 meter (3.3 feet) in height. The entire plant, including the blue to violet-blue inflorescence, is covered with woolly pubescence, giving it a silvery-white appearance. This woollystar is found in alluvial scrub plant communities along the Santa Ana River and Lytle and Cajon Creek flood plains from the base of the San Bernardino Mountains in San Bernardino County southwest along the Santa Ana River through Riverside County into the Santa Ana Canyon of northeastern Orange County (USFWS 1987). It requires periodic flooding. Associated perennial plants include California croton (*Croton californicus*), California buckwheat (*Eriogonum fasciculatum*), fastigiated golden aster (*Heterotheca sessiliflora* ssp. *fastigiata*), and scale-broom (*Lepidospartum squamatum*). This woollystar typically blooms between May and August but most heavily in June (Muñoz 1991). However, woollystar is readily identifiable throughout the year.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) [BUOW] is a state and federal SSC. This owl is a mottled, brownish and sand-colored, dove-sized raptor, with large, yellow eyes, a rounded head lacking ear tufts, white eyebrows, and long legs compared to other owl species. It is a ground dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The BUOW is heavily dependent upon the presence of mammal burrows, with ground squirrel burrows being a common choice, in its habitat to provide shelter from predators, inclement weather and to provide a nesting place (Coulombe 1971). They are also known to make use of human-created structures, such as cement culverts and pipes, for burrows. BUOW spend a great deal of time standing on dirt mounds at the entrance to a burrow, or perched on a fence post or other low to the ground perch from which they hunt for prey. They feed primarily on insects such as grasshoppers, June beetles and moths, but will also take small rodents, birds, and reptiles. They are active during the day and night, but are considered a crepuscular owl; generally observed in the early morning hours or at twilight. The breeding season for BUOW is February 1 through August 31. Up to 11, but typically 7 to 9, eggs are laid in a burrow, abandoned pipe, or other subterranean hollow where incubation is complete in 28-30 days. Young BUOW fledge in 44 days. BUOW populations in California are considered to be sedentary or locally migratory.

The BUOW is not listed under the state or federal Endangered Species Act, but is considered both a federal and state Species of Special Concern. The BUOW is a migratory bird protected by the

international treaty under the Migratory Bird Treaty Act of 1918 and by State law under the California Fish and Game Code (CDFG Code #3513 & #3503.5).

According to the CNDDDB, there are five (5) documented occurrences of BUOW within the *San Bernardino and Fontana* quad. The nearest documented BUOW occurrence (2007) is approximately 1.7 miles north of the project site.

Delhi Sands flower-loving fly

Delhi Sands flower-loving fly is a large fly (*Rhaphiomidas terminates abdominalis*), approximately 1 inch long, that is found only in northwestern Riverside and southwestern San Bernardino counties. It is only found in association with Delhi Sands soil formations. This soil formation consists of fine, sandy soils that are often consolidated dunes. Much of this habitat has been used from agriculture, housing, and industrial development, and the current known range of the Delhi Sands flower-loving fly has, as such, been reduced to an 8-mile radius circle that contains 5 known colonies.

Delhi Sands flower-loving fly prefers sparsely vegetated, arid regions with the aforementioned soil formations, and requires shade for oviposition sites. Little else is known about the fly's habitat and habits.

Designated Critical Habitat

There is critical habitat for SWFL within and adjacent to the project area. Figure 3 shows the critical habitats that occur within and adjacent to the Site. The Site is located directly north of two other critical habitats, Santa Ana Sucker (*Catostomus santaanae*) [SAS], and CAGN. The critical habitat for SAS occurs within the Santa Ana River and the critical habitat for the CAGN occurs south of the project area.

RESULTS – FIELD STUDY

The site is vacant, containing (basins, utility poles, etc.). The site has been subject to historic human disturbances, evidenced by signs of tire tracks, established dirt roads. The two basin areas of the Site appear to have had some type of chemical exposure as the vegetation in and around the basins exhibited distress and singed foliage or was completely dead. Historical aeriels indicate possible collections of runoff from the mine to the north.

Habitat

The habitat on the Site consists primarily of non-native, ruderal vegetation and non-native grasses. The ruderal vegetation present within the project area consists of low-growing perennial plants with a few taller shrubs and trees such as: London rocket (*Sisymbrium irio*), Coastal heron's bill (*Erodium cicutarium*), Menzies' fiddleneck (*Amsinckia menziesii*), and Tamarisk (*Tamarix ramosissima*). The site has been subject to historic human disturbances and showed signs of recent disturbances such as vehicular traffic and chemical weed treatment.

