Hernandez
Environmental
Services

GENERAL BIOLOGICAL ASSESSMENT REPORT
CORONA CLAY COMPANY
DAWSON CANYON
CONDITIONAL USE PERMIT NUMBER 3265
RIVERSIDE COUNTY, CALIFORNIA

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Summary

Hernandez Environmental Services (HES) was contracted by Corona Clay Company to prepare a General Biological Assessment (GBA). Corona Clay Company is submitting a Conditional Use Permit (CUP) application in conjunction with General Plan Amendment (GPA) No. 1144, Surface Mine Permit (SMP) No. 197R1, and Change of Zone (CZ) No. 6381 to facilitate entitlement of the existing onsite uses.

Corona Clay Company owns five (5) parcels totaling approximately 122.7 acres, which is located approximately 0.75 miles east-northeast of the intersection of I-15 and Temescal Canyon Road. The mine site is specifically located to the northeast of Park Canyon Road and Dawson Canyon Road, in Riverside County, California (Figure 1). The mine includes the following Assessor's Parcel Numbers (APN) and acreages: 283-190-019 (43.72 acres); 283-190-021 (20.26 acres); 283-190-022 (33.91 acres); 283-190-040 (15.76 acres); and 283-190-041 (9.06 acres). The physical address for APN 283-190-021 is 10600 Dawson Canyon Road in Corona, CA 92883.

On January 12, 2016, and November 1, 2017, HES conducted a field survey of the approximate 122.7-acre project site. The project site contains approximately 69.19 acres of disturbed habitat, 45.1 acres of disturbed coastal sage scrub, 5.41 acres of alluvial fan sage scrub, 2.02 acres of ephemeral stream, and 0.98 acres of disturbed chaparral. The project site is located within Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Criteria Cell Numbers 2934, 3039, and 3041, of Subunit 3 (SU3) Temescal Wash – West of the Temescal Canyon Area Plan. The project site is located within the narrow endemic plant overlay of the MSHCP.

A total of 41 sensitive species of plants and 59 sensitive species of animals have the potential to occur on or within the vicinity of the project location. The project site is located within critical habitat designated for coastal California gnatcatcher (*Polioptila californica californica*) by the U.S. Fish and Wildlife Service (USFWS). An alluvial fan sage scrub riparian corridor is present on the southwest portion of the property. This portion of the property is associated with the Temescal Wash and is used by plant and animal species as habitat and for species movement up and down stream. In addition, the project site has potential nesting habitat protected under the Migratory Bird Treaty Act of 1918 located in the disturbed, disturbed coastal sage scrub, alluvial fan sage scrub, ephemeral stream habitat, and disturbed chaparral areas of the property.

The approximately 5.41 acres of alluvial fan sage scrub, and 2.02 acres of ephemeral stream located on the project site may be regulated as a state jurisdictional stream under Section 1602 of the California Department of Fish and Game Code. This habitat is also considered a riparian/riverine area as defined in Section 6.1.2 of the Western Riverside County MSHCP.

Corona Clay is in the process of permitting the existing land uses and reclamation within the most consistent and appropriate land use designations and zoning. No new impacts to existing habitat are expected from these actions. Further, no new land disturbing activities are anticipated; therefore, no new impacts to sensitive species are expected.

1.0 Introduction

Hernandez Environmental Services (HES) was contracted by Corona Clay Company to prepare a General Biological Assessment (GBA). Corona Clay Company is submitting a Conditional Use Permit (CUP) application in conjunction with General Plan Amendment (GPA) No. 1144, Surface Mine Permit (SMP) No. 197R1, and Change of Zone (CZ) No. 6381 to facilitate entitlement of the existing onsite uses.

1.1 Project Site Location

Corona Clay Company owns five (5) parcels totaling approximately 122.7 acres, which is located approximately 0.75 miles east-northeast of the intersection of I-15 and Temescal Canyon Road. The mine site is specifically located to the northeast of Park Canyon Road and Dawson Canyon Road, in Riverside County, California (Figure 1). The mine includes the following Assessor's Parcel Numbers (APN) and acreages: 283-190-019 (43.72 acres); 283-190-021 (20.26 acres); 283-190-022 (33.91 acres); 283-190-040 (15.76 acres); and 283-190-041 (9.06 acres). The physical address for APN 283-190-021 is 10600 Dawson Canyon Road in Corona, CA 92883. Specifically, the mine site is located in Township 4S, Range 6W, Sections 26 and 35 San Bernardino Base and Meridian in the Lake Matthews United States Geological Survey 7.5 Topographic Map (Figure 2).

1.2 Project Description

As part of the overall entitlement process and in consultation with Riverside County staff, Corona Clay is submitting a CUP application in conjunction with GPA No. 1144, SMP No. 197R1 and CZ No. 6381 to facilitate entitlement of the existing onsite uses and reclamation within the most consistent and appropriate land use designations and zoning (Figure 3). GPA No. 1144 proposes to amend approximately 70 acres from Open Space-Mineral Resources (OS-MIN) to Open Space - Recreation (OS-REC). The General Plan Implementation Process was initiated in 2014, reviewed at a public hearing by the Planning Commission on October 15, 2014, and subsequently the Board of Supervisors adopted an order to initiate proceedings for GPA 1144 on November 24, 2014.

At the Land Development Committee meeting in October 2015, County Planning recommended that the CZ should change approximately 101 acres of Mineral Resources (M-R) to Controlled Development Areas (W-2). The overall existing land uses include the following:

- Six (6) motorcycle test tracks for motocross testing are leased to various motorcycle manufacturing companies. The tracks are utilized exclusively by the lessee and operated per a lease agreement with Corona Clay. The tracks only operate during daytime hours; no lighting is set up on the test tracks. The tracks are not open to the public. Each track is surrounded/protected by a 6-foot high chain link fence topped with three-strand barbed wire and has a 200 square-foot open sided shade structure (typical). Water is pumped into 6,000 to 12,000-gallon steel water tanks at each track and sprayed onto the tracks via agricultural type pipes and sprinklers to control dust and to compact the track surface. The lessee is required by lease agreement to conduct all operations in compliance

with all applicable laws, ordinances, rules, regulations, orders, or directives of any government authority and shall not damage or deposit waste on leased lands. The motorcycle test tracks are used intermittently by up to six manufacturing companies with a peak season from October through May.

- Clay processing facility that imports broken clay tile and other rock, gravel, sand, and clay material to crush, screen and mix to produce its final products such as "Angel Mix" for baseball fields and other clay, soil, and rock mixes for landscaping, recreational trails and parks.

- Remote controlled model airplane field consisting of approx. 1.25 acres of paved runway and a shade structure. It is leased to a remote controlled airplane club.

- Storage yards for miscellaneous equipment and construction materials.

- Open space in the southern areas, on slopes, and outside border areas.

APN 283-190-019

Existing Motorcycle Test Track No. 6 is located on approximately 4.5 acres (10 percent of the parcel) with a 6-foot high chain link perimeter fence topped with 3-strand barbed wire. In addition, two portable steel water tanks of 6,000 to 12,000-gallon capacity each and a pipe/sprinkler system for dust control and soil/track compaction are located within this area. Further, two existing open-sided shade structures of approximately 200 square feet each are also located within this area.

An existing remote controlled model airplane air field is located on approximately 7.4 acres (16 percent of the parcel) including approximately 1.2 acres of pavement (runway, apron, and parking), an open sided shade/covered parking structure of approximately 3,000 square feet, and a small storage shed and portable toilet.

The approximately 31.8-acre remainder of the parcel (73 percent of the parcel) is vacant, open space with illegal off-road vehicle use. Private motorcycle testing has no connection with illegal uses.

APN 283-190-021

An existing clay mix processing and products manufacturing facility is located on approximately 15.75 acres (77 percent of the parcel). The slope to be reclaimed under SMP 197R1 is located on one (1) acre (5 percent of the parcel). 3.6 acres is to be left as open space within the 330-foot wide Southern California Edison power line easement on the northern portion of site (18 percent of the parcel). The clay facility imports broken clay tile and other rock, gravel, sand, and clay material to crush, screen and mix to produce its final products such as "Angel Mix" for baseball fields and other clay, soil, and rock mixes for recreational trails, parks, and landscaping. The site includes crushers, screens, conveyors, stockpiles, equipment storage, office (approximately 625 square feet), caretaker's residence (approximately 2,350

square feet), power room (approximately 340 square feet), three (3) 1,000-gallon septic tanks and leach lines, and drainage controls and desilting basins to manage drainage on the slope, onsite drainage, and surrounding drainage that enters the site as shown on the exhibit and described in the Drainage Report and Water Quality Management Plan (WQMP). A right-of-way (ROW) of 0.2 acres (Lot B) is included on the west.

Approximately 20,000 tons of waste clay tile are imported onsite annually to produce specialty clay products for off-site sale. This amount varies with demand. The crushed and blended clay products stockpiled onsite are loaded onto 10- to 25-ton haul trucks by a loader and shipped to customers. Approximately 5 to a maximum of 20 trucks are expected per day depending on production and demand. In addition, it is expected that up to 20 employees, delivery, and maintenance trips may occur per day.

There will be no mining of onsite clay or other materials on the subject site.

APN 283-190-022

Four (4) existing motorcycle test tracks are located on approximately 17.5 acres (52 percent of the parcel). Test Track No. 2 is located on approximately 3.8 acres. Test Track No. 3 is located on approximately 5.4 acres. Test Track No. 4 is located on approximately 4.1 acres. Test Track No. 5 is located on approximately 4.2 acres of the parcel with 6-foot high chain link perimeter fencing topped with three-strand barbed wire around each track. One or two portable steel water tanks of 6,000 to 12,000-gallon capacity are located at each track and a pipe/sprinkler system is used for dust control and track compaction. One existing open-sided shade structure totaling approximately 200 square feet is typically constructed at each track. Two similar shade structures are located at Track No. 6.

Existing equipment storage areas totaling approximately 3.6 acres (11 percent of the parcel) are located to the northeast and the west with the following existing structures/facilities:

- Existing metal building (90 feet by 75 feet – 6,750 sq. ft.) for equipment repair and storage to be used for motorcycle repair and storage, including one floor 25-foot height, one restroom, and one 10-foot by 10-foot office.
- Existing modular office (12 feet by 60 feet) consisting of one floor with an area of 720 square feet, measuring 16 feet high.
- Existing modular office consisting of one floor with an area of 1,020 square feet, measuring 16 feet high.
- Existing wireless cell tower with a fenced enclosure measuring approximately 40 feet by 40 feet, totaling 1,600 square feet, with a 105–foot high monopole and a 10-foot by 20-foot equipment shelter.
- Existing 500-gallon propane tank.
- Existing 1,000-gallon septic tanks (2).
- ROW on 0.6 acres (Lot C).

The approximately 12.1-acre remainder of the parcel (36 percent of the parcel) consists of vacant slopes and open space with a Southern California Edison easement for an electrical power line alignment and steel tower with access road in northeast corner of parcel.

APN 283-190-040

Existing Motorcycle Test Track No. 1 located on approx. 5.2 acres with 6-foot high chain link perimeter fencing topped with three-strand barbed wire. One or two portable steel water tanks of 6,000 to 12,000-gallon capacity each and a pipe/sprinkler system for dust control and track compaction. One existing open-sided shade structure of approximately 200 square feet and two-story observation structure totaling approximately 375 square feet (approximately 33 percent of the parcel) are located onsite. A ROW of 0.1 acres (Lot A) is located on the southeast.

A recycle broken clay tile stockpile area with grizzly screen, hoppers, and conveyors located on 1.6 acres (10 percent of the parcel); clay facility storage yard located on 1.4 acres (9 percent of the parcel) with an open sided storage structure totaling approximately 1,700 square feet); storage yards located on one acre (6 percent of the parcel); and the 6.6-acre remainder of the parcel (42 percent of the parcel) is open space and natural slopes.

APN 283-190-041

A small portion of the existing Motorcycle Test Track No. 1 is located on approx. 0.3 acres (3 percent of the parcel) with 6-foot high chain link perimeter fencing topped with three-strand barbed wire. The 8.8-acre remainder of the parcel (approximately 97 percent of the parcel) is open space within a 330-foot wide easement owned by Southern California Edison for an electrical power line alignment and steel tower with access road in northeast corner of parcel.

2.0 Methodology

2.1 Literature Review

HES conducted a literature review and reviewed aerial photographs and topographic maps of the project site and surrounding areas. Nine USGS topographic maps, *Lake Matthews*, *Steele Peak*, *Riverside East*, *Riverside West*, *Corona North*, *Corona South*, *Santiago Peak*, *Alberhill*, and *Lake Elsinore* were reviewed to identify sensitive species with the California Natural Diversity Data Base (CNDDB), the United States Fish and Wildlife (USFWS) Endangered Species Lists, and the California Native Plant Society's (CNPS) Rare plant lists to obtain species information for the project area. The CNDDB and USFWS critical habitat databases were utilized, together with Geographic Information System (GIS) software, to locate the previously recorded locations of sensitive plant and wildlife occurrences and designated critical habitat

and determine the distance from the project sites. Additionally, the Western Riverside County MSHCP was reviewed for information on known occurrences of sensitive species within Riverside County.

2.1.1 Western Riverside County MSHCP

The Western Riverside County MSHCP (Dudek and Associates 2003) is a comprehensive, multijurisdictional habitat conservation planning program for western Riverside County, California. The purpose of the Western Riverside County MSHCP is to preserve native habitats, and to this end, the plan focuses upon the habitat needs of multiple species rather than one species at a time. The Western Riverside County MSHCP provides coverage/take authorization for some species listed under the federal or state Endangered Species Act (ESA) as well as non-listed special-status plant and wildlife species. It also provides mitigation for impacts to special-status species and their associated habitats.

Through agreements with the USFWS and California Department of Fish and Wildlife (CDFWG), 146 listed and special-status plant and animal species receive some level of coverage under the Western Riverside County MSHCP. Of the 146 covered species, the majority have no additional survey needs or conservation requirements. Furthermore, the Western Riverside County MSHCP provides mitigation for project-specific impacts to these species, thereby reducing the degree of impact to below a level of significance, pursuant to the California Environmental Quality Act (CEQA).

Several of the species covered under the Western Riverside County MSHCP have additional survey requirements. These include the riparian communities and associated species addressed in Section 6.1.2 of the Western Riverside County MSHCP document ("Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools"), plants identified in Section 6.1.3 ("Narrow Endemic Plant Species"); and plants and animal species addressed in Section 6.3.2 ("Additional Survey Needs and Procedures").

2.1.2 Project Relationship to the Western Riverside County MSHCP

The project area is located within the Western Riverside County MSHCP boundaries. The County of Riverside, acting as the lead agency for the proposed project, is a permittee under the Western Riverside County MSHCP and, therefore, is afforded coverage under the state or federal ESAs for impacts to listed species covered by the plan. The County is required to document consistency with the Western Riverside County MSHCP in conjunction with any discretionary approvals for the project. As such, this report was prepared to provide all necessary information required to determine project consistency with the Western Riverside County MSHCP.

The project site is located within the Temescal Canyon Area Plan of the Western Riverside County MSHCP. The project site is located within Western Riverside County MSHCP Criteria Cell Numbers 2934, 3039, and 3041, of Subunit 3 (SU3) Temescal Wash – West of the Temescal Canyon Area Plan. The Temescal Canyon Area Plan is divided into five Subunits. For each Subunit, target conservation

acreages are established. The target conservation acreage range for the Temescal Canyon Area Plan is between 29,555 and 31,870 acres. The target conservation range for the Temescal Wash Subunit is between 2,790 and 4,415 acres. Conservation within Cell Groups E and F focus on coastal sage scrub and Riversidean alluvial fan sage scrub in a mosaic of upland habitat, and water and riparian scrub, woodland, forest habitat. Areas to be conserved within these Cell Groups should be connected to will be connected to a variety of uplands and wetlands proposed for conservation in Cell Groups D, E, F, and G. Conservation within Cell Group E ranges from 65 to 75 percent of the Cell Group, focusing on the central portion of the Cell Group. Conservation within Cell Group F ranges from 65 to 75 percent of the Cell Group, focusing on the central and eastern portions of the Cell Group. Conservation within Cell Numbers 2934, 3039, and 3041 focus on coastal sage scrub and Riversidean alluvial fan sage scrub in a mosaic of upland habitat, and water and riparian scrub, woodland, forest habitat. Conservation within these Cells will contribute to the assembly of the proposed extension of Existing Core 2.

The project site is located within plan-defined areas requiring surveys for narrow endemic plant species and criteria area plant species. In addition, the project site is located within the Western Riverside County MSHCP burrowing owl (*Athene cunicularia*) survey area. Further, the project site contains approximately 5.41 acres of alluvial fan sage scrub and 2.02 acres of ephemeral stream. This habitat is considered riparian/riverine areas as defined in Section 6.1.2 of the Western Riverside MSHCP. Any project impacts to this habitat will need to be in compliance with Section 6.1.2 of the Western Riverside MSHCP. No vernal pools were observed within the project boundaries.

2.2 Field Survey

On January 12, 2016 and November 1, 2017, HES biologist, Juan Hernandez, conducted a field survey of the approximate 122.7-acre project site. The ambient temperature at 11:00 a.m., November 1, 2017 was 62 degrees Fahrenheit, overcast, with winds ranging from one to three miles per hour from the southwest. The purpose of the field survey was to document the existing habitat conditions, obtain plant and animal species information, view the surrounding land uses, assess the potential for state and federal waters, assess the potential for wildlife movement corridors, and assess for the presence of constituent elements for critical habitat, if present.

Linear transects spaced approximately 50 feet apart were walked (where possible) across the 122.7-acre project site for 100 percent coverage. All species observed were recorded and are listed in Appendix A. GPS waypoints were taken to delineate specific habitat types, species locations, state or federal waters, and any other information that would be useful for the assessment of the property.

3.0 Existing Conditions and Results

3.1 Environmental Setting

The project site is comprised of predominantly hilly terrain, with disturbed areas being used by motorbike companies as testing facilities and other commercial uses. The areas to the north and east consist of open fields. The area to the west is associated with Temescal Creek. The areas to the south consist of portions of Temescal Creek and open fields. Rural residences exist to the east, southeast and south of the site. The elevation of the property ranges from 1,200 feet to 950 feet above mean sea level (AMSL).

3.2 Soils

The Natural Resources Conservation Services Soils Survey identifies six soil types within the project site, as described below (Appendix D).

Table 1
Onsite Soil Types

Unit Name	Unit Symbol	Slope
Cortina gravelly loamy sand	CIC	2 to 8 percent
Cortina cobbly loamy sand	CmC	2 to 8 percent
Cortina gravelly course sandy loam	CnC	2 to 8 percent
Lodo rocky loam	LpF2	25 to 50 percent slopes, eroded
Ramona sandy loam	RaC3	5 to 8 percent severely eroded
Rough broken land	RuF	

3.3 Plant and Habitat Communities

The 122.7-acre project site contains approximately 69.19 acres of disturbed habitat, 45.1 acres of disturbed coastal sage scrub, 5.41 acres of alluvial fan sage scrub, 2.02 acres of ephemeral stream, and 0.98 acres of disturbed chaparral (Figure 4).

Table 2
Onsite Habitat Types

Disturbed Habitat	Disturbed Coastal Sage Scrub	Alluvial Fan Sage Scrub	Ephemeral Stream Habitat	Disturbed Chaparral	Total Acreage
69.19 acres	45.1 acres	5.41 acres	2.02 acres	0.98 acres	**122.7**

Following is a description of each habitat type:

3.3.1 Disturbed Habitat

The project site contains approximately 69.19 acres of habitat classified as disturbed. These areas contain no vegetation and are either developed with paved roads, existing buildings, work areas, dirt tracks, paved areas, or dirt roads.