As stated, the Site is bordered by the SAR on the south. The adjacent habitat in this section of the SAR is described as Riverside Alluvial Fan Sage Scrub (RAFSS) and riparian. The RAFSS is of good to moderate quality and could potentially support CAGN. However, the riparian habitat is not dense and consists of cottonwood trees (*Populus fremontii*) and willow trees (*Salix lasiolepis*) intermittently dispersed through the RAFSS. Because of the lack of dense riparian vegetation, it is unlikely that SWFL will be present as that species require riparian vegetation of at least 0.25 acres and at least 30 feet in width.

Wildlife

Seven birds and one mammal were observed during the survey. Species observed or otherwise detected on or in the vicinity of the project site during the surveys included; California ground squirrel (*Spermophilus beecheyi*), red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaida macroura*),

house finch (*Haemorhous mexicanus*), California towhee (*Melospiza crissalis*), Northern mockingbird (*Mimus polyglottos*), common raven (*Corvus corax*), and Western bluebird (*Sialia mexicana*).

There is some habitat within the immediate surrounding area, such as the SAR directly to the south that is marginally-suitable for several sensitive species identified in the CNDDDB search (Table 1).

Special Status Species

No State and/or federally listed threatened or endangered species, or other sensitive species were observed on the Site during surveys.

San Bernardino kangaroo rat

This species was not observed on the Site during the survey, and the project site does not contain suitable habitat for this species because the vegetation is primarily non-native, ruderal vegetation, and non-native grasses. The Site is adjacent to the SAR. A large upstream portion of the SAR is USFWS designated critical habitat for the SBKR. The closest recorded occurrence for this species is 5.4 miles northeast of the project site.

coastal California gnatcatcher

This species was not observed on Site during the survey and the project site does not contain suitable habitat for this species because the vegetation is primarily non-native, ruderal vegetation, and non-native grasses. Critical habitat for this species exists approximately 2,000 feet south of the project site, the closest recorded occurrence is documented approximately 5.4 miles northeast of the project site.

Southwestern willow flycatcher

This species was not observed on site during the survey and the project site does not contain suitable habitat for this species because the vegetation is primarily non-native, ruderal vegetation, and non-native grasses. There are no documented occurrences within the *San Bernardino* and *Fontana* USGS 7.5 minute quads. And though the project site is within designated critical habitat for this species, the quality of the site is extremely degraded and therefore not suitable for the species.

Santa Ana River wollystar

This species was not observed on site during the survey and the project site does not contain suitable habitat for this species because the vegetation is primarily non-native, ruderal vegetation, and non-native grasses. The nearest occurrence is within the SAR which abuts the Site's southern border.

Burrowing owl

The conditions present onsite are marginally suitable for BUOW because of the height of the surrounding vegetation is taller than BUOW prefer and the presence of predator species on site. The site was searched for BUOW sign since BUOW have been observed in within 2 miles of the Site. The site survey consisted of walking transects spaced at 30 m apart to provide 100 percent visual coverage of the Site. The result of the survey was that no evidence of BUOW was found in the survey area. No burrows of appropriate size, aspect or shape were located, and no BUOW pellets, feathers or white wash was found. No burrowing owl individuals were observed.

Delhi Sands flower-loving fly

This species is very site specific and only occurs within very specific habitats that contain Delhi Soils Series. The project site does not contain suitable habitat for this species.

Nesting Birds

Even though the site is of poor quality, many different bird species were utilizing the Site during the survey. The project site and immediate surrounding areas do contain habitat suitable for nesting birds.

CONCLUSIONS AND RECOMMENDATIONS

Although the Site is designated as federal critical habitat for the federal and State listed as endangered Southwestern willow flycatcher, the quality of that habitat on Site is severely degraded, and the habitat is not suitable to support the species. Also, the habitat within the adjacent SAR is not suitable due to the size and density of the available riparian vegetation. Focused surveys are not recommended.

Due to the use of the Site by various nesting birds, nesting bird surveys should be conducted prior to any construction activities taking place during the nesting season (generally February 1st to August 31st) to avoid potentially taking any birds or active nests. In general, impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, or between approximately August 31st and January 30th), and conducting a worker awareness training. However, if all work cannot be conducted outside of nesting season, a project-specific Nesting Bird Management Plan can be prepared to determine suitable buffers.