3.3.2 Disturbed Coastal Sage Scrub

The project site contains approximately 45.1 acres of brittlebush (*Encelia farinosa*) dominant coastal sage scrub. This habitat type occurs mainly on the hillsides. The disturbed coastal sage scrub contains a high percentage of invasive non-native plants predominantly Russian thistle (*Salsola tragus*). Other common plant species found in this habitat type include California buckwheat (*Eriogonum fasciculatum*), California sage (*Artemisia californica*), laurel sumac (*Malosma laurina*), sugar bush (*Rhua ovata*), goldenbush (*Isocoma menziesii*), deerweed (*Acmispon glaber*), white sage (*Salvia apiana*), and sweetbush (*Bebbia juncea*)

3.3.3 Alluvial Fan Sage Scrub

The project site contains approximately 5.41 acres of alluvial fan sage scrub. This habitat type is associated with sandy or gravelly washes and on gently alluvial fans. This habitat type is found on the southwestern portion of the property within the floodplain of Temescal Wash. Scalebroom (*Lepidospartum squamatum*) is readily found in alluvial fan sage scrub. Other species found in this habitat type include California sage, California buckwheat, yerba santa (*Eriodictyon* sp.), brittlebush, Mexican elderberry (*Sambucus mexicana*), deerweed, and mulefat (*Baccharis salicifolia*)

3.3.4 Ephemeral Stream Habitat

The project site contains approximately 2.02 acres of ephemeral stream habitat. This habitat is associated with ephemeral drainages that are tributary to Temescal Wash, and are predominantly composed of upland plant species. Plants associated with this habitat type include mulefat, California sage, California buckwheat, brittlebush, Mexican elderberry, and coast live oak (*Quercus agrifolia*).

3.3.5 Disturbed Chaparral

The project site contains approximately 0.98 acres of habitat classified as disturbed chaparral. This small area is located in the southern portion of the property. It was classified as disturbed chaparral due to the presence of inland scrub oak (*Quercus berberidifolia*). Chaparral habitat is usually associated with chamise (*Adenostoma fasciculatum*), coffeeberry (*Frangula californica*), toyon (*Heteromeles arbutifolia*), and laurel sumac (*Malosma laurina*).

4.0 Sensitive Biological Resources

4.1 Threatened and Endangered Species

A total of 41 sensitive species of plants and 59 sensitive species of animals have the potential to occur on or within the vicinity of the project location. These include those species listed or candidates for listing by the USFWS, California Department of Fish and Wildlife (CDFW) and CNPS. All habitats with the potential to be used by sensitive species were evaluated during the site visit and a determination has been made for the presence or probability of presence within this report. This section will address those species listed as Candidate, Rare, Threatened, or Endangered under the state and federal endangered species laws or directed to be evaluated under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Sensitive species which have a potential to occur will also be discussed in this section. Other special status species are addressed within Appendix B.

4.1.1 Threatened and Endangered Plants

A total of 11 plant species are listed as state and/or federal Threatened, Endangered, or Candidate species; are required to be reviewed under the Narrow Endemic Plant section of the Western Riverside County MSHCP; are 1B.1 listed plants on the CNPS Rare Plan Inventory; or have been found to have a potential to exist on the project site. Below are descriptions of these species:

Munz's Onion

Munz's onion (*Allium munzii*) is federally listed Endangered, State listed Threatened, and rank 1B.1 in the CNPS rare plant inventory. The species occurs in various habitat types including chaparral, coastal scrub, pinon and juniper woodlands, and valley and foothill grasslands. The project site contains suitable habitat for this species. **Potential to be present.**

San Diego Ambrosia

San Diego ambrosia (*Ambrosia pumila*) is federally listed endangered and rank 1B.1 in the CNPS rare plant inventory. Its habitat includes chaparral, coastal scrub, and valley and foothill grasslands. The project site contains suitable habitat for this species. **Potential to be present.**

Marsh Sandworth

Marsh sandworth (*Arenaria paludicola*) is federally and State listed as Endangered and is ranked as 1B.1 in the CNPS rare plant inventory. The species is found in wet meadows and marshes at elevations less than 300 meters and blooms from late spring into summer. There is no habitat present for this species. **This species is not present.**

San Jacinto Valley Crownscale

The San Jacinito Valley crownscale (*Atriplex coronata* var *notaitor*) is federally listed endangered and rank 1B.1 in the CNPS rare plant inventory. Its habitat includes alkali playas and vernal pools. There is no habitat for this species on the project site. **This species is not present.**

Davidson's Saltscale

Davidson's saltscale (*Atriplex serenana*) is CNPS 1B.2 listed plant. Its habitat includes coastal sage scrub and wetland riparian. The project site contains suitable habitat for this species. **Potential to be present.**

Nevin's Barberry

Nevin's barberry (*Berberis nevinii*) is federally and State listed as Endangered and is ranked as 1B.1 in the CNPS rare plant inventory. The species is found in chaparral, coastal sage scrub, and riparian scrub. This species blooms from March through May. The project site contains suitable habitat for this species. **Potential to be present.**

Thread-leaved Brodiaea

The thread-leaved brodiaea (*Brodiaea filifolia*) is federally listed Threatened, State listed Endangered, and rank 1B.1 in the CNPS rare plant inventory. The species occurs in vernal pool habitat. The project site does not have suitable habitat for this species. **This species is not present.**

Intermediate Mariposa-lily

Intermediate mariposa-lily (*Calochortus weedii* var. *intermedius*) is ranked as 1B.2 in the CNPS rare plant inventory. The species is found in chaparral, coastal sage scrub, and foothill grasslands. This species blooms from June through July. The project site contains suitable habitat for this species. **Potential to be present.**

Salt Marsh Bird's-Beak

Salt marsh bird's-beak (*Chloropyron maritinum* ssp. *maritimum*) is a federally and State listed Endangered species and is ranked 1B.2 in the CNPS rare plant inventory. This species occurs in coastal salt marsh habitat at elevations less than 10 meters. Its blooming period is from May to October. The project site does not have suitable habitat for this species. **This species is not present.**

Parry's Spineflower

Parry's spineflower (*Chorianthe parryi* var. *parryi*) is ranked 1B.1 in the CNPS rare plant inventory. Its habitat includes chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. The project site contains suitable habitat for this species. **Potential to be present.**

San Miguel Savory

San Miguel savory (*Clinopodium chandleri*) is ranked 1B.2 in the CNPS rare plant inventory. Its habitat includes chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. The project site contains suitable habitat for this species. **Potential to be present.**

Slender-Horned Spineflower

Slender-horned spineflower (*Dodecahema leptoceras*) is a federally and State listed Endangered species and is ranked 1B.1 in the CNPS rare plant inventory. Its habitat includes chaparral, cismontane woodland and coastal scrub with sand or gravel soils at elevations ranging from 200 to 700 meters. Its flowering period is from May to June. The project site contains suitable habitat for this species. **Potential to be present.**

Many-stemmed Dudleya

Many-stemmed dudleya (*Dudleya multicaulis*) is ranked 1B.2 in the CNPS rare plant inventory. Its habitat includes chaparral, coastal sage scrub, and valley and foothill grassland. The project site contains suitable habitat for this species. **Potential to be present.**

Santa Ana River Woollystar

Santa Ana River Woollystar (*Eriastrum densifolium* ssp. *sanctorum*) is a federally and state listed Endangered species and is ranked 1B.1 in the CNPS rare plant inventory. This species occurs in washes, floodplains, and dry riverbeds at elevations less than 500 meters. Its blooming period is from May to September. The project site contains suitable habitat for this species. **Potential to be present.**

Mesa Horkelia

Mesa horkelia (*Horkelia vuneata* var. *puberula*) is ranked 1B.1 in the CNPS rare plant inventory. Its habitat includes chaparral, cismontane woodland, and coastal scrub. This plant flowers between March and July. The project site contains suitable habitat for this species. **Potential to be present.**

Robinson's Pepper-grass

Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) is ranked 4.3 in the CNPS rare plant inventory. Its habitat includes chaparral and coastal sage scrub. This plant flowers between March and June. The project site contains suitable habitat for this species. **Potential to be present.**

Spreading Naverretia

Spreading navarratia (*Navarretia fossalis*) is a federally Threatened species and ranked 1B.1 in the CNPS rare plant inventory. Its habitat includes shadscale scrub and wetlands. The project site does not have suitable habitat for this species. **This species is not present.**

Californiia Orcutt Grass

California Orcutt grass (*Orcuttia californica*) is a federal and state Endangered species. It is ranked 1B.1 in the CNPS rare plant inventory. It is found in vernal pools and wetlands. The project site does not support suitable habitat for the species. **This species is not present.**

Brand's Phancelia

Brand's phancelia (*Phancelia stellaris*) is ranked 1B.1 in the CNPS rare plant inventory. Its habitat includes coastal dunes and coastal scrub. This plant flowers between March and May. The project site does not have suitable habitat for this species. **This species is not present.**

Hammitt's Clay-cress

Hammitt's clay-cress (*Sibaropsis hammittii*) is ranked 1B.2 in the CNPS rare plant inventory. Its habitat includes washes and steep hillsides. This plant flowers between March and April. The project site contains suitable habitat for this species. **Potential to be present.**

4.1.2 Threatened and Endangered Animals

A total of 27 animal species are listed as state and/or federal Threatened, Endangered, or Candidate or for special consideration under the Western Riverside County MSHCP will be reviewed in this section. Sensitive species which have a potential to occur will also be discussed in this section. All sensitive species located in the following USGS Quadrangle maps were evaluated: *Lake Matthews*, *Steele Peak*, *Riverside east, Riverside West, Corona North, Corona South, Santiago Peak, Alber Hill*, and *Lake Elsinore*. A complete list of those species are discussed within Appendix B.

State and/or federal Threatened, Endangered, or Candidate or for special consideration under the Western Riverside County MSHCP:

Southern California Rufous-Crowned Sparrow

Southern California rufous-crowned sparrow (*Aimophila ruficeps canens*) is a CDFW Species of Special Concern and a Western Riverside County MSHCP covered species. They require open coastal scrub and chaparral on medium to steep slopes. This species will abandon areas where sage scrub or chaparral has become too dense or uniform. They nest in shrubs such as California sagebrush, manzanita (*Arctostaphylos* spp.), and poison oak (*Toxicodendron diversiloba*), as well as morning glory (*Calystegia macrostegia*) and native bunch grasses. The project site contains habitat suitable for this species. **Potential to be present.**

Arroyo Toad

Arroyo Toad (Anaxyrus californicus) is a federally listed endangered species. The most favorable breeding habitat consist of slow-moving shallow pools, nearby sandbars, and adjacent stream terraces. There is no habitat for this species on the project site. **The species is not present.**

Orange-throated Whiptail

The orange-throated whiptail (*AspidoSouthern California Edisonlis hyperythra*) is a CDFW Species of Special Concern and a Western Riverside County MSHCP covered species. This species lives in semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral. This species was observed on the property. **Species is present.**

Coastal Whiptail

The coastal whiptail (*Aspidolis tigris stejnegeri*) is a CDFW Species of Special Concern and a Western Riverside County MSHCP covered species. This species lives in semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral. The property contains habitat for this species. **Potential to be present.**

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a CDFW Species of Special Concern and a Western Riverside County MSHCP covered species. The species lives in dry open areas with no trees and short grass. The project site contains habitat for this species. **Potential to be present.**

Swainson's Hawk

Swainsons hawk (*Buteo swainsoni*) is a State listed threatened species. The species favors open grasslands for foraging but also occurs in agricultural settings. They rely on scattered stands of trees near agricultural fields and grasslands for nesting sites. The project site contains trees suitable for nesting; therefore, **a Potential to be present.**

Coastal Cactus Wren

Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) is a CDFW Species of Special Concern and a Western Riverside County MSHCP covered species. The species prefers coastal sage scrub habitat for nesting and foraging. The project site does contain habitat for this species. **Potential to be present.**

Santa Ana Sucker

Santa Ana sucker (*Catostomus santaanae*) is a federally listed threatened species and CDFW species of special concern. The species is restricted to southern California rivers. There is no habitat for this species on the project site. **The species is not present.**

Western Snowy Plover

Western snowy plover (*Charadrius alexandrinus nivosus*) is a federally listed threatened species and CDFW species of special concern. The species prefers standing water, sandy beaches, salt pond levees, of shores of large alkali lakes. There is no habitat for this species on the project site. **The species is not present.**

Western Yellow-Billed Cuckoo

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is federally listed as threatened and state listed as Endangered. It is found in riparian habitat with vegetation such as willow and willow-cottonwood thickets with heavy underbrush. The species is restricted to cottonwood-dominated forests. Surveys were conducted for this species and it was not found. **The species is not present.**

San Diego Banded Gecko

San Diego banded gecko (*Coleonyx variegatus abbotti*) is a CDFW Species of Special Concern and a Western Riverside County MSHCP covered species. The species prefers coastal sage scrub in granite or rocky outcrops. There is habitat for this species on the project site. **Potential to be present.**

Red-diamond Rattlesnake

Red-diamond rattlesnake (*Crotalus ruber*) is a CDFW Species of Special Concern and a Western Riverside County MSHCP covered species. The species prefers coastal sage scrub, chaparral, or grasslands in granite or rocky outcrops. There is habitat for this species on the project site. **Potential to be present.**

San Bernardino Kangaroo Rat

San Bernardino kangaroo rat (*Dipodomys merriami parvus*) a federally listed endangered species. Its habitat is limited to alluvial floodplains and adjacent upland habitats typically vegetated by Riversidean alluvial fan sagescrub. The project sited contains habitat for this species located on the southwestern portion of the site. **Potential to be present.**

Stephen's Kangaroo Rat

Stephens' Kangaroo Rat (*Dipodomys stephensi*) is a federally listed endangered species and state listed threatened species. The species is found in coastal sage scrub, and in valley and foothill grasslands. The project site does contain habitat for this species. **Potential to be present.**

Southwestern Willow Flycatcher

Southwestern willow flycatcher (*Empidonax trailii extimus*) is federally and state listed as endangered. The species breeds in dense riparian habitats along rivers, streams, or other wetlands. Vegetation can be dominated by dense growths of willows, seep willow (*Baccharis* sp.), tamarisk (*Tamarix* sp.) or other large trees. The project site does not have habitat for this species. **This species is not present.**

Quino Checkerspot Butterfly

Quino checkerspot butterfly (*Euphydryas editha quino*) is federally listed as endangered. This species is found in sunny openings within coastal sage scrub and chaparral. The project site contains habitat for this species. **Potential to be present.**

Bald Eagle

Bald eagle (*Halieaeetus leucocephalus*) is State listed as endangered and is a delisted federal species. The species is fully protected under the regulations of the CDFW. It is found around wetlands, open water areas with an abundance of fish. It nests and roosts in large trees. There is no habitat for this species on the project site. **The species is not present.**

San Diego Desert Woodrat

San Diego desert woodrat (*Neotoma lepida intermedia*) is CDFW Species if Special Concern and a Western Riverside County MSHCP covered species. It is found in coastal sage scrub and chaparral. The project site contains habitat for this species. **Potential to be present.**

Los Angeles Pocket Mouse

Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) is CDFW Species if Special Concern and a Western Riverside County MSHCP covered species. It is found in coastal sage scrub and grasslands. The project site contains habitat for this species. **Potential to be present.**

Coast Horned Lizard

Coast horned lizard (*Phrynosoma blainvillii*) is CDFW Species if Special Concern and a Western Riverside County MSHCP covered species. It is found in coastal sage scrub, washes, and grasslands. The project site contains habitat for this species. **Potential to be present.**

Coastal California Gnatcatcher

Coastal California gnatcatcher (*Polioptila californica californica*) is a federally listed threatened species and CDFW species of Special Concern. The species range is limited to the California coast and is found only in coastal sage scrub. The project site contains habitat for this species. **Potential to be present.**

Delhi Sands Flower-Loving Fly

Delhi sands flower-loving fly (*Rhaphimidas terminatus abdominalis*) is a federally listed endangered species. Its habitat is limited to dunes containing sandy soils of the Delhi series. There is no habitat for this species on the project site. **This species is not present.**

Coast Patch-nosed Snake

Coast patch-nosed snake (*Salvadora hexalepis virgultea*) is CDFW Species if Special Concern and a Western Riverside County MSHCP covered species. It is found in brushy or shrubby vegetation in coastal sage scrub. The project site contains habitat for this species. **Potential to be present.**

Riverside Fairy Shrimp

Riverside fairy shrimp (*Streptocehalus woottoni*) is a federally listed threatened species. This species is found in seasonal pools of water in coastal sage scrub and grasslands. The project site does not have habitat for this species. **This species is not present.**

American Badger

American badger (*Taxidea taxus*) is CDFW Species if Special Concern and a Western Riverside County MSHCP covered species. It is found in a wide variety of habitats from brushy or shrubby vegetation in coastal sage scrub to desert environments. The project site contains habitat for this species. **Potential to be present.**

Least Bell's Vireo

Least Bell's vireo (*Vireo belii pusillus*) is a federally and State listed endangered species. It is found in riparian forests, riparian scrub, and riparian woodlands. The project site does have alluvial fan sage scrub, and ephemeral upland stream habitat, but these habitat types lack the mulefat and willow scrub preferred by this species for nesting. **This species is not present.**

4.2 Species with other Special Status Listings

Species which are listed as California Species of Special Concern or are on the CDFW List of Rare plants have all been evaluated and the results can be reviewed within Appendix B. Any of these species that have the potential to be present or are considered present within the project area will have mitigation measures to avoid or minimize impacts in the Recommendations section of this report.

4.3 Critical Habitats

The project site is located within critical habitat designated for coastal California gnatcatcher (*Polioptila californica californica*) by the USFWS.

4.4 Nesting Birds

The project site contains potential nesting habitat protected under the Migratory Bird Treaty Act of 1918 located in the disturbed, disturbed coastal sage scrub, alluvial fan sage scrub, ephemeral stream habitat, and disturbed chaparral areas of the property.

4.5 Wildlife Movement Corridors

A major riparian corridor is present in the southwest portion of the property in the alluvial fan sage scrub habitat. This portion of the property is associated with the Temescal Wash and is used by bird, reptile, mammal, invertebrates, and amphibian species to reproduce, find shelter, forage, and movement.

4.6 Western Riverside County MSHCP

The project site is located within the Temescal Canyon Area Plan of the Western Riverside County MSHCP. The project site is located within Western Riverside County MSHCP Criteria Cell Numbers 2934, 3039, and 3041, of Subunit 3 (SU3) Temescal Wash – West of the Temescal Canyon Area Plan. The Temescal Canyon Area Plan is divided into five Subunits. For each Subunit, target conservation acreages are established. The target conservation acreage range for the Temescal Canyon Area Plan is between 29,555 and 31,870 acres. The target conservation range for the Temescal Wash Subunit is between 2,790 and 4,415 acres. Conservation within Cell Groups E and F focus on coastal sage scrub and Riversidean alluvial fan sage scrub in a mosaic of upland habitat, and water and riparian scrub, woodland, forest habitat. Areas to be conserved within these Cell Groups should be connected to will be connected to a variety of uplands and wetlands proposed for conservation in Cell Groups D, E, F, and G. Conservation within Cell Group E ranges from 65 to 75 percent of the Cell Group, focusing on the central portion of the Cell Group. Conservation within Cell Group F ranges from 65 to 75 percent of the Cell Group, focusing on the central and eastern portions of the Cell Group. Conservation within Cell Numbers 2934, 3039, and 3041 focus on coastal sage scrub and Riversidean alluvial fan sage scrub in a mosaic of upland habitat, and water and riparian scrub, woodland, forest habitat. Conservation within these Cells will contribute to the assembly of the proposed extension of Existing Core 2.

4.6.1 Section 6.1.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

The project site contains approximately 5.41 acres of alluvial fan sage scrub and 2.02 acres of ephemeral stream, which may be state jurisdictional streams regulated under Section 1602 of the California Department of Fish and Game Code for the protection of lake or streams. This habitat is also considered riparian/riverine areas as defined in Section 6.1.2 of the Western Riverside County MSHCP. Any project impacts to this habitat will need to be in compliance with Section 6.1.2 of the Western Riverside County MSHCP.

Vernal pools are seasonal depressional wetlands that occur under Mediterranean climate conditions of the west coast and in glaciated conditions of northeastern and midwestern states. They are covered by shallow water for variable periods from winter to spring, but may be completely dry most of the summer and fall. Vernal pools are usually associated with hard clay layers or bedrock, which helps keep water in the pools. Vernal pools and seasonal depressions usually are dominated by hydrophytic plans, hydric soils, and evidence of hydrology.

The entire site was evaluated for the presence of vernal pools and seasonal depressions. No vernal pools were observed within the project boundaries. However, the project site does contain many ruts and ditches

caused by the heavy motor vehicle use that may hold water during the rainy season and may provide temporary habitat for vernal pool species.

4.6.2 Section 6.1.3 Protection of Narrow Endemic Plant Species

The project site is located within the narrow endemic plant overlay of the Western Riverside County MSHCP. The County of Riverside requires at least habitat assessments for California Orcutt Grass, Hammitt's clay-cress, many-stemmed dudleya, Munz's onion, San Diego ambrosia, San Miguel savory, slender-horned spineflower, spreading navarretia, and Wright's trichocoronis. Of these species, the project had potential habitat for Hammitt's clay-cress, many-stemmed dudleya, Munz's onion, San Diego ambrosia, San Miguel savory, slender-horned spineflower, and spreading navarretia.

4.6.3 Section 6.1.4 Guidelines Pertaining to the Urban/Wildlands Interface

The project site is located within Western Riverside County MSHCP Criteria Cell Numbers 2934, 3039, and 3041, of Subunit 3 (SU3) Temescal Wash – West of the Temescal Canyon Area Plan. Developments within these criteria cells are required to minimize edge effects that will adversely affect biological resources within MSHCP conservation areas. In order to minimize edge effects, the project is required to follow MSHCP guidelines for drainage, toxics, lighting, noise, invasives, barriers, and grading/land development.

4.6.4 Section 6.3.2 Guidelines Additional Survey Needs and Procedures

Riverside County Transportation and Land Management (TLMA) requires a habitat assessment for burrowing owl, Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*), Davidson saltscale, little mousetail (*Myosurus minimus ssp. Apus*), Parish's brittlescale (*Atriplex parishii*), round-leaved filaree (*California macrophylla*), smooth tarplant (*Centromadia pungens ssp. Laevis*), and thread-leaved brodiaea. Habitat assessments were performed for these species and suitable habitat was found for burrowing owl and Davidson's saltscale.

4.7 Other City, County, Regional, State, or Federal Conservation Plans

The project is required to conduct a survey of oak and native trees to comply with Riverside County Ordinance 559.

4.8 State and Federal Jurisdictional Drainages

The project site contains approximately 5.41 acres of alluvial fan sage scrub and 2.02 acres of ephemeral stream, which may be state jurisdictional streams regulated under Section 1602 of the California Department of Fish and Game Code for the protection of lake or streams. This habitat is also considered riparian/riverine areas as defined in Section 6.1.2 of the Western Riverside County MSHCP. Any project

impacts to this habitat will need to be in compliance with Section 6.1.2 of the MSHCP. Due to the fact that a jurisdictional delineation was not performed, the extent of federal waters is not known.

5.0 Project Impacts

5.1 Impacts to Existing Habitats

Corona Clay is in the process of permitting the existing land uses and reclamation within the most consistent and appropriate land use designations and zoning. No new impacts to existing habitat are expected from these actions.

5.2 Impacts to Sensitive Species

The proposed project consists of the conversion of existing land uses to the appropriate land use designations and zoning. No new land disturbing activities are anticipated; therefore, no new impacts to sensitive species are expected.

5.3 Nesting Birds

The project site contains shrubs and trees that can support nesting song birds or raptors. The proposed project consists of the conversion of existing land uses to the appropriate land use designations and zoning. No new land disturbing activities are anticipated; therefore, no new impacts to nesting birds or raptors are expected.

5.4 Impacts to Critical Habitat

The project is located within designated federal critical habitat for coastal California gnatcatcher. The proposed project consists of the conversion of existing land uses to the appropriate land use designations and zoning. No new land disturbing activities are anticipated; therefore, no new impacts to critical habitat is expected.

5.5 Impacts to Wildlife Movement Corridors

There is a major riparian corridor present in the southwest portion of the property in the alluvial fan sage scrub habitat. This portion of the property is associated with the Temescal Wash and is used by bird, reptile, mammal, invertebrates, and amphibian species to reproduce, find shelter, forage, and movement. The proposed project consists of the conversion of existing land uses to the appropriate land use designations and zoning. No new land disturbing activities are anticipated; therefore, no new impacts are expected.

5.6 Conflict with Local Policies or Ordinances Protecting Biological Resources

Any project activities that have the potential to impact onsite trees will require a survey of oak and native trees to comply with Riverside County Ordinance 559. However, the proposed project consists of the conversion of existing land uses to the appropriate land use designations and zoning. Therefore, no impacts are expected.

5.7 Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan

The project site is located within Western Riverside County MSHCP Criteria Cell Numbers 2934, 3039, and 3041, of Subunit 3 (SU3) Temescal Wash – West of the Temescal Canyon Area Plan. The proposed project consists of the conversion of existing land uses to the appropriate land use designations and zoning. No new land disturbing activities are anticipated; therefore, no new impacts are expected.

5.8 State and Federal Drainages

The project site contains approximately 5.41acres of alluvial fan sage scrub and 2.02 acres of ephemeral stream. These areas may be state jurisdictional streams regulated under Section 1602 of the California Department of Fish and Game Code for the protection of lake or streams. These areas may also be considered waters of the United States; however, a jurisdictional delineation was not performed. Therefore, the amount of federal waters is not known. The proposed project consists of the conversion of existing land uses to the appropriate land use designations and zoning. No new land disturbing activities are anticipated; therefore, no new impacts to drainages are expected.

5.9 Impacts to Section 6.1.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

The project site contains approximately 5.41 acres of alluvial fan sage scrub and 2.02 acres of ephemeral stream. These areas may be state jurisdictional streams regulated under Section 1602 of the California Department of Fish and Game Code for the protection of lake or streams. This habitat is also considered riparian/riverine areas as defined in Section 6.1.2 of the Western Riverside County MSHCP. Any project impacts to this habitat will need to be in compliance with Section 6.1.2 of the Western Riverside County MSHCP. No vernal pools were observed within the project boundaries. However, the project site does contain many ruts and ditches caused by the heavy motor vehicle use that may hold water during the rainy season and may provide temporary habitat for vernal pool species.

The proposed project consists of the conversion of existing land uses to the appropriate land use designations and zoning. No new land disturbing activities are anticipated; therefore, no new impacts are expected.

5.10 Impacts to Section 6.1.3 Protection of Narrow Endemic Plant Species

The project site is located within the narrow endemic plant overlay of the Western Riverside County MSHCP. The County of Riverside requires at least habitat assessments for California Orcutt Grass, Hammitt's clay-cress, many-stemmed dudleya, Munz's onion, San Diego ambrosia, San Miguel savory, slender-horned spineflower, spreading navarretia, and Wright's trichocoronis. Of these species, the project had potential habitat for Hammitt's clay-cress, many-stemmed dudleya, Munz's onion, San Diego ambrosia, San Miguel savory, slender-horned spineflower, and spreading navarretia. The proposed project consists of the conversion of existing land uses to the appropriate land use designations and zoning. No new land disturbing activities are anticipated; therefore, no new impacts are expected.

6.0 Recommendations

6.1 Western Riverside County MSHCP Covered Species

6.1.1 Narrow Endemic Plant Species

The County of Riverside requires habitat assessments for California Orcutt Grass, Hammitt's clay-cress, many-stemmed dudleya, Munz's onion, San Diego ambrosia, San Miguel savory, slender-horned spineflower, spreading navarretia, and Wright's trichocoronis. Of these species, the project had potential habitat for Hammitt's clay-cress, many-stemmed dudleya, Munz's onion, San Diego ambrosia, San Miguel savory, slender-horned spineflower, and spreading navarretia. Focused botanical surveys will be required for any new project activities as outlined in the MSHCP.

6.1.2 Urban/Wildlands Interface

The project site is located within Western Riverside County MSHCP Criteria Cell Numbers 2934, 3039, and 3041, of Subunit 3 (SU3) of the Temescal Canyon Area Plan. Developments within these criteria cells are required to minimize edge effects that will adversely affect biological resources within MSHCP conservation areas. In order to minimize edge effects, the project is required to follow MSHCP guidelines for drainage, toxics, lighting, noise, invasives, barriers, and grading/land development. Note that compliance with these guidelines is required for the existing developments even if no new areas are to be disturbed.

6.1.3 Additional Survey Needs and Procedures

Burrowing Owl

Based on the presence of suitable habitat documented during the habitat assessment, focused surveys are required as part of the project review process. Focused burrowing owl surveys will be required for any new project activities as outlined in the MSHCP.

Davidson's Saltscale

Based on the presence of suitable habitat documented during the habitat assessment, focused surveys are required as part of the project review process for any new project activities. Davidson's saltscale located as a result of survey efforts shall be conserved in accordance with procedures described within Section 6.3.2 of the Western Riverside County MSHCP.

6.1.4 Oak Trees

Any project activities that have the potential to impact onsite trees will require a survey of oak and native trees to comply with Riverside County Ordinance 559.

6.2 Nesting birds

- It is recommended that vegetation removal be conducted outside of the nesting season for migratory birds to avoid direct impacts. The migratory bird nesting season is between February 1 and September 15.

- If vegetation removal will occur during the migratory bird nesting season, between February 1 and September 15, it is recommended that pre-construction nesting bird surveys be performed within three days prior to vegetation removal.

- If active nests are found during nesting bird surveys, they shall be flagged and a 200-foot buffer shall be fenced around the nests.

- A biological monitor shall visit the site once a week during ground disturbing activities to ensure all fencing is in place and no sensitive species are being impacted.

6.3 State and Federal Drainages

- Any impacts to onsite drainages and/or associated riparian habitat will require the preparation of a Jurisdictional Delineation and consultation with the CDFW, the U.S. Army Corps of Engineers, and the Santa Ana Regional Water Quality Control Board to determine the need for permits that must be obtained.

- Any impacts to Western Riverside County MSHCP riparian/riverine resources will require preparation of an MSHCP Determination of Biologically Equivalent or Superior Preservation (DBESP).

7.0 Certification

*"**CERTIFICATION**: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief."*

Signed 

PROJECT MANAGER

Fieldwork Performed By:

Juan Hernandez

PRINCIPAL BIOLOGIST

8.0 References

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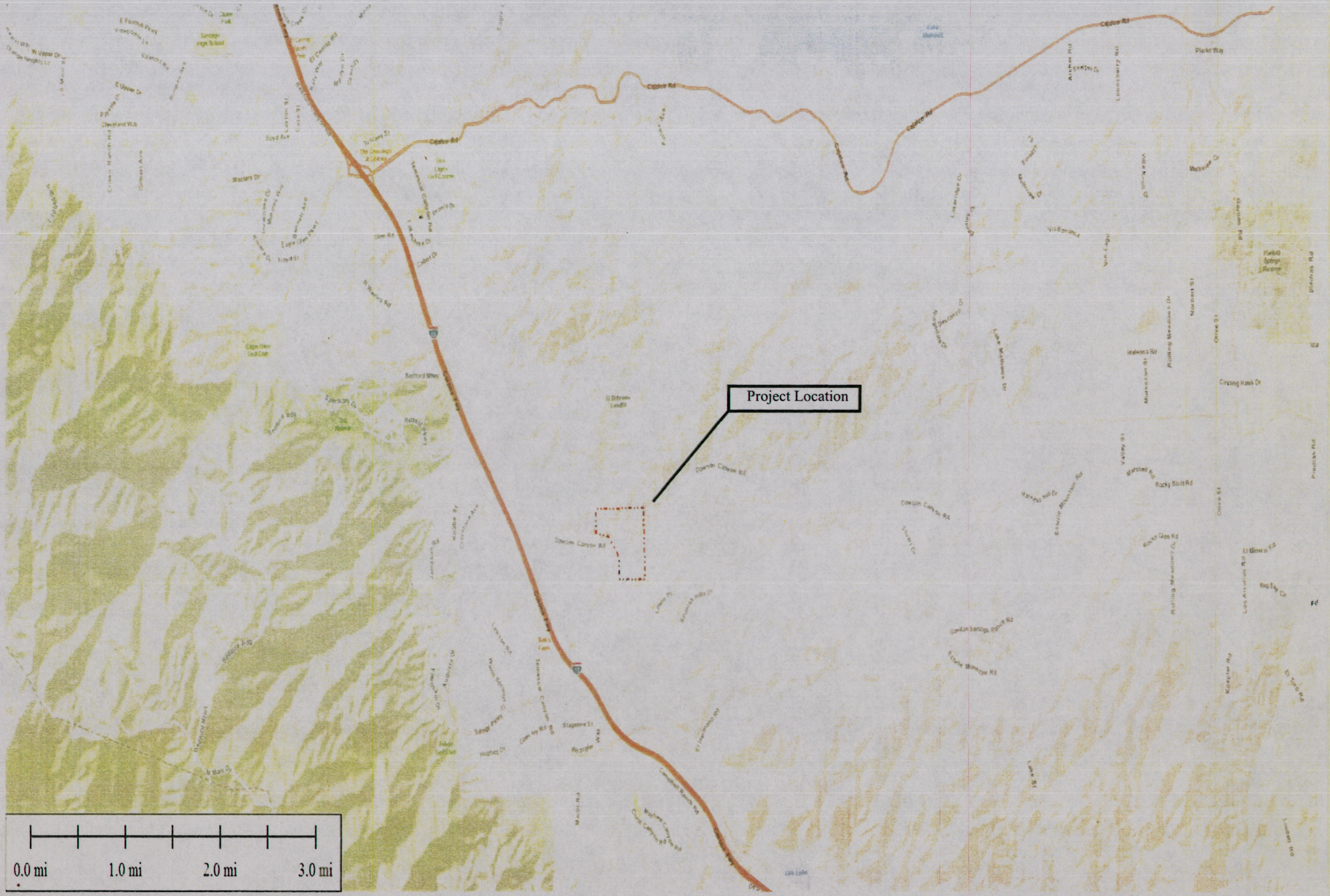


Figure 1

Location Map
General Biological Assessment
Conditional Use Permit Number 3265
Corona Clay Company
Riverside County, California

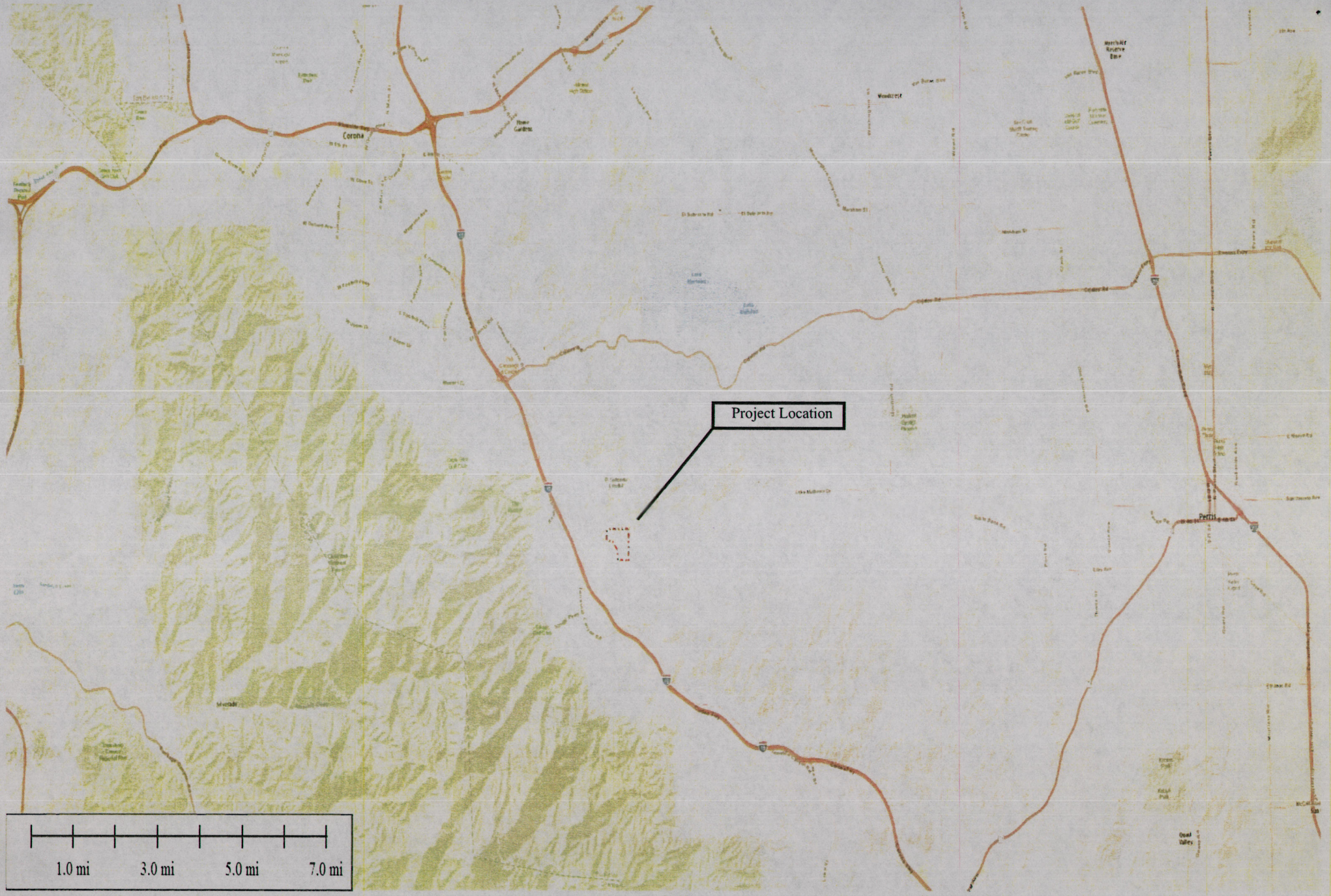


Figure 2
Vicinity Map
General Biological Assessment
Conditional Use Permit Number 3265
Corona Clay Company
Riverside County, California

Figure 3

Exisiting Land Use Map
General Biological Assessment
Conditional Use Permit Number 3265
Corona Clay Company
Riverside County, California

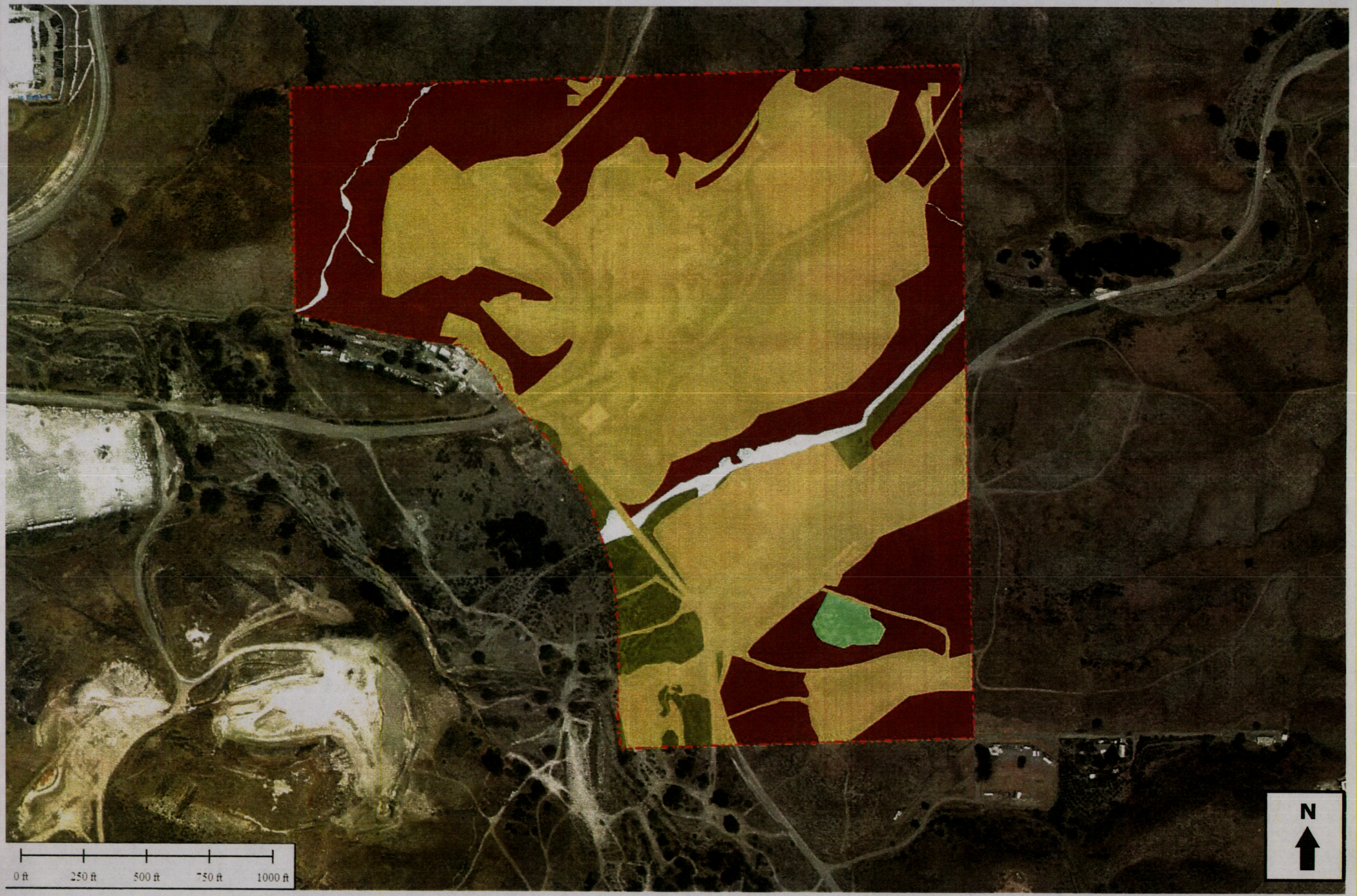


Figure 4
Habitat Map
General Biological Assessment
Conditional Use Permit Number 3265
Corona Clay Company
Riverside County, California