Please do not hesitate to contact me at 909-915-5900 should you have any questions or require further information.

Sincerely,



Shay Lawrey, President
Ecologist/Regulatory Specialist

Attachments:

- Attachment A – Tables
- Attachment B – Figures
- Attachment C – Site Photos

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Table 1. CNDDDB Sensitive Species Documented within the San Bernardino South and Fontana – USGS 7.5 quadrangle.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
<i>Agelaius tricolor</i>	tricolored blackbird	None, Candidate Endangered	G2G3, S1S2, CDFW-SSC	Freshwater marsh, Marsh & swamp, Swamp, Wetland, Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, & foraging area with insect prey within a few km of the colony.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Arenaria paludicola</i>	marsh sandwort	Endangered, Endangered	G1, S1, 1B.1	Freshwater marsh, Marsh & swamp, Wetland, Marshes and swamps. Growing up through dense mats of Typha, Juncus, Scirpus, etc. in freshwater marsh. Sandy soil. 3-170 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Arizona elegans occidentalis</i>	California glossy snake	None, None	G5T2, S2, CDFW-SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular Ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Artemisiospiza belli belli</i>	Bell's sage sparrow	None, None	G5T2T4, S2?, CDFW-WL	Chaparral, Coastal scrub, Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	Suitable habitat for this species does not occur onsite. Potential to occur is low .

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	None, None	G5, S2S3, CDFW-WL	Chaparral, Cismontane woodland, Coastal scrub, Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes & other sandy areas with patches of brush & rocks. Perennial plants necessary for its major food-termites.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	None, None	G5T5, S3, CDFW-SSC	Found in deserts & semiarid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Astragalus hornii</i> var. <i>hornii</i>	Horn's milk-vetch	None, None	G4G5T1T2, S1, 1B.1	Alkali playa, Meadows & seeps, Wetland, Meadows and seeps, playas. Lake margins, alkaline sites. 75-350 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Athene cunicularia</i>	burrowing owl	None, None	G4, S3, CDFW-SSC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Bombus crotchii</i>	Crotch bumble bee	None, None	G3G4, S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Suitable habitat for this species does not occur onsite. Potential to occur is low .

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
<i>Buteo swainsoni</i>	Swainson's hawk	None, Threatened	G5, S3	Great Basin grassland, Riparian forest, Riparian woodland, Valley & foothill grassland, Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees., Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Calochortus plummerae</i>	Plummer's mariposa-lily	None, None	G4, S4, 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Carex comosa</i>	bristly sedge	None, None	G5, S2, 2B.1	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. -5-1620 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Carolella busckana</i>	Busck's gallmoth	None, None	G1G3, SH	Coastal dunes, Coastal scrub	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Catostomus santaanae</i>	Santa Ana sucker	Threatened, None	G1, S1	Aquatic, South coast flowing waters, Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, & algae.	Suitable habitat for this species does not occur onsite. Potential to occur is low .

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	None, None	G3G4T2, S2, 1B.1	Wetland, Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None, None	G5T3T4, S3S4	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego Co. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	salt marsh bird's-beak	Endangered, Endangered	G4?T1, S1, 1B.2	Wetland, Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	None, None	G3T3, S3, 1B.1	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats, sometimes at interface of 2 vegetation types, such as chaparral and oak woodland; dry, sandy soils. 225-1220 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Cicindela tranquebarica viridissima</i>	greenest tiger beetle	None, None	G5T1, S1	Riparian woodland, Inhabits the woodlands adjacent to the Santa Ana River basin. Usually found in open spots between trees.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	Threatened, Endangered	G5T2T3, S1	Riparian forest, Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape.	Suitable habitat for this species does not occur onsite. Potential to occur is low .