Legend

- Property Boundary
- 69.19 Acres Disturbed Habitat
- 45.1 Acres Disturbed Coastal Sage Scrub
- 5.41 Acres Alluvial Fan Sage Scrub
- 2.02 Acres Ephemeral Stream
- 0.98 Acres Disturbed Chaparral

Hernandez Environmental Services

Appendix A Species List

Plant List

Acourtia microcephala	Sacapellote
Amaranthus sp.	Pigweed
Ambrosia psilostachya	Western ragweed
Artemisia californiaca	California Sagebrush
Avena sp.	Oats
Baccharis pilularis	Coyote brush
Baccharis salicifolia	Mulefat
Bebbia juncea	Sweetbush
Brassica nigra	Black mustard
Brassica tournefortii	Common mustard
Bromus sp.	Bromus
Centaurea melitensis	Tocalote
Cercidium floridum	Blue palo verde
Chenopodium album	Lambs quarters
Conyza canadensis	Horseweed
Cuscuta californica	California dodder
Cylindropuntia californica	California cholla
Encelia californica	California encelia
Encelia farinosa	Brittlebush
Ephedra viridis	Mormon tea
Erigeron bonariensis	Horseweed
Eriogonum fasciculatum	California buckwheat
Erodium sp	Filaree
Eucalyptus globules	Eucalyptus

Hazardia squarrosa	Saw-toothed goldenbush
Heteromeles arbutifolia	Toyan
Helianthus petiolaris	Sunflower
Heterptheca grandiflora	Telegraph weed
Hirschfeldia incana	Mustard
Hordeum sp	Barley
Isocoma menziesii	Goldenbush
Juniperus californica	California Juniper
Keckiella cordifolia	Bush penstemon
Lepidospartum squamatum	Scale broom
Lotus scoparius	Deer weed
Malva parviflora	Cheeseweed
Marrubium vulgare	Horehound
Mimulus auurantiacus	Monkeyflower
Mirabilis laevis	Wishbone bush
Nicotina glauca	Tree tabacco
Platanus occidentalis	Sycamore
Populus fremontii	Fremont cottonwood
Quercus agrifolia	Coast live oak
Quercus wislizeni	Scrub oak
Rhamnus ilicifolis	Hollyleaf redberry
Rhus integrifolia	Lemonade berry
Rhua ovata	Sugar bush
Ricinus communis	Castor bean
Rumex crispus	Curley dock
Salix laevigata	Red Willow
Salsola tragus	Russian Thistle
Salvia apiana	White sage
Salvia mellifera	Black sage

Sambucus mexicana	Mexican elderberry
Schinus molle	Peruvian peppertree
Scirpus acutus	Common tule
Scirpus californiacus	California bulrush
Tamarix ramosissima	Tamarisk
Toxicodendron diversilobum	Poison oak
Tribulus terrestris	Puncture vine
Trichostema lanceolatum	Vinegar weed
Typha sp.	Cattail
Typha domingensis	Southern cattail
Viscum album	Dodder
Washingtonia robusta	Mexican fan palm
Yucca whipplei	chaparral yucca

Animal List

Accipiter striatus	Cooper's hawk
Aphelocoma californiaca	Western scrub jay
Buteo jamaicensis	Red-tailed Hawk
Calypte anna	Anna's hummingbird
Canis latrans	Coyote
Carpodacus mexicanus	House finch
Corvus corax	Raven
Corvus brachyrhynchos	Crow
Dendroica coronata	Yellow-rumped warbler
Didelphis virginiana	Virginia opossum
Hirundo rustica	Barn swallow
Melospiza melodia	Song sparrow
Mephitis mephitis	Stripped skunk
Mimus polyglottos	Mocking bird

Passer domesticus	House Sparrow
Pipilo crissalis	California towee
Polioptila californica	Coastal California gnatcatcher
Procyon lotor	Northern racoon
Sayornis nigricans	Black phoebe
Sayornis saya	Say's phoebe
Sceloporus occidentalis	Western fence lizard
Spermophilus beecheyi	California ground squirrel
Streptopelia decaocto	Euroasian collard dove
Sturnella neglecta	Western meadowlark
Sturnus vulgaris	European starling
Sylvilagus audubonii	Desert cottontail
Thomomys bottae	Botha's pocket gopher
Tyrannus verticalis	Western kingbird
Zenaida macroura	Mourning dove

Plants

Scientific Name	Common Name	Federal Listing	State Listing	CNPS	Other Status	Habitats	GenHab	Presence/Absence
Abronia villosa var. aurita	chaparral sand-verbena	None	None	1B.1	BLM_S-Sensitive | USFS_S-Sensitive	Chaparral | Coastal scrub | Desert dunes	Chaparral, coastal scrub, desert dunes.	No habitat for this species. **Not present.**
Allium munzii	Munz's onion	Endangered	Threatened	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Coastal scrub | Pinon & juniper woodlands | Valley & foothill grassland	Chaparral, coastal scrub, cismontane woodland, pinyon-juniper woodland, valley and foothill grassland.	Habitat is present. Flowers April-May. **Potential to be present.**
Ambrosia pumila	San Diego ambrosia	Endangered	None	1B.1		Chaparral | Coastal scrub | Valley & foothill grassland	Chaparral, coastal scrub, valley and foothill grassland.	Habitat is present. Flowers April-July. **Potential to be present.**
Arenaria paludicola	marsh sandwort	Endangered	Endangered	1B.1	SB_SBBG-Santa Barbara Botanic Garden	Freshwater marsh | Marsh & swamp | Wetland	Marshes and swamps.	No habitat for this species. **Not present.**
Atriplex coronata var. notatior	San Jacinto Valley crownscale	Endangered	None	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Alkali playa | Valley & foothill grassland | Vernal pool | Wetland	Playas, valley and foothill grassland, vernal pools.	No habitat for this species. **Not present.**
Atriplex parishii	Parish's brittlescale			1B.1		Shadescale scrub, alkali sink, freshwater wetlands, wetland riparian.		No habitat for this species. **Not present.**

Atriplex serenana	Davidson's saltscale	None	None	1B.2		Coastal sage scrub, wetland riparian		Habitat is present. **Potential to be present.**
Berberis nevinii	Nevin's barberry	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Chaparral | Cismontane woodland | Coastal scrub | Riparian scrub	Chaparral, cismontane woodland, coastal scrub, riparian scrub.	Habitat is present. Flowers March through May **Potential to be present.**
Brodiaea filifolia	thread-leaved brodiaea	Threatened	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools.	No habitat for this species. **Not present.**
California macrophylla	round-leaved filaree	None	None	1B.2	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Cismontane woodland | Valley & foothill grassland	Cismontane woodland, valley and foothill grassland.	Habitat for this species is not present. **Not present.**

Calochortus plummerae	Plummer's mariposa-lily	None	None	4.2	SB_RSABG -Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Coastal scrub | Lower montane coniferous forest | Valley & foothill grassland	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest.	No habitat for this species. **Not present.**
Calochortus weedii var. intermedius	intermediate mariposa-lily	None	None	1B.2	SB_RSABG -Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Valley & foothill grassland	Coastal scrub, chaparral, valley and foothill grassland.	Habitat is present. Flowers June through July **Potential to be present.**
Canyon Live Oak Ravine Forest	Canyon Live Oak Ravine Forest	None	None			Riparian forest		**Not present.**
Centromadia pungens ssp. laevis	smooth tarplant	None	None	1B.1	SB_RSABG -Rancho Santa Ana Botanic Garden	Alkali playa | Chenopod scrub | Meadow & seep | Riparian woodland | Valley & foothill grassland | Wetland	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland.	No habitat for this species. **Not present.**
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	Endangered	Endangered	1B.2	SB_RSABG -Rancho Santa Ana Botanic Garden	Coastal dunes | Marsh & swamp | Salt marsh | Wetland	Coastal salt marsh, coastal dunes.	No habitat for this species. **Not present.**

Chorizanthe parryi var. parryi	Parry's spineflower	None	None	1B.1	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal scrub | Valley & foothill grassland	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland.	Habitat is present. Flowers May through June **Potential to be present.**
Chorizanthe polygonoides var. longispina	long-spined spineflower	None	None	1B.2	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral | Coastal scrub | Meadow & seep | Ultramafic | Valley & foothill grassland | Vernal pool	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools.	No habitat for this species. **Not present.**
Clinopodium chandleri	San Miguel savory	None	None	1B.2	BLM_S-Sensitive | USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal scrub | Riparian woodland | Ultramafic | Valley & foothill grassland	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland.	Habitat is present. Flowers March through July. **Potential to be present.**
Comarostaphylis diversifolia ssp. diversifolia	summer holly	None	None	1B.2	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland	Chaparral, cismontane woodland.	No habitat for this species. **Not present.**

Dodecahema leptoceras	slender-horned spineflower	Endangered	Endangered	1B.1	SB_RSABG -Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Coastal scrub	Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub).	Habitat is present. Flowers May through June **Potential to be present.**
Dudleya multicaulis	many-stemmed dudleya	None	None	1B.2	BLM_S-Sensitive | SB_RSABG -Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Valley & foothill grassland	Chaparral, coastal scrub, valley and foothill grassland.	Habitat is present. Flowers May through June **Potential to be present.**
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Endangered	Endangered	1B.1	SB_RSABG -Rancho Santa Ana Botanic Garden	Chaparral | Coastal scrub	Coastal scrub, chaparral.	Habitat is present. Flowers May through September **Potential to be present.**
Harpagonella palmeri	Palmer's grapplinghook	None	None	4.2	SB_RSABG -Rancho Santa Ana Botanic Garden	Chaparral | Coastal scrub | Valley & foothill grassland	Chaparral, coastal scrub, valley and foothill grassland.	Habitat is present. Flowers March through May. **Potential to be present.**

Hesperocyparis forbesii	Tecate cypress	None	None	1B.1	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden | SB_USDA-US Dept of Agriculture | USFS_S-Sensitive	Chaparral | Closed-cone coniferous forest	Closed-cone coniferous forest, chaparral.	No habitat for this species. **Not present.**
Horkelia cuneata var. puberula	mesa horkelia	None	None	1B.1	USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal scrub	Chaparral, cismontane woodland, coastal scrub.	Habitat is present. Flowers March through July. **Potential to be present.**
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	None	None	1B.1	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden	Alkali playa | Marsh & swamp | Salt marsh | Vernal pool | Wetland	Coastal salt marshes, playas, vernal pools.	No habitat for this species. **Not present.**
Lepechinia cardiophylla	heart-leaved pitcher sage	None	None	1B.2	SB_RSABG-Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Cismontane woodland | Closed-cone coniferous forest	Closed-cone coniferous forest, chaparral, cismontane woodland.	No habitat for this species. **Not present.**

Lepidium virginicum var. robinsonii	Robinson's pepper-grass	None	None	4.3		Chaparral | Coastal scrub	Chaparral, coastal scrub.	Habitat is present. Flowers March through June. **Potential to be present.**
Monardella hypoleuca ssp. intermedia	intermediate monardella	None	None	1B.3		Chaparral | Cismontane woodland | Lower montane coniferous forest	Chaparral, cismontane woodland, lower montane coniferous forest (sometimes).	No habitat for this species. **Not present.**
Monardella macrantha ssp. hallii	Hall's monardella	None	None	1B.3	SB_RSABG -Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Broadleaved upland forest | Chaparral | Cismontane woodland | Lower montane coniferous forest | Valley & foothill grassland	Broadleaved upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley & foothill grassland.	No habitat for this species. **Not present.**
Myosurus minimus ssp. apus	little mousetail	None	None	3.1		Valley & foothill grassland | Vernal pool | Wetland	Vernal pools, valley and foothill grassland. This subspecies has taxonomic problems; distinguishing between this and M. sessilis is difficult. Hybrid?	No habitat for this species. **Not present.**

Navarretia fossalis	Spreading naverretia	Threatened		1B.1		Shadscale scrub, freshwater wetlands, wetland riparian.	Wetlands.	No habitat for this species. **Not present.**
Nolina cismontana	chaparral nolina	None	None	1B.2	SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Ultramafic	Chaparral.	No habitat for this species. **Not present.**
Orcuttia californica	California Orcutt grass	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Vernal pool | Wetland	Vernal pools.	No habitat for this species. **Not present.**
Phacelia keckii	Santiago Peak phacelia	None	None	1B.3	USFS_S-Sensitive	Chaparral | Closed-cone coniferous forest	Closed-cone coniferous forest, chaparral.	No habitat for this species. **Not present.**
Phacelia stellaris	Brand's star phacelia	None	None	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Coastal dunes | Coastal scrub	Coastal scrub, coastal dunes.	No habitat for this species. **Not present.**

Sibaropsis hammittii	Hammitt's clay cress	None	None	1B.2		Washes, steep hillsides, dry flats, calcareous rubble, rocky bluffs, exposed crevices		Habitat is present. Flowers March through April **Potential to be present.**
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	None	None			Riparian forest		**Not present.**
Southern Cottonwood Willow Riparian Forest	Southern Cottonwood Willow Riparian Forest	None	None			Riparian forest		**Not present.**
Southern Interior Cypress Forest	Southern Interior Cypress Forest	None	None			Closed-cone coniferous forest		**Not present.**
Southern Riparian Forest	Southern Riparian Forest	None	None			Riparian forest		**Not present.**
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	None	None			Riparian woodland		**Not present.**
Southern Willow Scrub	Southern Willow Scrub	None	None			Riparian scrub		**Not present.**
Symphyotrichum defoliatum	San Bernardino aster	None	None	1B.2	BLM_S-Sensitive | USFS_S-Sensitive	Cismontane woodland | Coastal scrub | Lower montane coniferous forest | Marsh & swamp | Meadow & seep | Valley & foothill grassland	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland.	No habitat for this species. **Not present.**

Texosporium sancti-jacobi	woven-spored lichen	None	None		3	Chaparral	Chaparral.	No habitat for this species. **Not present.**
Tortula californica	California screw moss	None	None	1B.2	BLM_S-Sensitive	Chenopod scrub | Valley & foothill grassland	Chenopod scrub, valley and foothill grassland.	No habitat for this species. **Not present.**
Trichocoronis wrightii var, wrightii	Wright's trichocoronis			2B.1		Freshwater wetlands, wetlan riparian, meadows, marshes, vernal pools.		No habitat for this species. **Not present.**
Valley Needlegrass Grassland	Valley Needlegrass Grassland	None	None			Valley & foothill grassland		No habitat for this species. **Not present.**

Animals

Scientific Name	Common Name	Taxon Group	Federal Listing	State Listing	Other Status	Habitats	GenHab	Presence/Absence
Accipiter cooperii	Cooper's hawk	Birds	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern	Cismontane woodland | Riparian forest | Riparian woodland | Upper montane coniferous forest	Woodland, chiefly of open, interrupted or marginal type.	No nesting habitat for this species. **Not present.**
Agelaius tricolor	tricolored blackbird	Birds	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	Freshwater marsh | Marsh & swamp | Swamp | Wetland	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California.	No habitat for this species present. **Not present.**
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	Birds	None	None	CDFW_WL-Watch List	Chaparral | Coastal scrub	Resident in Southern California coastal sage scrub and sparse mixed chaparral.	The project site does have habitat for this species. **Potential to be present.**

Anaxyrus californicus	arroyo toad	Amphibians	Endangered	None	CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered	Desert wash | Riparian scrub | Riparian woodland | South coast flowing waters | South coast standing waters	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc.	No habitat for this species present. **Not present.**
Antrozous pallidus	pallid bat	Mammals	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority	Chaparral | Coastal scrub | Desert wash | Great Basin grassland | Great Basin scrub | Mojavean desert scrub | Riparian woodland | Sonoran desert scrub | Upper montane coniferous forest | Valley & foothill grassland	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting.	No habitat for this species present. **Not present.**
Artemisiospiza belli belli	Bell's sage sparrow	Birds	None	None	CDFW_WL-Watch List | USFWS_BCC-Birds of Conservation Concern	Chaparral | Coastal scrub	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range.	No habitat for this species present. **Not present.**

Asio otus	long-eared owl	Birds	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Cismontane woodland | Great Basin scrub | Riparian forest | Riparian woodland | Upper montane coniferous forest	Riparian bottomlands grown to tall willows & cottonwoods; also, belts of live oak paralleling stream courses.	No habitat for this species present. **Not present.**
Aspidoscelis hyperythra	orangethroat whiptail	Reptiles	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal scrub	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats.	Species observed. **Present.**
Aspidoscelis tigris stejnegeri	coastal whiptail	Reptiles	None	None			Found in deserts & semiarid areas with sparse vegetation and open areas. Also found in woodland & riparian areas.	The project site does have habitat for this species. **Potential to be present.**
Athene cunicularia	burrowing owl	Birds	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Coastal prairie | Coastal scrub | Great Basin grassland | Great Basin scrub | Mojavean desert scrub | Sonoran desert scrub | Valley & foothill grassland	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation.	The project site does have habitat for this species. **Potential to be present.**

Bombus crotchii	Crotch bumble bee	Insects	None	None			Coastal California east to the Sierra-Cascade crest and south into Mexico.	No habitat for this species present. **Not present.**
Buteo swainsoni	Swainson's hawk	Birds	None	Threatened	BLM_S-Sensitive | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	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.	The project site does have habitat for this species. **Potential to be present.**
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	Birds	None	None	CDFW_SSC-Species of Special Concern | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Coastal scrub	Southern California coastal sage scrub.	The project site does have habitat for this species. **Potential to be present.**
Carolella busckana	Busck's gallmoth	Insects	None	None		Coastal dunes | Coastal scrub		No habitat for this species present. **Not present.**
Catostomus santaanae	Santa Ana sucker	Fish	Threatened	None	AFS_TH-Threatened | IUCN_VU-Vulnerable	Aquatic | South coast flowing waters	Endemic to Los Angeles Basin south coastal streams.	No habitat for this species present. **Not present.**

Ceratochrysis longimala	Desert cuckoo wasp	Insects	None	None				No habitat for this species present. **Not present.**
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	Mammals	None	None	CDFW_SSC-Species of Special Concern	Chaparral | Coastal scrub	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego Co.	The project site does have habitat for this species. **Potential to be present.**
Charadrius alexandrinus nivosus	western snowy plover	Birds	Threatened	None	CDFW_SSC-Species of Special Concern | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	Great Basin standing waters | Sand shore | Wetland	Sandy beaches, salt pond levees & shores of large alkali lakes.	No habitat for this species present. **Not present.**
Charina trivirgata	rosy boa	Reptiles	None	None	IUCN_LC-Least Concern | USFS_S-Sensitive	Chaparral | Mojavean desert scrub | Sonoran desert scrub	Desert & chaparral from the coast to the Mojave & Colorado deserts. prefers moderate to dense vegetation & rocky cover.	No habitat for this species present. **Not present.**

Cicindela senilis frosti	senile tiger beetle	Insects	None	None		Mud shore/flats | Wetland	Inhabits marine shoreline, from Central California coast south to salt marshes of San Diego. Also found at Lake Elsinore	No habitat for this species present. **Not present.**
Circus cyaneus	northern harrier	Birds	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Coastal scrub | Great Basin grassland | Marsh & swamp | Riparian scrub | Valley & foothill grassland | Wetland	Coastal salt & fresh-water marsh. Nest & forage in grasslands, from salt grass in desert sink to mountain cienagas.	No nesting habitat for this species. **Not present.**
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Birds	Threatened	Endangered	BLM_S-Sensitive | NABCI_RWL-Red Watch List | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Riparian forest	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	No habitat for this species present. **Not present.**
Coleonyx variegatus abbotti	San Diego banded gecko	Reptiles	None	None		Chaparral | Coastal scrub	Coastal & cismontane Southern California.	The project site does have habitat for this species. **Potential to be present.**

Crotalus ruber	red-diamond rattlesnake	Reptiles	None	None	CDFW_SSC -Species of Special Concern | USFS_S-Sensitive	Chaparral | Mojavean desert scrub | Sonoran desert scrub	Chaparrral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains.	The project site does have habitat for this species. **Potential to be present.**
Diadophis punctatus modestus	San Bernardino ringneck snake	Reptiles	None	None	USFS_S-Sensitive		Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams.	No habitat for this species present. **Not present.**
Dipodomys merriami parvus	San Bernardino kangaroo rat	Mammals	Endangered	None	CDFW_SSC -Species of Special Concern	Coastal scrub	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains.	The project site does have habitat for this species. **Potential to be present.**
Dipodomys stephensi	Stephens' kangaroo rat	Mammals	Endangered	Threatened	IUCN_EN-Endangered	Coastal scrub | Valley & foothill grassland	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover.	The project site does have habitat for this species. **Potential to be present.**

Elanus leucurus	white-tailed kite	Birds	None	None	BLM_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern	Cismontane woodland | Marsh & swamp | Riparian woodland | Valley & foothill grassland | Wetland	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland.	The project site does have habitat for this species. **Potential to be present.**
Empidonax traillii extimus	southwestern willow flycatcher	Birds	Endangered	Endangered	NABCI_RWL-Red Watch List	Riparian woodland	Riparian woodlands in Southern California.	No habitat for this species present. **Not present.**
Emys marmorata	western pond turtle	Reptiles	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive	Aquatic | Artificial flowing waters | Klamath/North coast flowing waters | Klamath/North coast standing waters | Marsh & swamp | Sacramento/San Joaquin flowing waters | Sacramento/San Joaquin standing waters | South coast flowing waters | South coast standing waters | Wetland	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	No habitat for this species present. **Not present.**
Eremophila alpestris actia	California horned lark	Birds	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern	Marine intertidal & splash zone communities | Meadow & seep	Coastal regions, chiefly from Sonoma Co. to San Diego Co. Also main part of San Joaquin Valley & east to foothills.	No habitat for this species present. **Not present.**

Eumops perotis californicus	western mastiff bat	Mammals	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | WBWG_H-High Priority	Chaparral | Cismontane woodland | Coastal scrub | Valley & foothill grassland	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc	No habitat for this species present. **Not present.**
Euphydryas editha quino	quino checkerspot butterfly	Insects	Endangered	None	XERCES_CI-Critically Imperiled	Chaparral | Coastal scrub	Sunny openings within chaparral & coastal sage shrublands in parts of Riverside & San Diego counties.	The project site does have habitat for this species. **Potential to be present.**
Gila orcuttii	arroyo chub	Fish	None	None	AFS_VU-Vulnerable | CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	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.	No habitat for this species present. **Not present.**

Haliaeetus leucocephalus	bald eagle	Birds	Delisted	Endangered	BLM_S-Sensitive | CDF_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Lower montane coniferous forest | Oldgrowth	Ocean shore, lake margins, & rivers for both nesting & wintering. Most nests within 1 mi of water.	No habitat for this species present. **Not present.**
Icteria virens	yellow-breasted chat	Birds	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Riparian forest | Riparian scrub | Riparian woodland	Summer resident	No habitat for this species present. **Not present.**
Lampropeltis zonata (pulchra)	California mountain kingsnake (San Diego population)	Reptiles	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Chaparral | Cismontane woodland | Meadow & seep | Riparian forest | Riparian woodland | Upper montane coniferous forest | Wetland	Restricted to the San Gabriel and San Jacinto mtns of Southern California.	No habitat for this species present. **Not present.**

Lanius ludovicianus	loggerhead shrike	Birds	None	None	CDFW_SSC -Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Broadleaved upland forest | Desert wash | Joshua tree woodland | Mojavean desert scrub | Pinon & juniper woodlands | Riparian woodland | Sonoran desert scrub	Broken woodlands, savannah, pinyon-juniper, Joshua tree, & riparian woodlands, desert oases, scrub & washes.	No habitat for this species present. **Not present.**
Lasiurus xanthinus	western yellow bat	Mammals	None	None	CDFW_SSC -Species of Special Concern | IUCN_LC-Least Concern | WBWG_H-High Priority	Desert wash	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats.	No habitat for this species present. **Not present.**
Lepus californicus bennettii	San Diego black-tailed jackrabbit	Mammals	None	None	CDFW_SSC -Species of Special Concern	Coastal scrub	Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges.	Species observed. **Present.**
Myotis yumanensis	Yuma myotis	Mammals	None	None	BLM_S-Sensitive | IUCN_LC-Least Concern | WBWG_LM-Low-Medium Priority	Lower montane coniferous forest | Riparian forest | Riparian woodland | Upper montane coniferous forest	Optimal habitats are open forests and woodlands with sources of water over which to feed.	No habitat for this species present. **Not present.**

Neotoma lepida intermedia	San Diego desert woodrat	Mammals	None	None	CDFW_SSC-Species of Special Concern	Coastal scrub	Coastal scrub of Southern California from San Diego County to San Luis Obispo County.	The project site does have habitat for this species. **Potential to be present.**
Nyctinomops femorosaccus	pocketed free-tailed bat	Mammals	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | WBWG_M-Medium Priority	Joshua tree woodland | 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.	No habitat for this species present. **Not present.**
Onychomys torridus ramona	southern grasshopper mouse	Mammals	None	None	CDFW_SSC-Species of Special Concern	Chenopod scrub	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	No habitat for this species present. **Not present.**
Perognathus longimembris brevinasus	Los Angeles pocket mouse	Mammals	None	None	CDFW_SSC-Species of Special Concern	Coastal scrub	Lower elevation grasslands & coastal sage communities in and around the Los Angeles Basin.	The project site does have habitat for this species. **Potential to be present.**

Phrynosoma blainvillii	coast horned lizard	Reptiles	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Chaparral | Cismontane woodland | Coastal bluff scrub | Coastal scrub | Desert wash | Pinon & juniper woodlands | Riparian scrub | Riparian woodland | Valley & foothill grassland	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	The project site does have habitat for this species. **Potential to be present.**
Plegadis chihi	white-faced ibis	Birds	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern	Marsh & swamp | Wetland	Shallow fresh-water marsh.	No habitat for this species present. **Not present.**
Polioptila californica californica	coastal California gnatcatcher	Birds	Threatened	None	CDFW_SSC-Species of Special Concern | NABCI_YWL-Yellow Watch List	Coastal bluff scrub | Coastal scrub	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California.	The project site does have habitat for this species. **Potential to be present.**
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	Insects	Endangered	None		Interior dunes	Found only in areas of the Delhi Sands formation in southwestern San Bernardino & northwestern Riverside counties.	No habitat for this species present. **Not present.**

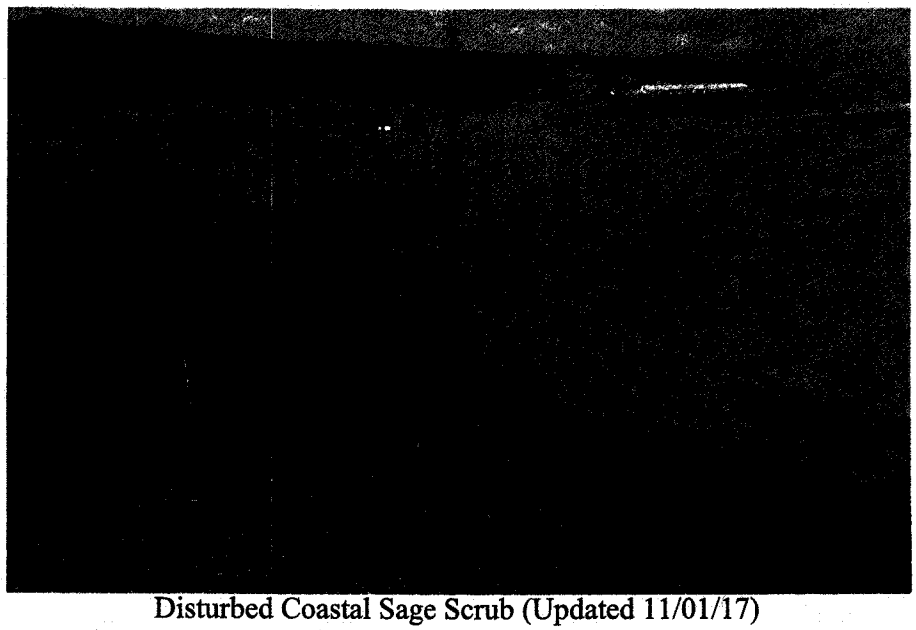
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	Fish	None	None	AFS_TH-Threatened | CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Aquatic | South coast flowing waters	Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system.	No habitat for this species present. **Not present.**
Salvadora hexalepis virgultea	coast patch-nosed snake	Reptiles	None	None	CDFW_SSC-Species of Special Concern	Coastal scrub	Brushy or shrubby vegetation in coastal Southern California.	The project site does have habitat for this species. **Potential to be present.**
Setophaga petechia	yellow warbler	Birds	None	None	CDFW_SSC-Species of Special Concern | USFWS_BCC-Birds of Conservation Concern	Riparian forest | Riparian scrub | Riparian woodland	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada.	No habitat for this species present. **Not present.**
Southern California Arroyo Chub/Santa Ana Sucker Stream	Southern California Arroyo Chub/Santa Ana Sucker Stream	Inland Waters	None	None				**Not present.**

Spea hammondii	western spadefoot	Amphibians	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	Cismontane woodland | Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.	No habitat for this species present. **Not present.**
Spinus lawrencei	Lawrence's goldfinch	Birds	None	None	IUCN_LC-Least Concern | NABCI_YWL-Yellow Watch List | USFWS_BCC-Birds of Conservation Concern	Broadleaved upland forest | Chaparral | Pinon & juniper woodlands | Riparian woodland	Nests in open oak or other arid woodland & chaparral, near water. Nearby herbaceous habitats used for feeding.	No habitat for this species present. **Not present.**
Streptocephalus woottoni	Riverside fairy shrimp	Crustaceans	Endangered	None	IUCN_EN-Endangered	Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Endemic to W RIV, ORA & SDG counties in areas of tectonic swales/earth slump basins in grassland & coastal sage scrub.	No habitat for this species present. **Not present.**
Taricha torosa	Coast Range newt	Amphibians	None	None	CDFW_SSC-Species of Special Concern		Coastal drainages from Mendocino County to San Diego County.	No habitat for this species present. **Not present.**

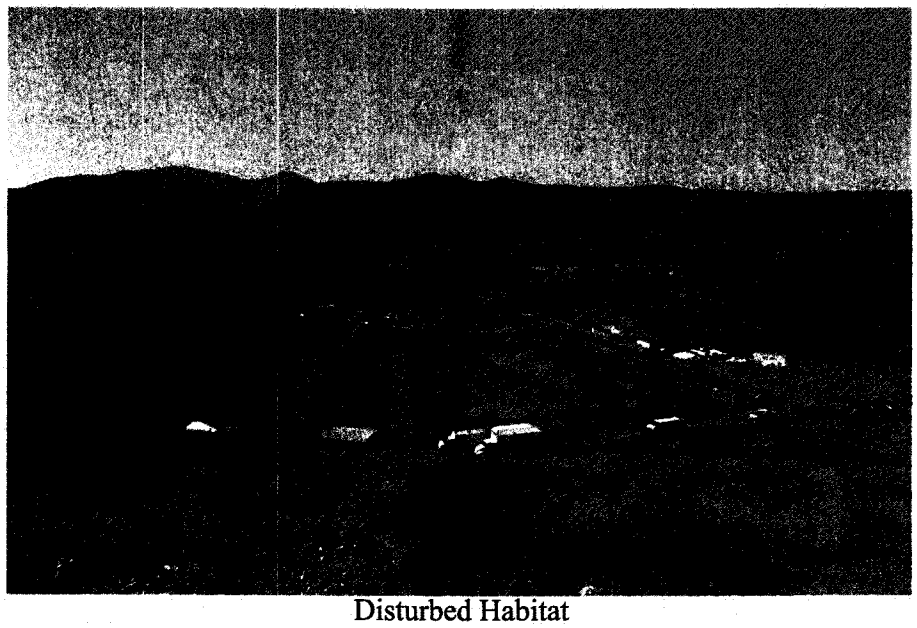
						plain | Redwood | Riparian forest | Riparian scrub | Riparian woodland | Salt marsh | Sonoran desert scrub |		
Taxidea taxus	American badger	Mammals	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Sonoran thorn woodland | Ultramafic | Upper montane coniferous forest | Upper Sonoran scrub | Valley & foothill grassland	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	The project site does have habitat for this species. **Potential to be present.**
Thamnophis hammondii	two-striped garter snake	Reptiles	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Marsh & swamp | Riparian scrub | Riparian woodland | Wetland	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation.	No habitat for this species present. **Not present.**
Vireo bellii pusillus	least Bell's vireo	Birds	Endangered	Endangered	IUCN_NT-Near Threatened | NABCI_YWL-Yellow Watch List	Riparian forest | Riparian scrub | Riparian woodland	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms	No habitat for this species present. **Not present.**

Corona Clay
General Biological Assessment
Riverside County, California

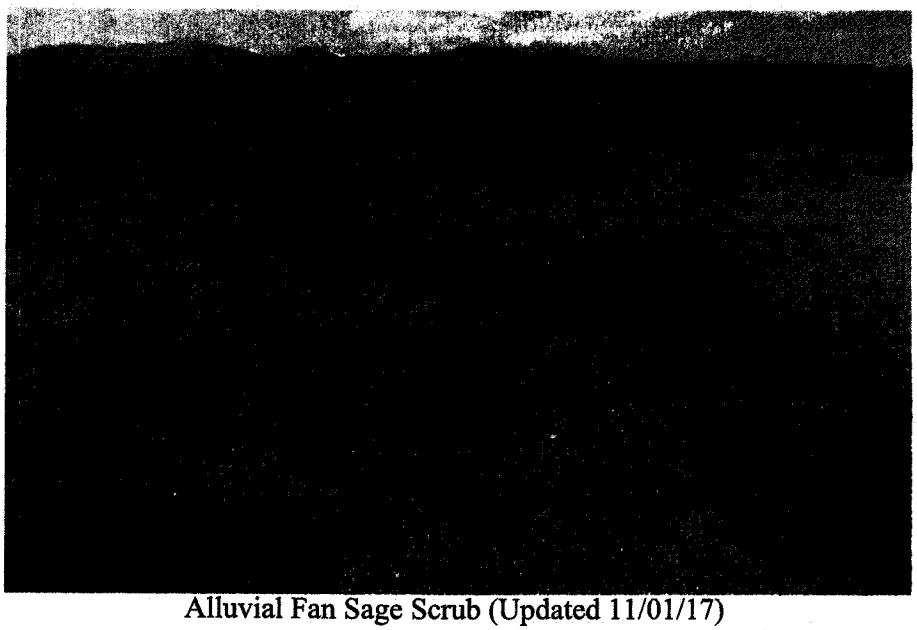
Hernandez Environmental Services



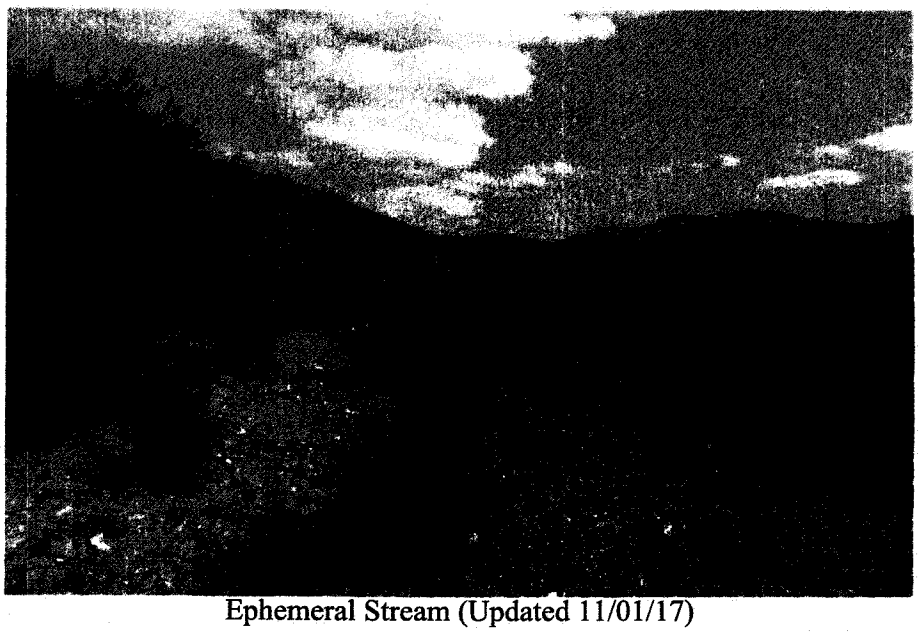
Disturbed Coastal Sage Scrub (Updated 11/01/17)



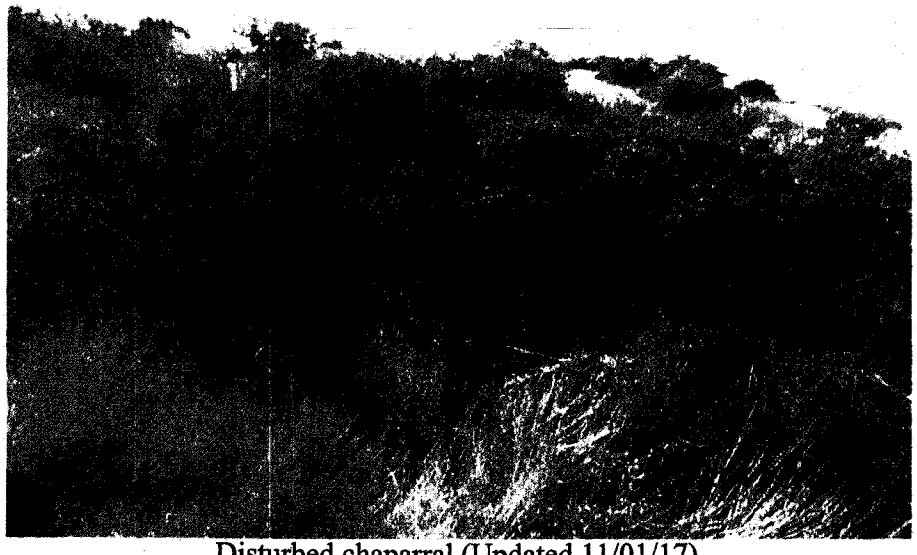
Disturbed Habitat



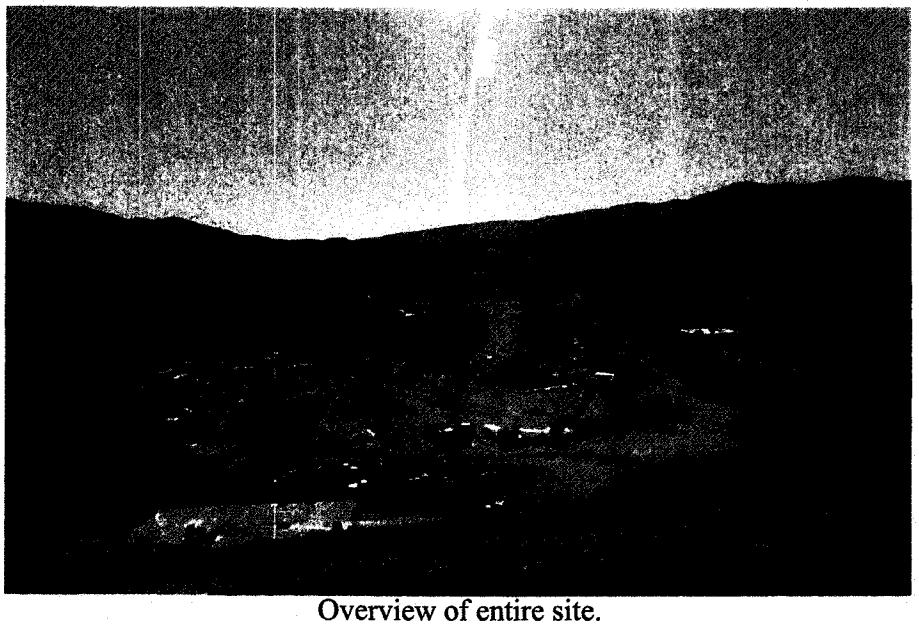
Alluvial Fan Sage Scrub (Updated 11/01/17)