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
<i>Coleonyx variegatus abbotti</i>	San Diego banded gecko	None, None	G5T3T4, S1S2, CDFW-SSC	Chaparral, Coastal scrub, Coastal & cismontane Southern California. Found in granite or rocky outcrops in coastal scrub & chaparral habitats.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Crotalus ruber</i>	red-diamond rattlesnake	None, None	G4, S3, CDFW-SSC	Chaparral, Mojavean desert scrub, Sonoran desert scrub, Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas & dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	Peruvian dodder	None, None	G5T4T5, SH, 2B.2	Marshes and swamps (freshwater). Freshwater marsh. 15-280 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Dipodomys merriami parvus</i>	San Bernardino kangaroo rat	Endangered, None	G5T1, S1, CDFW-SSC	Coastal scrub, Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	Endangered, Threatened	G2, S2	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover., Prefers buckwheat, chamise, brome grass & filaree. Will burrow into firm soil.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Dodecahema leptoceras</i>	slender-horned spineflower	Endangered, Endangered	G1, S1, 1B.1	Chaparral, Cismontane woodland, Coastal scrub, Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. 200-765 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Santa Ana River woollystar	Endangered, Endangered	G4T1, S1, 1B.1	Chaparral, Coastal scrub, Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-700 m. Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland, Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc, Roosts in crevices in cliff faces, high buildings, trees & tunnels.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Eumops perotis californicus</i>	western mastiff bat	None, None	G5T4, S3S4	Estuary, Great Basin grassland, Valley & foothill grassland, Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands & deserts, farms & ranches. Clumps of trees or windbreaks are required for roosting in open country.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Falco columbarius</i>	merlin	None, None	G5, S3S4, CDFW-WL	Chaparral, lower montane coniferous forest. Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone. Granitic, sandy soils. 1350-1700 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Galium californicum</i> ssp. <i>primum</i>	Alvin Meadow bedstraw	None, None	G5T1, S1, 1B.2, USFS-S	Aquatic, South coast flowing waters, Native to streams from Malibu Cr to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mohave & San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation & associated invertebrates.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Gila orcuttii</i>	arroyo chub	None, None	G2, S2, CDFW-SSC		Suitable habitat for this species does not occur onsite. Potential to occur is low .

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	None, None	G5TH, SH, 1A	Freshwater marsh, Marsh & swamp, Salt marsh, Wetland, Marshes and swamps (coastal salt and freshwater). 10-1675 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	None, None	G4T1, S1, 1B.1, USFS-S	Chaparral, Cismontane woodland, Coastal scrub, Chaparral, cismontane woodland, coastal scrub., Sandy or gravelly sites. 15-1645 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Lasiurus xanthinus</i>	western yellow bat	None, None	G5, S3, CDFW-SSC	Desert wash, Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None, None	G5T3, S3, 4.3	Chaparral, Coastal scrub, Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None, None	G5T3T4, S3S4, CDFW-SSC	Coastal scrub, Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Lycium parishii</i>	Parish's desert-thorn	None, None	G3?, S1, 2B.3	Coastal scrub, Sonoran desert scrub, Coastal scrub, Sonoran desert scrub. 135-1000 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Monardella pringlei</i>	Pringle's monardella	None, None	GX, SX, 1A	Coastal scrub, Coastal scrub. Sandy hills. 300-400 m. Brackish marsh, Freshwater marsh, Marsh & swamp, Wetland, Marshes and swamps. Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-330 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Nasturtium gambelii</i>	Gambel's water cress	Endangered, Threatened	G1, S1, 1B.1		Suitable habitat for this species does not occur onsite. Potential to occur is low .

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	None, None	G4, S3, CDFW-SSC	Joshua tree woodlands, Pinon & juniper woodlands, Riparian scrub, Sonoran desert scrub, Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	None, None	G5T3, S3, CDFW-SSC	Chenopod scrub, Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions & orthopteran insects.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	None, None	G5T1T2, S1S2, CDFW-SSC	Coastal scrub, Lower elevation grasslands & coastal sage communities in and around the Los Angeles Basin., Open ground with fine sandy soils. May not dig extensive burrows, hiding under weeds & dead leaves instead.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Phrynosoma blainvillii</i>	coast horned lizard	None, None	G3G4, S3S4, CDFW-SSC	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub, Desert wash, Pinon & juniper woodlands, Riparian scrub, Riparian woodland, Valley & foothill grassland, Frequent a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes., Open areas for sunning, bushes for cover, patches of loose soil for burial, & abundant supply of ants & other insects.	Suitable habitat for this species does not occur onsite. Potential to occur is low .