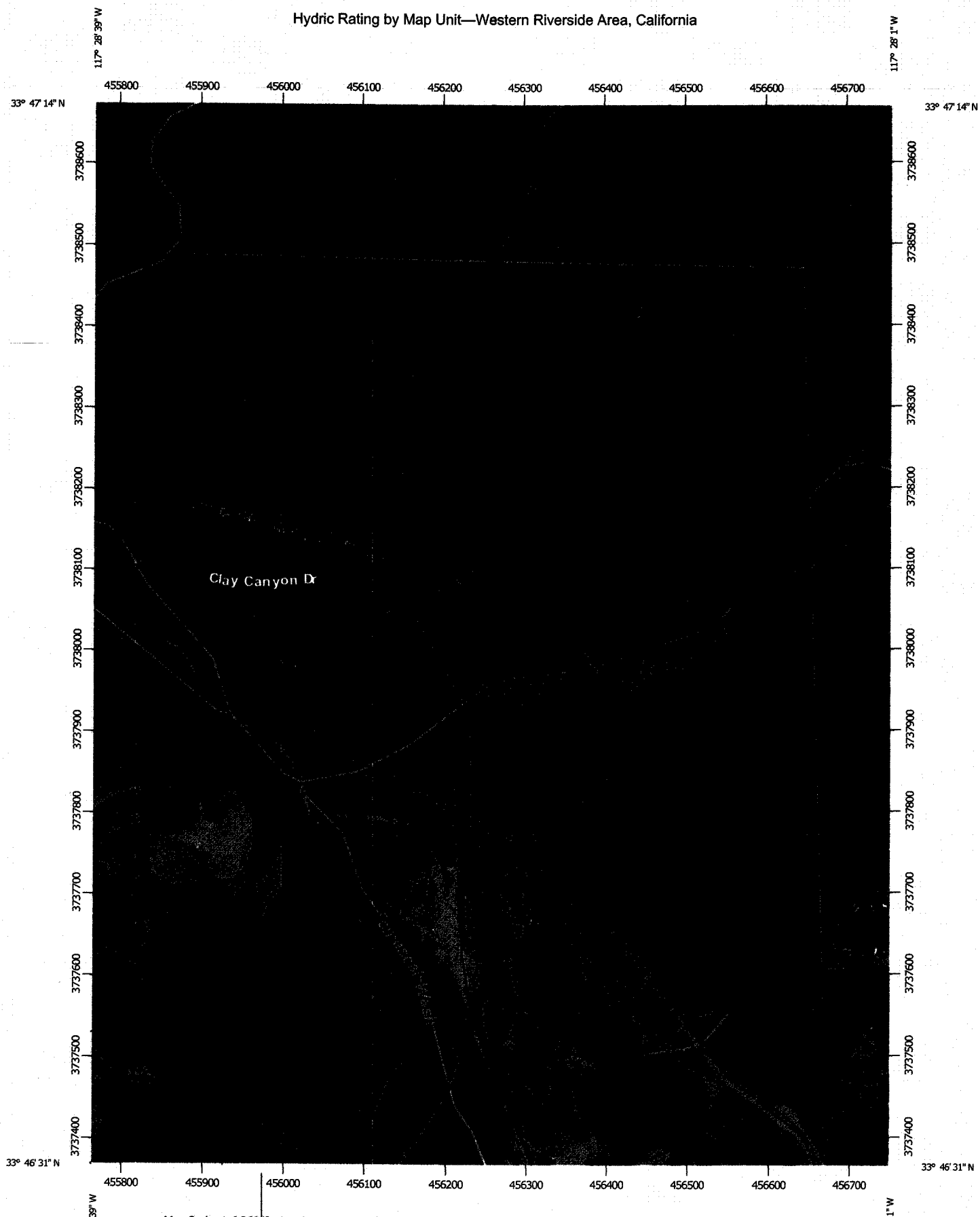
Ephemeral Stream (Updated 11/01/17)



Disturbed chaparral (Updated 11/01/17)



Overview of entire site.


117° 28' 39" W
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33° 46' 31" N
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Clay Canyon Dr
Map Scale: 1:6,360 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 50 100 200 300
Feet
0 300 600 1200 1800
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 8, Sep 22, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 25, 2010—Jun 3, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Hydric Rating by Map Unit— Summary by Map Unit — Western Riverside Area, California (CA679)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
ClC	Cortina gravelly loamy sand, 2 to 8 percent slopes	10	1.4	1.1%
CmC	Cortina cobbly loamy sand, 2 to 8 percent slopes	10	16.0	12.3%
CnC	Cortina gravelly coarse sandy loam, 2 to 8 percent slop es	0	29.6	22.7%
LpF2	Lodo rocky loam, 25 to 50 percent slopes, eroded	0	66.0	50.6%
RaC3	Ramona sandy loam, 5 to 8 percent slopes, severely erod ed	0	5.1	3.9%
RuF	Rough broken land	0	12.4	9.5%
Totals for Area of Interest			**130.4**	**100.0%**

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

PHASE 1 CULTURAL RESOURCES ASSESSMENT

DAWSON CANYON RECLAMATION PLAN-CORONA CLAY

CUP No. 03265
Temescal Valley Area
Riverside County, California

For Submittal to:

Riverside County Planning Department
County Administrative Center
4080 Lemon Street
Riverside, CA 92502

Prepared for:

Lilburn Corporation
1905 Business Center Drive
San Bernardino, CA 92408

Prepared by:

CRM TECH
1016 East Cooley Drive, Suite A/B
Colton, CA 92324

Bai "Tom" Tang, Principal Investigator
Michael Hogan, Principal Investigator

December 26, 2017
(Fieldwork Completed on November 17 and 20, 2017)
CRM TECH Contract No. 3283A

Title: Phase I Cultural Resources Assessment: Dawson Canyon Reclamation Plan-Corona Clay, CUP No. 03265, Temescal Valley Area, Riverside County, California

Author(s): Bai "Tom" Tang, Principal Investigator
Deirdre Encarnación, Archaeologist/Report Writer
Terri Jacquemain, Historian
Daniel Ballester, Archaeologist/Field Director
Nina Gallardo, Archaeologist/Native American Liaison

Consulting Firm: CRM TECH
1016 East Cooley Drive, Suite A/B
Colton, CA 92324
(909) 824-6400

Date: December 26, 2017

For Submittal to: Riverside County Planning Department
County Administrative Center
4080 Lemon Street
Riverside, CA 92501
(951) 951-3200

Prepared for: Martin Derus
Lilburn Corporation
1905 Business Center Drive
San Bernardino, CA 92408
(909) 890-1818

USGS Quadrangle: Lake Mathews, Calif., 7.5' quadrangle; Section 35, T4S R6W, San Bernardino Baseline and Meridian

Project Size: Approximately 122.71 acres

Keywords: Arcilla area, Temescal Valley, western Riverside County; Assessor's Parcel Nos. 283-190-019, -021, -022, -040 and -041; Site 33-028055: remains of historic-period chute; no "historical resources" or "tribal cultural resources" affected

MANAGEMENT SUMMARY

Between October and December 2017, at the request of the Lilburn Corporation, CRM TECH performed a cultural resources study on approximately 122.71 acres of rural land near the community of Arcilla in the unincorporated Temescal Valley area of Riverside County, California. The subject property of the study consists of Assessor's Parcel Nos. 283-190-019, -021, -022, -040 and -041, located near the intersection of Park Canyon Road and Dawson Canyon Road, in the northeast quarter of Section 35, T4S R6W, San Bernardino Baseline and Meridian.

The study is a part of the environmental review process for the entitlement of existing on-site uses, including a clay processing facility, seven motorcycle test tracks, a remote-controlled model airplane field, storage yards, and a residence. The County of Riverside, as the lead agency, required the study in compliance with the California Environmental Quality Act (CEQA). The purpose of the study is to provide the County with the necessary information and analysis to determine whether the entitlement would cause substantial adverse changes to any "historical resources" or "tribal cultural resources," as defined by CEQA, that may exist in or around the project area.

In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, contacted Native American representatives, and carried out an intensive-level field survey. As a result of these research procedures, Site 33-028055, representing the remains of a wood-and-metal chute that was once used in association with the clay mining operations nearby, was identified and recorded within the project area, but was subsequently determined not to meet CEQA's definition of a "historical resource." No other potential "historical resources" or "tribal cultural resources" were encountered within or adjacent to the project area.

Based on these findings, CRM TECH recommends to the County of Riverside a finding of *No Impact* on cultural resources, pending the completion of Native American consultation process by the County pursuant to Assembly Bill 52 to ensure the proper identification of potential "tribal cultural resources." In light of the results of the study, CRM TECH recommends no additional cultural resources investigation unless project plans undergo such changes as to include areas not covered by this study. If buried cultural materials are encountered inadvertently during any earth-moving operations associated with the project, all work within 50 feet of the discovery should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

No artifacts were collected during this Phase I survey. All field notes and photographs are on file at the CRM TECH office. Copies of the report are on file at the Eastern Information Center, the County of Riverside Planning Department, and the CRM TECH office.

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LIST OF FIGURES

INTRODUCTION

Between October and December 2017, at the request of the Lilburn Corporation, CRM TECH performed a cultural resources study on approximately 122.71 acres of rural land near the community of Arcilla in the unincorporated Temescal Valley area of Riverside County, California (Fig. 1). The subject property of the study consists of Assessor's Parcel Nos. 283-190-019, -021, -022, -040 and -041, located near the intersection of Park Canyon Road and Dawson Canyon Road, in the northeast quarter of Section 35, T4S R6W, San Bernardino Baseline and Meridian (Figs. 2, 3).

The study is a part of the environmental review process for the entitlement of existing on-site uses, including industrial, recreational, and storage facilities as well as a residence. The County of Riverside, as the lead agency, required the study in compliance with the California Environmental Quality Act (CEQA; PRC §21000, et seq.). The purpose of the study is to provide the County with the necessary information and analysis to determine whether the entitlement would cause substantial adverse changes to any "historical resources" or "tribal cultural resources," as defined by CEQA, that may exist in or around the project area.

In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, contacted Native American representatives, and carried out a systematic field survey of the entire project area. The following report is a complete account of the methods, results, and final conclusion of the study. Personnel who participated in the study are named in the appropriate sections below, and their qualifications are provided in Appendix 1.

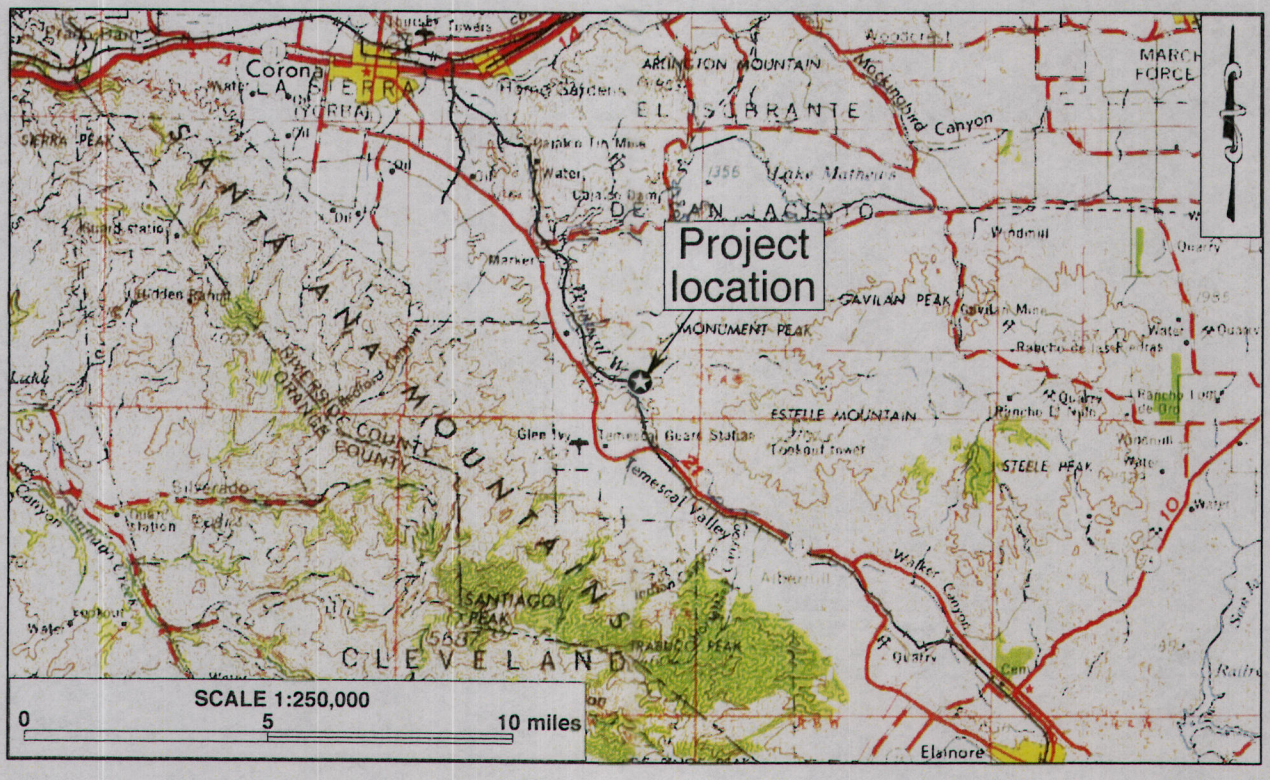

Figure 1. Project vicinity. (Based on USGS Santa Ana, Calif., 1:250,000 quadrangle [USGS 1979])

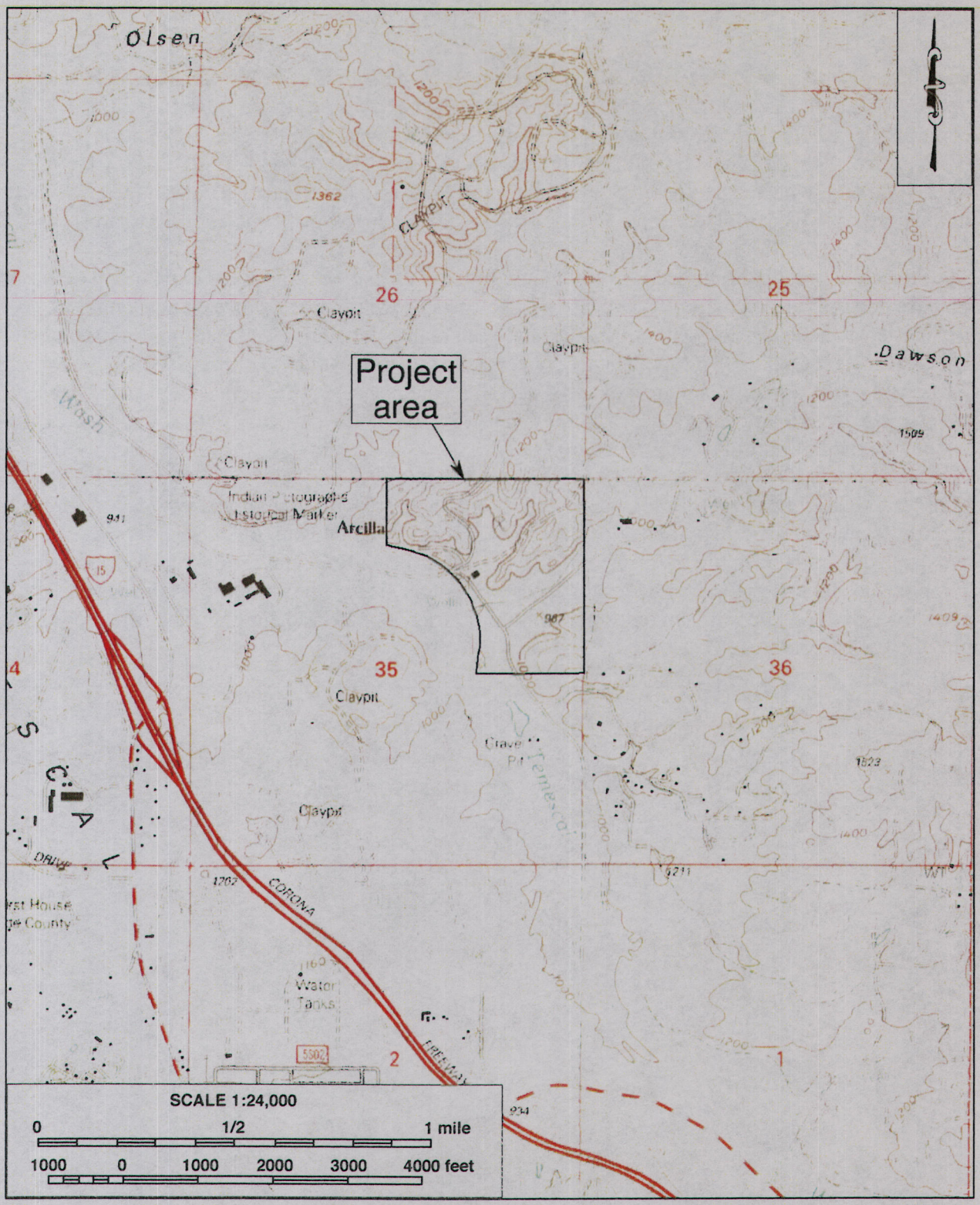

Figure 2. Project location. (Based on USGS Lake Mathews, Calif., 1:24,000 quadrangle [USGS 1997])

Figure 3. Aerial view of the project area.

SETTING

CURRENT NATURAL SETTING

The project area is situated in the rolling hills on the northeastern side of the Temescal Valley, approximately two miles across the narrow valley from the base of the Santa Ana Mountains. The natural environment of the area is characterized by the Mediterranean climate typical of inland southern California lowlands, featuring hot and dry summers with mild and wet winters. The average high temperature in summer reaches 92° Fahrenheit, while the average low temperature in winter dips to 42°. The average annual precipitation in the area is approximately 12 inches, most of which occurs between November and March.

The project area consists of an irregularly shaped tract of partially developed land containing a clay-processing facility, seven motorcycle test tracks, a remote-controlled model airplane field, storage areas, and a residence, all concentrated on the hilltops that have evidently been leveled in the past (Figs. 3, 4). Elevations on the property range approximately from 960 feet to 1,165 feet above mean sea level. The rugged slopes of the hillside at lower elevations are currently undeveloped (Figs. 3, 4). Surface soils in the vicinity typically are composed of greyish-brown, fine- to coarse-grained sands with some exposed bedrock outcrops.

The native vegetation in the area belongs to the Coastal Sage Scrub plant community and includes California sagebrush, buckwheat, manzanita, gooseberry, California aster, golden bush, and coyote brush. The existing vegetation on the property features a mix of native and invasive species, such as buckwheat, broom baccharis, sycamore and oak trees, tumbleweed, wild mustard, foxtail, and other small grasses and shrubs. Introduced landscaping plants were also observed around buildings and along roads. The ground surface on the hilltops and along the various roads has been greatly disturbed by past construction activities, but retains much more of its natural character on the lower slopes (Fig. 4).

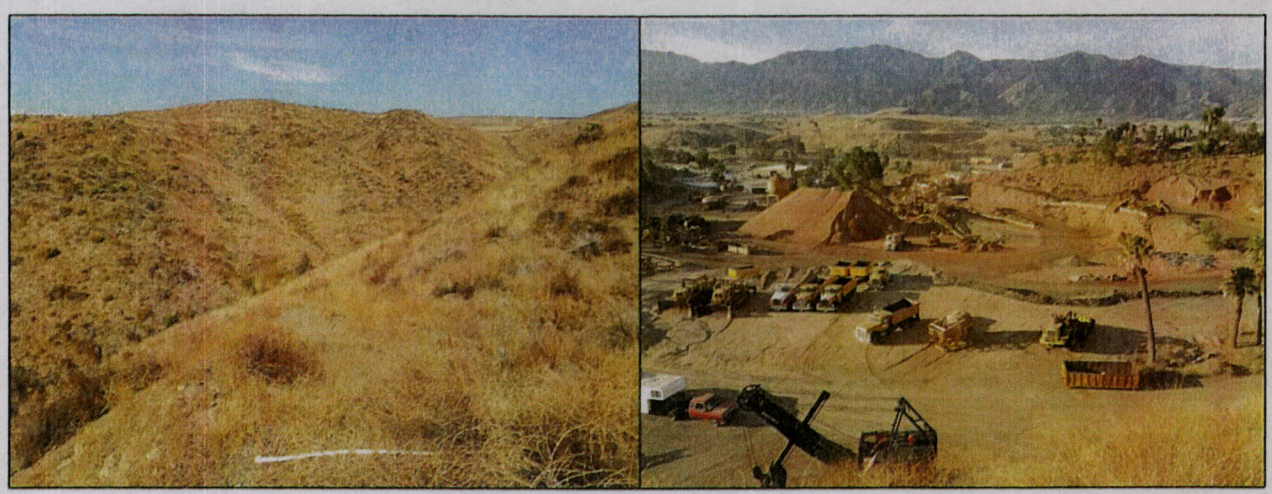

Figure 4. Typical landscapes in the project area. *Left*: view to the north across the western portion; *right*: clay-processing facility, view to the south. (Photographs taken on November 17 and 20, 2017)

CULTURAL SETTING

Prehistoric Context

The earliest evidence of human occupation in Riverside County was discovered below the surface of an alluvial fan in the northern portion of the Lakeview Mountains, overlooking the San Jacinto Valley, with radiocarbon dates clustering around 9,500 B.P. (Horne and McDougall 2008). Another site found near the shoreline of Lake Elsinore, close to the confluence of Temescal Wash and the San Jacinto River, yielded radiocarbon dates between 8,000 and 9,000 B.P. (Grenda 1997). Additional sites with isolated Archaic dart points, bifaces, and other associated lithic artifacts from the same age range have been found in the nearby Cajon Pass area of San Bernardino County, typically atop knolls with good viewsheds (Basgall and True 1985; Goodman and McDonald 2001; Goodman 2002; Milburn et al. 2008).