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
<i>Polioptila californica californica</i>	coastal California gnatcatcher	Threatened, None	G4G5T2Q, S2, CDFW-SSC	Coastal bluff scrub, Coastal scrub, Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas & slopes. Not all areas classified as coastal sage scrub are occupied.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Rhaphiomidas terminatus abdominalis</i>	Delhi Sands flower-loving fly	Endangered, None	G1T1, S1	Interior dunes, Found only in areas of the Delhi Sands formation in southwestern San Bernardino & northwestern Riverside counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes & sparse vegetation. Oviposition req. shade.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Ribes divaricatum</i> var. <i>parishii</i>	Parish's gooseberry	None, None	G4TH, SH, 1A	Riparian woodland, Riparian woodland. Salix swales in riparian habitats. 65-300 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Riversidian Alluvial Fan Sage Scrub</i>	Riversidian Alluvial Fan Sage Scrub	None, None	G1, S1.1	Coastal scrub	This habitat does not occur on site.
<i>Senecio aphanactis</i>	chaparral ragwort	None, None	G3, S2, 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-855 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Sidalcea neomexicana</i>	Salt Spring checkerbloom	None, None	G4, S2, 2B.2, USFS-S	Wetland, Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 0-1530 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
<i>Southern Cottonwood Willow Riparian Forest</i>	Southern Cottonwood Willow Riparian Forest	None, None	G3, S3.2	Riparian forest	This habitat does occur on site. However, it is severely degraded and of poor quality.

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Southern Riparian Scrub	Southern Riparian Scrub	None, None	G3, S3.2	Riparian scrub	This habitat does not occur on site.
Sphenopholis obtusata	prairie wedge grass	None, None	G5, S2, 2B.2	Cismontane woodland, meadows and seeps. Open moist sites, along rivers and springs, alkaline desert seeps. 300-2000 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .
Symphotrichum defoliatum	San Bernardino aster	None, None	G2, S2, 1B.2, USFS-S	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernal mesic grassland or near ditches, streams and springs; disturbed areas. 2-2040 m.	Suitable habitat for this species does not occur onsite. Potential to occur is low .

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Taxidea taxus	American badger	None, None	G5, S3, CDFW-SSC	Alkali marsh, Alkali playa, Alpine, Alpine dwarf scrub, Bog & fen, Brackish marsh, Broadleaved upland forest, Chaparral, Chenopod scrub, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub, Desert dunes, Desert wash, Freshwater marsh, Great Basin grassland, Great Basin scrub, Interior dunes, Lone formation, Joshua tree woodland, Limestone, Lower montane coniferous forest, Marsh & swamp, Meadow & seep, Mojavean desert scrub, Montane dwarf scrub, North coast coniferous forest, Oldgrowth, Pavement plain, Redwood, Riparian forest, Riparian scrub, Riparian woodland, Salt marsh, Sonoran desert scrub, Sonoran thorn woodland, Ultramafic, Upper montane coniferous forest, Upper Sonoran scrub, Valley & foothill grassland, Most abundant in drier open stages of most shrub forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils & open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Suitable habitat for this species does not occur onsite. Potential to occur is low .

Scientific Name	Common Name	Federal/State Status	Other Status	Habitat	Potential to Occur
Vireo bellii pusillus	Least Bell's vireo	Endangered, Endangered	G5T2, S2	Riparian forest, Riparian scrub, Riparian woodland, Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Suitable habitat for this species does not occur onsite. Potential to occur is low .

Coding and Terms

E = Endangered T = Threatened SSC = Species of Special Concern
R = Rare C = Candidate FP = Fully Protected

Federal Species of Concern: "taxa for which the U.S. Fish and Wildlife Service has information that indicates proposing to list the taxa as endangered or threatened is possibly appropriate, but for which substantial data on the biological vulnerability and threats are not currently known or on file to support the immediate preparation of rules." (Arnold). All of these species have a limited range. In fact, some species are limited to the San Bernardino Mountains area, however, they are locally common.

State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code: "It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird."