The cultural prehistory of southern California has been summarized into numerous chronologies, including those developed by Chartkoff and Chartkoff (1984), Warren (1984), and others. Specifically, the prehistory of Riverside County has been addressed by O'Connell et al. (1974), McDonald et al. (1987), Keller and McCarthy (1989), Grenda (1993), Goldberg (2001), and Horne and McDougall (2008). Although the beginning and ending dates of different cultural horizons vary regionally, the general framework of the prehistory of western Riverside County can be broken into three primary periods:

- Paleoindian Period (ca. 18,000-9,000 B.P.): Native peoples of this period created fluted spearhead bases designed to be hafted to wooden shafts. The distinctive method of thinning bifaces and spearhead preforms by removing long, linear flakes leaves diagnostic Paleoindian markers at tool-making sites. Other artifacts associated with the Paleoindian toolkit include choppers, cutting tools, retouched flakes, and perforators. Sites from this period are very sparse across the landscape and most are deeply buried.
- Archaic Period (ca. 9,000-1,500 B.P.): Archaic sites are characterized by abundant lithic scatters of considerable size with many biface thinning flakes, bifacial preforms broken during manufacture, and well-made groundstone bowls and basin metates. As a consequence of making dart points, many biface thinning waste flakes were generated at individual production stations, which is a diagnostic feature of Archaic sites.
- Late Prehistoric Period (ca. 1,500 B.P.-contact): Sites from this period typically contain small lithic scatters from the manufacture of small arrow points, expedient groundstone tools such as tabular metates and unshaped manos, wooden mortars with stone pestles, acorn or mesquite bean granaries, ceramic vessels, shell beads suggestive of extensive trading networks, and steatite implements such as pipes and arrow shaft straighteners.

Ethnohistoric Context

The Temescal Valley area lies within the traditional territory of the Takic-speaking Luiseño people, which extended from present-day Riverside to Escondido and Oceanside. The name of the group is derived from Mission San Luis Rey, which held jurisdiction over most of the traditional Luiseño territory during the late 18th and early 19th centuries. Luiseño history, as recorded in traditional songs, tells the creation story from the birth of the first people, the *kaamalam*, to the sickness, death,

and cremation of *Wiyoot*, the most powerful and wise one, at Lake Elsinore. In modern anthropological literature, the leading sources on Luiseño culture and history are Kroeber (1925), Strong (1929), and Bean and Shipek (1978).

Anthropologists have divided the Luiseño into several autonomous lineages or kin groups, which represented the basic political unit among most southern California Indians. According to Bean and Shipek (1978:551), each Luiseño lineage possessed a permanent base camp, or village, on the valley floor and another in the mountain regions for acorn collection. Luiseño villages were made up of family members and relatives, where chiefs of the village inherited their position and each village owned its own land. Villages were usually located in sheltered canyons or near year-round sources of freshwater, always near subsistence resources.

Nearly all resources of the environment were exploited by the Luiseño in a highly developed seasonal mobility system. The Luiseño people were primarily hunters and gatherers. They collected seeds, roots, wild berries, acorns, wild grapes, strawberries, wild onions, and prickly pear cacti, and hunted deer, elks, antelopes, rabbits, wood rats, and a variety of insects. Bows and arrows, atlatls or spear throwers, rabbit sticks, traps, nets, clubs, and slings were the main hunting tools. Each lineage had exclusive hunting and gathering rights in their procurement ranges. These boundaries were respected and only crossed with permission (Bean and Shipek 1978:551).

It is estimated that when Spanish colonization of Alta California began in 1769, the Luiseño had approximately 50 active villages with an average population of 200 each, although other estimates place the total Luiseño population at 4,000-5,000 (Bean and Shipek 1978:557). Some of the villages were forcefully moved to the Spanish missions, while others were largely left intact (*ibid.*:558). Ultimately, Luiseño population declined rapidly after European contact because of diseases such as small pox as well as harsh living conditions at the missions and, later, on the Mexican ranchos, where the Native people often worked as seasonal ranch hands.

After the American annexation of Alta California, the large number of non-Native settlers further eroded the foundation of the traditional Luiseño society. During the latter half of the 19th century, almost all of the remaining Luiseño villages were displaced, their occupants eventually removed to the various reservations. Today, the nearest Native American groups of Luiseño heritage live on the Pechanga and Soboba Indian Reservations.

Historic Context

The Temescal Valley was reportedly named after a *Temascal*, or Native American sweathouse, that was located in the vicinity (Gunther 1984:528-529). For this area, the historic period began in the 1810s, when Spanish explorers "discovered" an ancient Indian trail that traversed the entire length of the valley (Hoover et al. 1966:290; Jennings et al. 1993:92). During much of the Spanish and Mexican Periods in California history, the Temescal Valley was under the nominal control of Mission San Luis Rey, although the claim was contested by the neighboring Mission San Juan Capistrano.

In 1818, the Temescal Valley became the site of the first non-Native settlement in what is now Riverside County when Leandro José Serrano, a Spanish soldier from San Diego, established his Rancho Temescal under a temporary occupancy and grazing permit issued by Mission San Luis Rey

(Hoover et al. 1966:292; Jennings et al. 1993:91). By the mid-1820s, Serrano had built an adobe house, planted a garden with fruit trees, and raised considerable cattle and horse stock (Gunther 1984:532; Jennings et al. 1993:91). After the American annexation of Alta California in 1848, however, the Serrano family's claim to Rancho Temescal was rejected by the U.S. government in 1866 since they had never received a clear title to the land during the Spanish and Mexican Periods (Gunther 1984:532-534). The Temescal Valley was subsequently declared open for entry by settlers.

In the early years after the American annexation, the Southern Emigrant Road or the Los Angeles-Fort Yuma Road, as the trail in the Temescal Valley came to be known, served as one of the main gateways by which many of the legendary wagon trains from the eastern United States entered California. Between 1858 and 1861, it gained further prestige when John Butterfield's Overland Mail Company selected it for the famed stagecoach line between San Francisco and St. Louis, Missouri (Gunther 1984:79-80). Although it has left little physical remains to be discovered today, the heritage of the Southern Emigrant Road has been carried to the present time by a succession of modern transportation arteries, including the Atchison, Topeka and Santa Fe Railway (now dismantled), the old Highway 71 (now Temescal Canyon Road), and finally today's Interstate Highway 15.

By the 1870s-1890s, a number of settlers, including some of the early pioneers in the area, had established their homesteads in the vicinity of Serrano's adobe house, while others were scattered throughout the valley (GLO 1874a-1892). For much of the period since then, agriculture remained the primary means of livelihood in the Temescal Valley, especially horticulture and apiculture. In the meantime, several mining fevers swept through the area as well, most notably the rush on tin claims around Cajalco and the coal and clay mining industry centered at Alberhill. The Cajalco tin mining lasted from the 1850s to the 1890s, but left little impact on the economic and settlement pattern in the Temescal Valley at large (Gunther 1984:89-90). In contrast, the Alberhill coal and clay enterprise, started in the 1880s, eventually developed into an important industrial center (Hudson 1978:151-152; Gunther 1984:535-537).

Located approximately five miles northwest of Alberhill, the project vicinity was also well-known for clay mining, as reflected in the place name Arcilla, the Spanish word for clay (Gunther 1984:28). The name was applied to this location in 1927, when the Santa Fe Railway established a siding here on its newly completed Temescal Valley line (*ibid.*). During the most recent decades, as elsewhere in the Inland Empire region, urban expansion spurred by residential and commercial development has greatly transformed the socioeconomic landscape at both ends of the Temescal Valley, in the Corona and Lake Elsinore-Murrieta areas.

RESEARCH METHODS

RECORDS SEARCH

On October 31, 2017, CRM TECH archaeologist Nina Gallardo completed the historical/ archaeological resources records search at the Eastern Information Center (EIC). Located on the campus of the University of California, Riverside, the EIC is the State of California's official

cultural resource records repository for the County of Riverside. During the records search, Gallardo examined maps and records on file for previously identified cultural resources in or near the project area and existing cultural resources reports pertaining to the vicinity. Previously identified cultural resources include properties designated as California Historical Landmarks, Points of Historical Interest, or Riverside County Landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Inventory.

HISTORICAL RESEARCH

Historical research for this study was completed in two phases. The preliminary background research was conducted by CRM TECH principal investigator Bai "Tom" Tang on the basis of published literature in local and regional history, U.S. General Land Office survey plat maps dated 1874-1892, U.S. Geological Survey (USGS) topographic maps dated 1901-1997, and aerial photographs taken in 1948-2016. The historic maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, located in Moreno Valley. The aerial photographs are available at the NETR Online website and through the Google Earth software.

After the identification and recordation of historic-period features in the project area during the field survey, CRM TECH historian Terri Jacquemain pursued more specific and in-depth research on the history of the property. Sources consulted during this phase of the research included primarily property tax assessment records of the County of Riverside, oral historical accounts provided by Craig Deleo, long-time owner and operator of the Corona Clay Company, and various online genealogical databases, along with the local historical literature.

NATIVE AMERICAN PARTICIPATION

On October 26, 2017, CRM TECH submitted a written request to the State of California Native American Heritage Commission for a records search in the commission's sacred lands file. In the meantime, CRM TECH notified the Tribal Historic Preservation Office of the Pechanga Band of Luiseño Indians of the upcoming archaeological fieldwork on October 26 and November 14, and invited tribal participation. Following the commission's recommendations and previously established consultation protocol, on November 2 CRM TECH further contacted a total of 54 tribal representatives in the region in writing for additional information on potential Native American cultural resources in the project vicinity. The correspondence between CRM TECH and the Native American representatives is attached to this report as Appendix 2.

FIELD SURVEY

On November 17 and 20, 2017, CRM TECH field director Daniel Ballester and project archaeologists Nina Gallardo and Ben Kerridge carried out the intensive-level field survey of the project area. The survey was completed on foot by walking a series of parallel transects spaced 15 meters (approximately 50 feet) apart. On the relatively level hilltops, the transects were oriented in the north-south and northeast-southwest directions, in conformation with existing built-environment features. On the steep hillside, the transects were laid out along the natural contour lines.

In this way, the ground surface in the project area was systematically and carefully examined for any evidence of human activities dating to the prehistoric or historic period (i.e., 50 years ago or older). Visibility of the native ground surface ranged widely from poor (virtually 0%) to good (80%) depending on the density of the vegetation growth. As a part of the survey procedures, Ballester also closely inspected all buildings, structures, and other built-environment features in the project area in order to identify and document any that might date to the historic period.

When archaeological features and artifacts were discovered during the survey, their locations were marked with survey flags. Upon completion of the survey, these locations were re-visited and photographed. Further field recordation, including feature descriptions, a location map with UTM coordinates, and a scaled sketch map, were completed to document the exact location and physical characteristics of the features and artifacts. The field maps and written descriptions were then compiled into a standard site record form and submitted to the EIC for inclusion in the California Historical Resources Information System. No artifacts were collected during the survey.

RESULTS AND FINDINGS

RECORDS SEARCH

According to EIC records, portions of the project area were covered by five previous cultural resources studies completed between 1976 and 2009 (Fig. 5). These studies all included pedestrian field surveys and records searches for various projects ranging from linear infrastructure construction to mining operations. None of these previous studies, however, covered the entire project area. Furthermore, other than the 2009 study that focused on a series of power pole sites (#8632 in Fig. 5), all of them occurred more than 20 years ago and are therefore considered outdated for statutory compliance purposes today. No cultural resources were previously recorded within or immediately adjacent to the current project boundaries.

Outside the project area but within a one-mile radius, EIC records yielded more than 30 other studies on various tracts of land and linear features (Fig. 5; see App. 3). In all, over 80% of the land within the scope of the records search has been surveyed, which resulted in the identification of 27 historical/ archaeological sites and 12 isolates—i.e., localities with fewer than three artifacts—within the one-mile radius, as listed in Table 1 (see App. 4 for locations).

The majority of these known cultural resources, 22 of the sites and all 12 of the isolates, are of prehistoric—i.e., Native American—origin. Most of these prehistoric resources were clustered densely to the west of the project location, especially in the foothills across the Temescal Wash that are less rugged and steep than the terrain within project boundaries. Only a few of the prehistoric sites or isolates were found to the north and the east of the project location despite a similar extent of past survey coverage, and they tended to be spaced much farther apart, around one quarter-mile from one another (see App. 4).

The nearest prehistoric resource to the project area was Site 33-001725, representing a group of bedrock milling features with a total of six grinding slicks and a mortar, which was recorded in 1979 roughly 300 feet to the west of the northwest project boundary (see App. 4). Other prehistoric

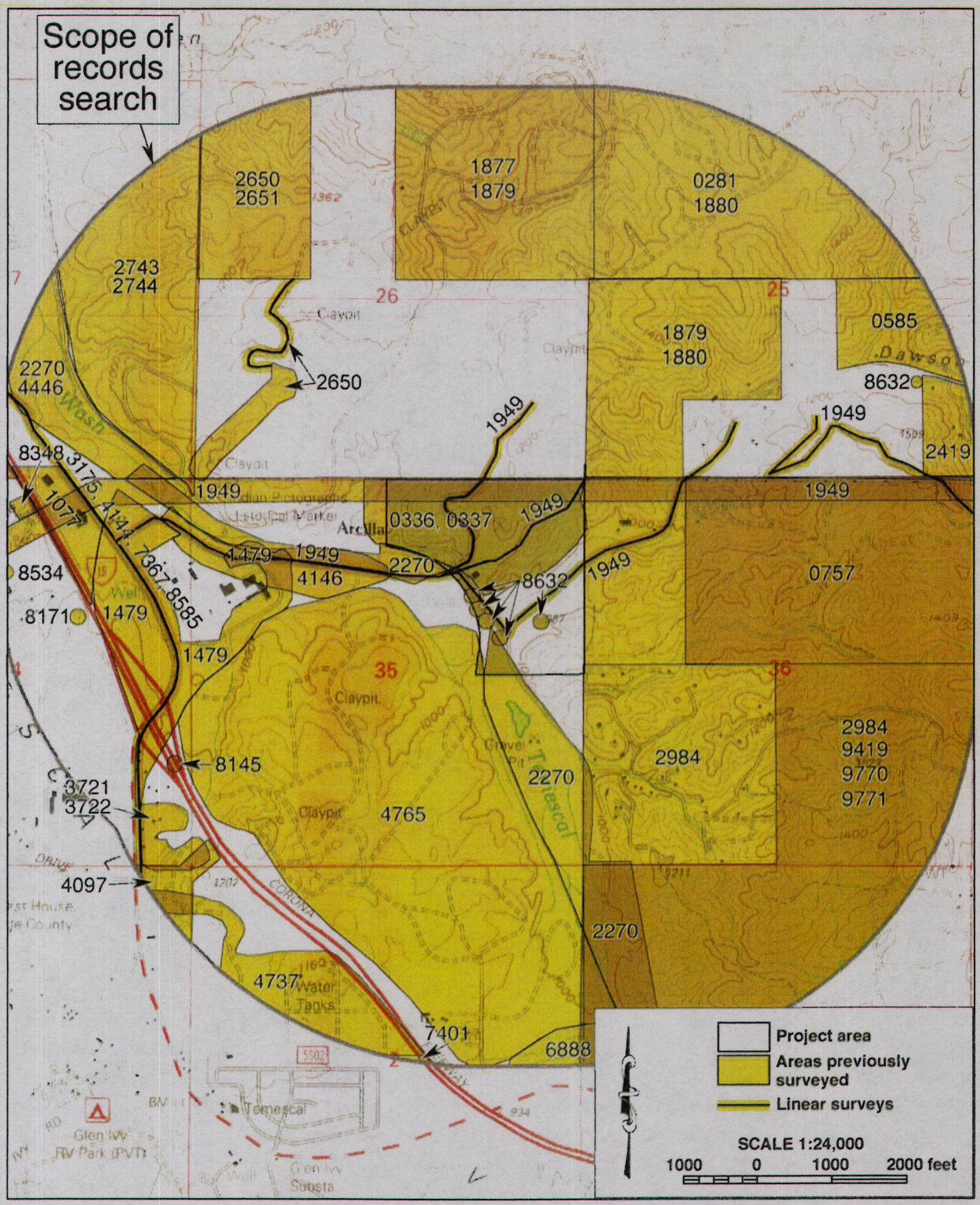

Figure 5. Previous cultural resources studies in the vicinity of the project area, listed by EIC file number. (See App. 3 for bibliography)

Table 1. Previously Recorded Cultural Resources within the Scope of the Records Search		
Number	**Author/Year**	**Description**
33-000034	Various	Petroglyph (California Historical Landmark No. 187)
33-000078	Various	Pictographs
33-000101	Various	Native American habitation site and historic-period foundation
33-000108	Various	Native American habitation site
33-001090	McCarthy 1978	Bedrock milling slicks and lithics artifacts
33-001099	Various 1985-2007	Native American habitation site
33-001149	Various 1977-1991	Lithic scatter
33-001725	Brown 1979	Bedrock milling features
33-002992	Bonner and Sawyer 1985	Groundstone and flaked-stone scatter
33-003531	Bergin and Preston 1989	Lithic scatter
33-003532	Bergin and Preston 1989	Lithic scatter
33-003830	McCarthy 1990	Pictograph
33-003831	McCarthy and Goodman 1990	Bedrock milling features
33-003832	Various	Atchison, Topeka and Santa Fe Railway, Temescal Valley line
33-004111	Swope and Hallaran 1991	Serrano Tanning Vats (California Historical Landmark No. 186)
33-004980	Drover and Smith 1991	Lithic scatter
33-004981	Various 1991-2015	Native American habitation site
33-004982	Drover and Smith 1991	Lithic scatter
33-006438	Various	Same as 33-004111
33-006441	Various	Serrano Adobe Ruins (California Historical Landmark No. 224)
33-008267	Strudwick and King 1998	Lithic scatter
33-011089	Ballester 2001	Isolate: metate
33-011090	Ballester 2001	Isolate: pestle and mano
33-011091	Ballester 2001	Isolate: mano
33-013484	Pink and Singer 1979	Isolate: metate
33-013622	Hoover and Garrett 2004	Bedrock milling slick
33-013623	Hoover and Garrett 2004	Bedrock milling slicks
33-013624	Hoover and Garrett 2004	Bedrock milling slicks and mano
33-013625	Hoover and Garrett 2004	Bedrock milling slicks and cupules
33-013690	Hoover and Blevins 2004	Isolate: mano
33-013691	Hoover and Blevins 2004	Isolate: mano
33-013692	Hoover and Blevins 2004	Isolate: mano
33-013693	Hoover and Blevins 2004	Isolate: millingstone fragment
33-015427	Goodman et al. 2006	Remnants of irrigation system
33-016699	Clowery-Moreno 2007	Isolate: lithic core
33-016700	Clowery-Moreno 2007	Isolate: flake
33-016701	Clowery-Moreno 2007	Isolate: flake
33-016702	Clowery-Moreno 2007	Isolate: hammerstone
33-024861	Hahnlen 2016	Bedrock milling feature

resources in the vicinity included several habitation areas, pictographs/petroglyphs, and scattered groundstone and flaked-stone artifacts, as demonstrated by Table 1.