State Fully Protected: The classification of Fully Protected was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles. Please note that most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

State Plant Rankings:

- S1 - less than 6 element occurrences, or less than 1,000 individuals, or less than 2,000 acres
- S2 - 6 to 20 element occurrences, or between 1,000 and 3,000 individuals, or between 2,000 and 10,000 acres
- S3 - 21 to 100 element occurrences, or between 3,000 and 10,000 individuals, or between 10,000 and 50,000 acres
- S4 - No Threat Rank
- S5 - No Threat Rank
- SH - all sites in California are historical
- .1 - very threatened
- .2 - threatened
- .3 - no current threats known

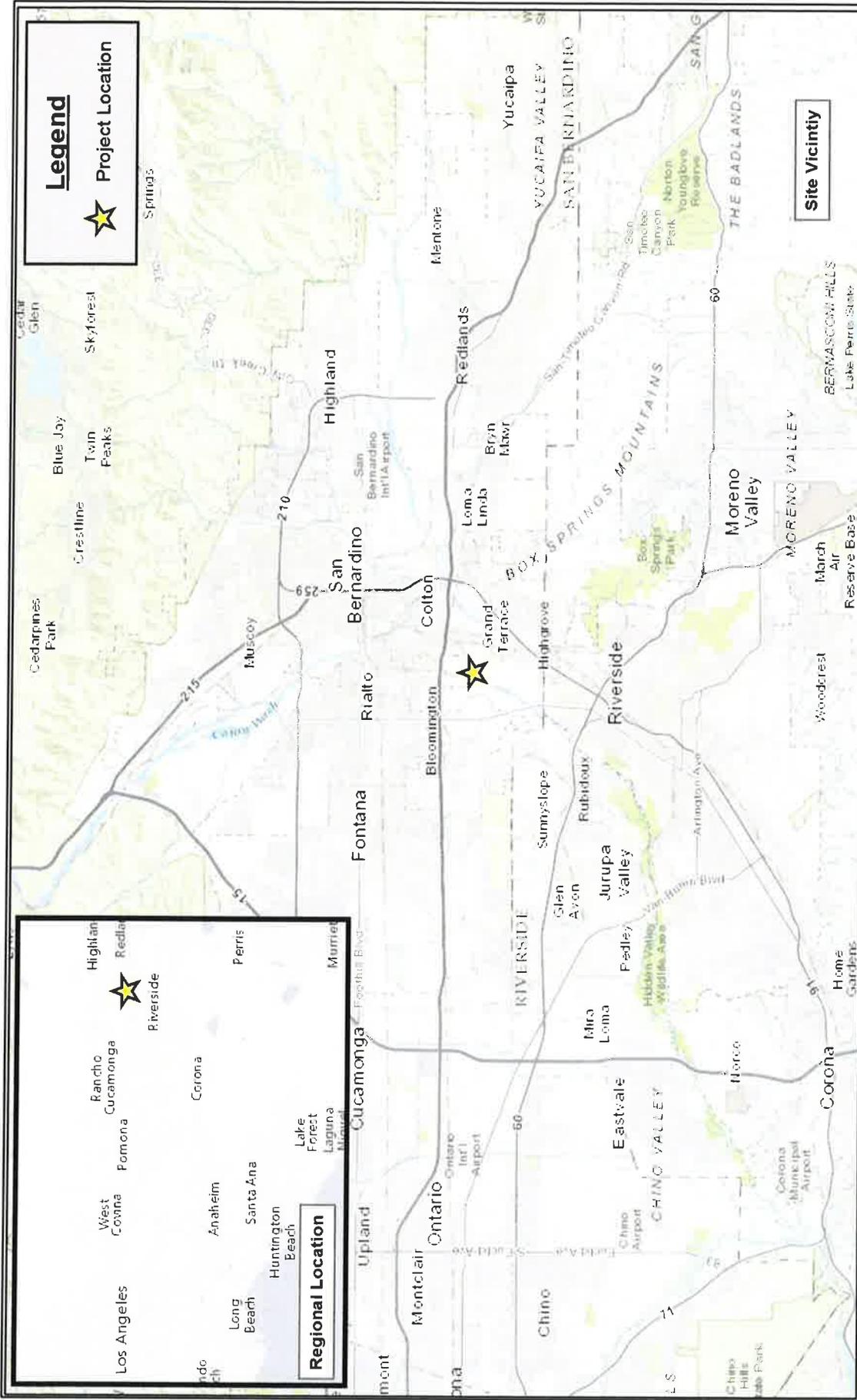


Figure 1 - Regional Overview and Site Vicinity

Agua Mansa Rd. Parcel
 Lilburn Corporation





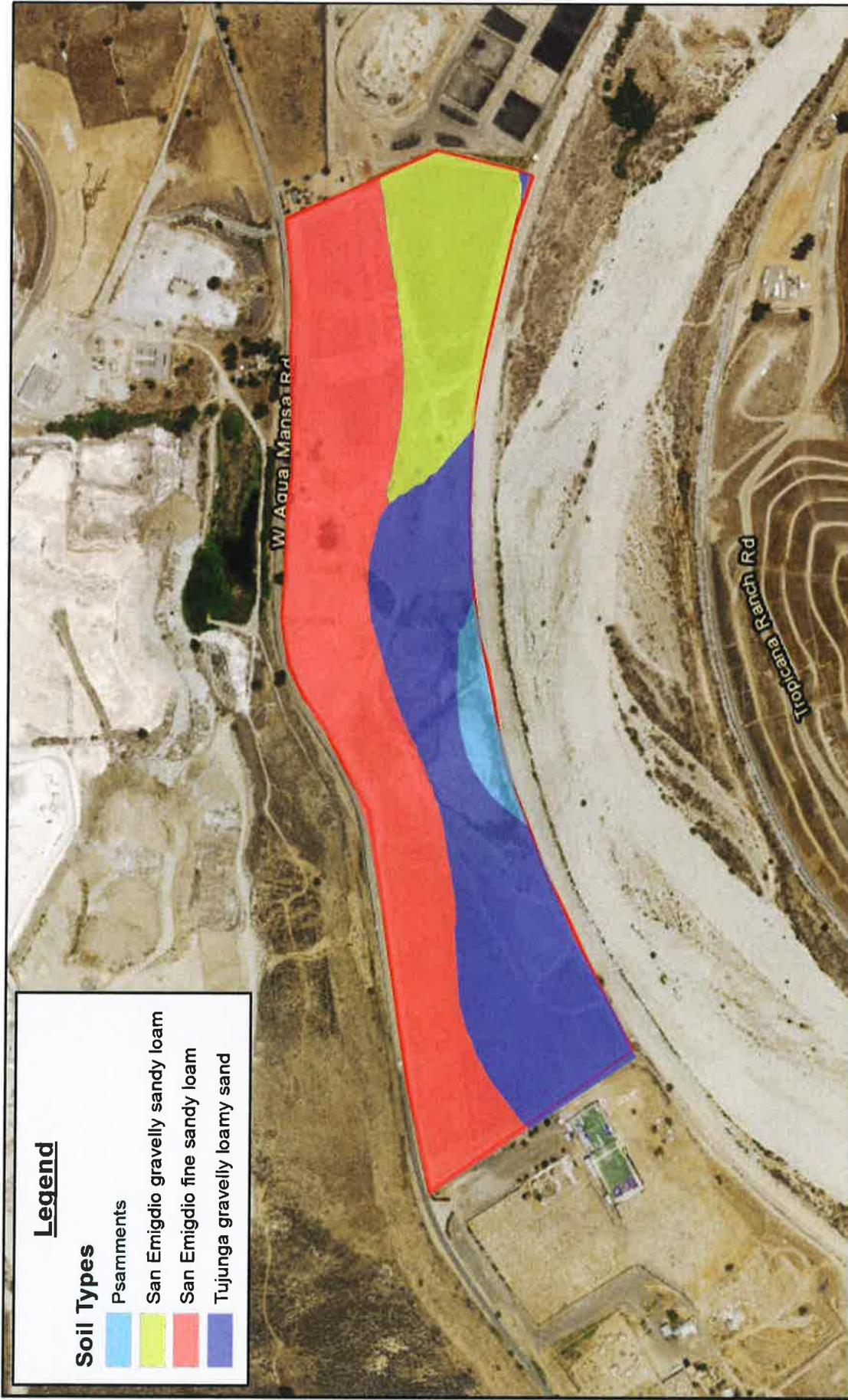
Figure 2 - Site Location

Agua Mansa Rd. Parcel
Lilburn Corporation



Figure 3 - Critical Habitat Overlay

Agua Mansa Rd. Parcel
Lilburn Corporation



Legend

Soil Types

-  Psammments
-  San Emigdio gravelly sandy loam
-  San Emigdio fine sandy loam
-  Tujunga gravelly loamy sand



Figure 4 - Soils

Agua Mansa Rd. Parcel
Lilburn Corporation



Photo 1 – Site entrance facing south.



Photo 2 – Larger basin on southern edge. Plants showing signs of chemical burns.



Photo 3 – Facing northeast
from southwest corner of
property.



Photo 4 – Eastern edge of
property. Facing northeast.

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