The other five sites recorded within one mile of the project location dated to the historic period and included two California Historical Landmarks associated with Leandro José Serrano's Rancho Temescal settlement as well as more recent infrastructure features. Among these, Site 33-003832, lying a short distance outside the southwestern project boundary (see App. 4), represented the abandoned grade of the former Santa Fe Railway line through the Temescal Valley, which was built in 1927 and removed in the 1970s (McCarthy 1990:1; Love and Tang 1996:2). Since none of these recorded sites or isolates was found within or adjacent to the project area, none of them requires further consideration during this study.

FIELD SURVEY

During the field survey, the remains of a wood-and-metal chute, which was evidently historical in age and associated with the clay mining operations nearby, was noted on a south-facing hillside in the northwestern portion of the project area, occupying a roughly 65x40-foot area (Fig. 6; see App. 5). The site was recorded into the California Historical Resources Inventory as a result of this study and was subsequently designated 33-028055 by the EIC. The primary components of the site include the remnants of two parallel metal rails running generally north-south down a finger ridge, each of them supported by a set of vertical metal beams. The western rail has almost disappeared, and what is left of the eastern one measures approximately 10 feet long.

Lumber that appears to have been part of the assembly lies on either side of the rail alignment, scattered on the slopes. To the southwest and northeast of the alignment, 6x6-inch wooden beams protrude from the hillside, supporting the remains of a rudimentary retaining structure. These beams are lashed together crudely with rusted metal cables. From the southwestern portion of the retaining structure, the cables extend up the hill to connect to the metal rails. The southwestern end of the retaining structure is now in disarray, as a portion of the finger ridge has collapsed.

The soil in the site area is very fine, red and grey in color, and exhibits substantial concreting action. This soil is several inches thick, as evidenced by a collapsed section of the finger ridge that exposed the subsurface soil strata. The chute once extended at least 22 feet down the slope from its northernmost point, presumably leading to a local dock and the Santa Fe Railway siding below. Debris within the site boundaries include several rusted metal nails measuring six inches long and fragments of a vehicle license plate.

Figure 6. Chute remains at 33-028055, view to the southeast. (Photograph taken on November 20, 2017)

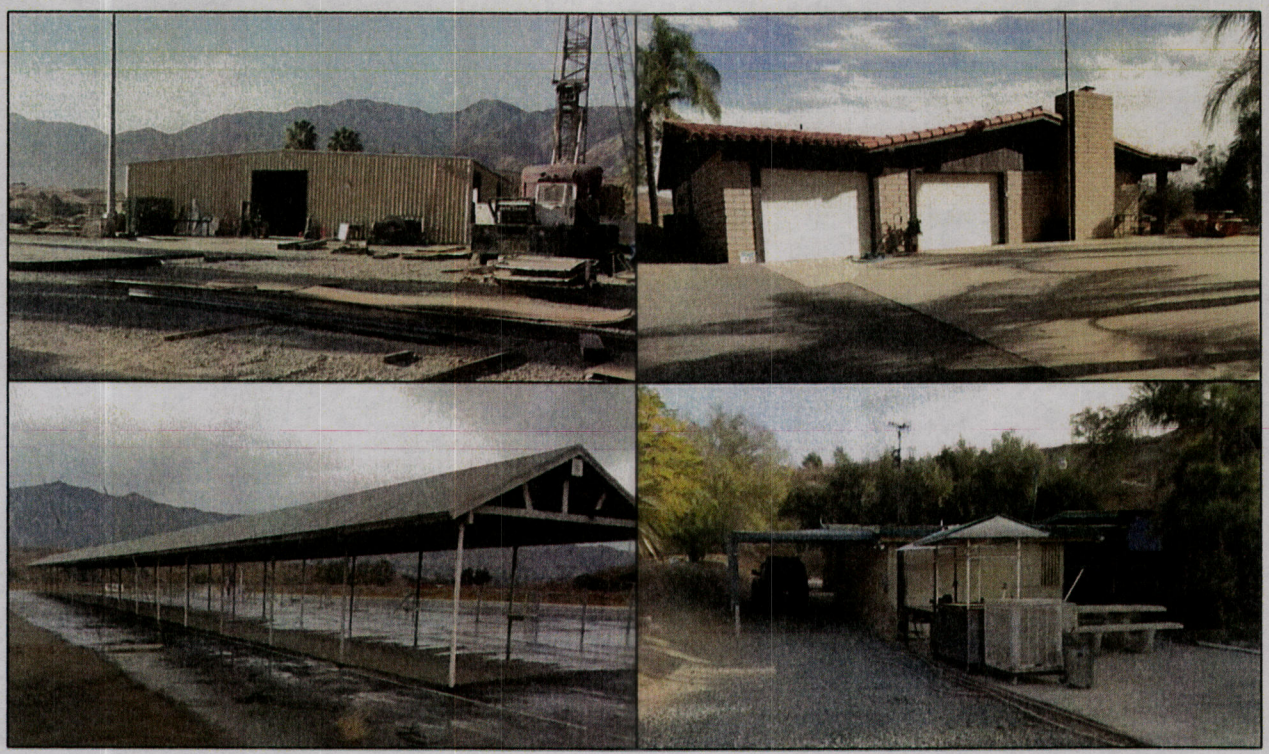

Figure 7. Representative buildings in the project area. *Clockwise from top left*: storage building; caretaker's residence; office/employee lounge; shade structure at the model airplane field. (Photographs taken on November 17 and 20, 2017)

No other potential "historical resources" or "tribal cultural resources" were observed within or adjacent to the project area during the survey. Buildings and structures currently extant in the project area include a large metal storage building, a concrete-block residence for the caretaker, a small office and employee lounge, and a number of trailers and shade structures (Fig. 7). All of these are evidently modern—i.e., less than 50 years old—in origin, and none of them predates 1980 (see below).

Some of the roads that cross the project area, such as Park Canyon Road, Dawson Canyon Road, and Clay Canyon Road, trace their roots to the historic period (see below). However, these roads, paved or unpaved, represent the results of repeated upgrading and constant maintenance over the years, and none of them demonstrates any distinctively historical character. Therefore, none of them is considered a potential "historical resource."

HISTORICAL RESEARCH

Sources consulted for this study revealed ample evidence of settlement and development activities in the surrounding area throughout the historic period. As early as the 1850s-1870s, several settlers' houses and farmlands, including an olive orchard planted by the Serrano family, were noted on the level floor of the Temescal Valley nearby, along the Southern Emigrant Road, which is identified in historic maps simply as "Old Road" (Fig. 8). A secondary road branched off from the Southern Emigrant Road and extended to the northeast, crossing the northwestern portion of the project area along a similar course to that of present-day Clay Canyon Road (Fig. 8).

By the 1890s, a second road extended across the southeastern portion of the project area along roughly the same course as today's Dawson Canyon Road (Fig. 9). In the 1930s-1950s, the Atchison, Topeka and Santa Fe Railway's Temescal Valley line, constructed in 1927, was observed in close proximity to the southwestern edge of the project area, along with a portion of the Arcilla siding (Figs. 10, 11; NETR Online 1948). Throughout the historic period, however, no major man-made features were reported within the project boundaries other than the roads (Figs. 8-11; NETR Online 1948-1967). A clay pit located roughly a quarter-mile north of the project location, at the end of Clay Canyon Road, was evidently the focal point for the activities in and around the project area at that time (Figs. 10, 11; NETR Online 1948).

Historically, the 122.71-acre project area was part of a much larger parcel, at least 560 acres in size, that was the long-time property of the Temescal Water Company (County Assessor 1899-1926). Although undeveloped, the property was leased to a number of mining interests over the years, including legendary industrialist Henry J. Kaiser, who procured from this area the clay needed for his steel plant in Fontana (Deleo 2017). Others who held mining leases on the property included American Container, United Tile, the Harrington Company, and the McClinton family, who shared the area under separate leases (*ibid.*). In the 1960s, Corona Clay Company, the current owner of parcels in the project area, also became a lessee (*ibid.*).

Corona Clay Company was founded in 1948 by the Deleo family, and was incorporated 10 years later (Corona Clay Company n.d.). The most notable family member in this venture, Joe Deleo, worked as a mining employee in his youth and, except for a period of military service at the Mira Loma Quartermaster Depot in present-day Jurupa Valley during World War II, spent his whole life

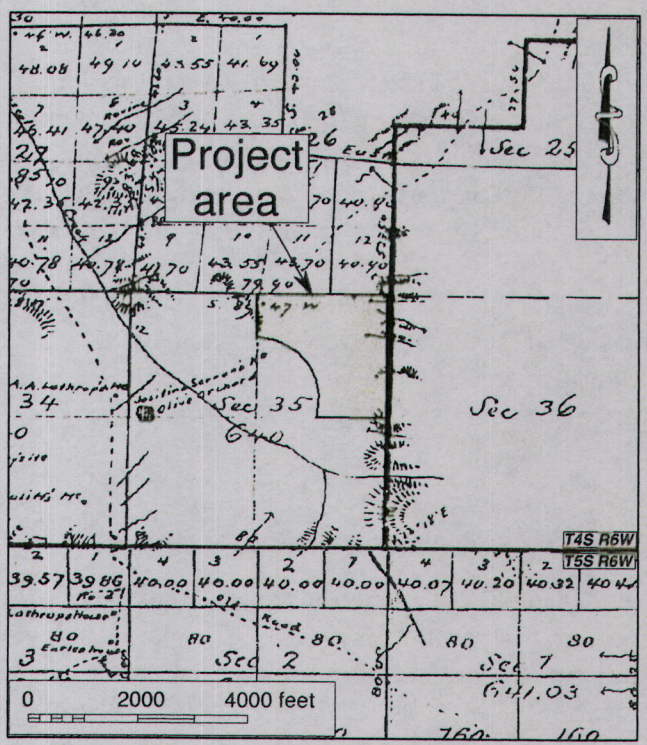

Figure 8. The project area and vicinity in 1853-1874. (Source: GLO 1874a; 1874b)

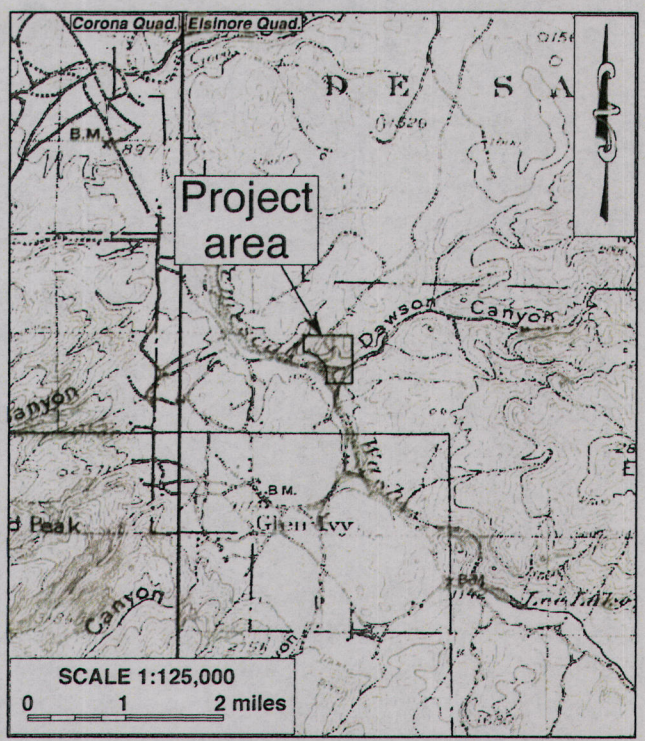

Figure 9. The project area and vicinity in 1894-1899. (Source: USGS 1901; 1902)

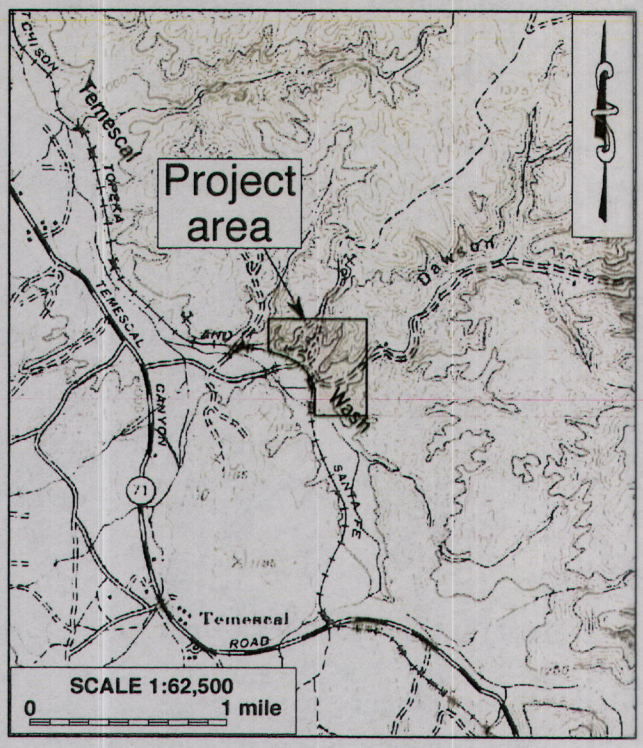

Figure 10. The project area and vicinity in 1939. (Source: USGS 1942)

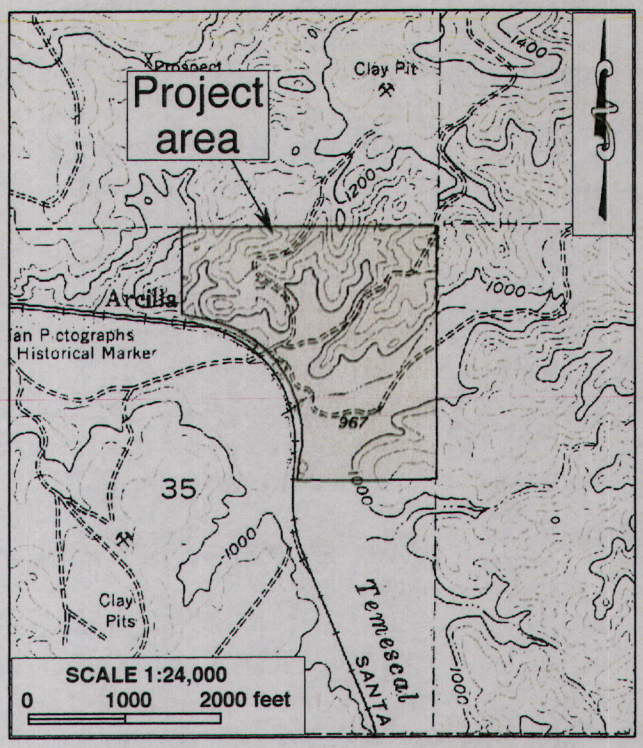

Figure 11. The project area and vicinity in 1948-1953. (Source: USGS 1953)

in clay mining (Deleo 2017). Current family patriarch Gerald Deleo, 84, secured the mining lease in the project vicinity in the 1960s, as mentioned above, and his son, Craig, now 65, has stayed in the family business since age 16 (*ibid.*). The family bought the property in the 1980s (*ibid.*).

The mining operations in this area were focused on excavating a fine-grained red clay favored in brick and tile making as well as beauty treatments such as "mud baths" at the nearby health spa of Glen Ivy (Deleo 2017). The clay from the mining pit to the north was transported to the project area and funneled down the hillside through a gravity-driven chute at Site 33-028055 (*ibid.*). At the bottom of the chute, the clay was loaded onto waiting trucks bound for local manufacturers such as L.A. Brick, Liston Brick, and Pacific Clay, or onto open rail cars on the Santa Fe Railway for shipment to the Phoenix Brick Yard in Arizona, which was founded in 1917 and is still among the largest brick manufacturers today (*ibid.*; Summit Brick n.d.). According to Craig Deleo (*ibid.*), the chute eventually fell out of use after the automotive industry produced more powerful trucks that were better able to climb the hills to the clay pit.

The chute was among a few rudimentary structures needed for the clay mining operations until the company secured a contract around 1965 to supply clay for the new Angel Stadium that was being built in Anaheim (Deleo 2017). As fine as the raw clay was, it needed to be even finer for the ballpark's infield base, so a mechanical crusher was brought in for the job (*ibid.*). In any event, prior to 1980 the project area evidently served solely as a transportation corridor for the company's operations, and no buildings or structures were present within the current project boundaries in 1966-1967 (NETR Online 1966; 1967).

To take further advantage of its capabilities, around 1980 the Corona Clay Company launched a short-lived joint venture with a partner to produce pressed brick pavers, which resulted in the construction of the large storage building in the project area during the 1980s (NETR Online 1981; 1994; Deleo 2017). Prior to that, the caretaker's house was built around 1980 (NETR Online 1980; Deleo 2017). Also in the 1980s, Western Waste Industries, now a part of Waste Management, Inc., acquired the adjacent property to the north of the project area, but the clay pit remained accessible through leases (Deleo 2017).

In the 1990s, the clay pit was finally closed after Western Waste Industries acquired that area and turned it into a part of the El Sobrante Landfill (Deleo 2017). Since then, the project area has been gradually converted into other uses. By 1994, the model airplane field in the southeastern portion of the project area was in place, along with two of the seven motorcycle test tracks (NETR Online 1994). They were followed by the other five tracks over the next 22 years, with the last one, Track No. 6B, completed in 2014-2016 (NETR Online 1994-2012; Google Earth 1994-2016).

NATIVE AMERICAN PARTICIPATION

In response to CRM TECH's inquiry, the Native American Heritage Commission reported in a letter dated October 31, 2017, that the sacred lands record search yielded negative results for Native American cultural resources in the project area. However, the commission recommended that local Native American groups be contacted for further information, and provided a list of potential contacts in the region for that purpose (see App. 2).

Upon receiving the commission's response, CRM TECH sent written requests for comments to 40 of the 43 individuals on the referral list (see App. 2). The other three persons, John Perada of the Los Coyotes Band of Cahuilla and Cupeño Indians, Jim McPherson of the Rincon Band of Luiseño Indians, and Julie Hagen of the Viejas Band of Kumeyaay Indians, no longer serve the tribes as spokespersons on cultural resources issues, according to previous tribal responses. Meanwhile, as recommended by the appropriate tribal government staff, the following designated spokespersons for the tribes were also contacted:

- David L. Saldivar, Tribal Government Affairs Manager, Augustine Band of Cahuilla Indians;
- Judy Stapp, Director of Cultural Affairs, Cabazon Band of Mission Indians;
- Bobby Ray Esparza, Cultural Director, Cahuilla Band of Indians;
- Desiderio Vela, Environmental Program Manager, Ewiiaapaayp Band of Kumeyaay Indians;
- Samuel H. Dunlap, Cultural Resources Director, Gabrielino Tongva Nation;
- Rob Roy, Environmental Director, La Jolla Band of Luiseño Indians;
- Veronica Santos, Cultural Resources Coordinator, Manzanita Band of the Kumeyaay Nation;
- Raymond Huaute, Cultural Resource Specialist, Morongo Band of Mission Indians;
- Chris Devers, Vice-Chairman and Cultural Committee member, Pauma Band of Luiseño Indians;
- Tuba Ebru Ozdil, Planning Specialist, Pechanga Band of Luiseño Indians;
- Destiny Colocho, Manager, Cultural Resource Department, Rincon Band of Luiseño Indians;
- Jim McPherson, Director, Monitoring Program, San Pasqual Band of Mission Indians;
- Gabriella Rubalcava, Environmental Director, Santa Rosa Band of Cahuilla Indians;
- Ernest Pingleton, Cultural Resources Manager, Viejas Band of Kumeyaay Indians.

The requests for comments were sent to the tribal representatives on November 2, 2017. As of this time, nine tribal representatives have responded in writing (see App. 2). Seven of them, Destiny Colocho of the Rincon Band of Luiseño Indians, Katie Croft of the Agua Caliente Band of Cahuilla Indians, Chris Devers of the Pauma Band of Luiseño Indians, Steven Estrada of the Santa Rosa Band of Cahuilla Indians, Judy Stapp of the Cabazon Band of Mission Indians, Ray Teran of the Viejas Band of Kumeyaay Indians, and Amanda Vance of the Augustine Band of Cahuilla Indians, expressed no specific concerns over this project.

Among the seven tribal representatives, Ms. Croft, Mr. Estrada, Mr. Teran, and Ms. Vance deferred to other tribes located in closer proximity to the project area, such as the Soboba Band of Luiseño Indians. Additionally, Mr. Devers and Ms. Vance recommended monitoring of ground disturbing activities associated with the project, Mr. Devers and Ms. Colocho requested copies of all cultural resources documentation for the project, while Mr. Teran and Ms. Vance asked to be notified of any Native American cultural resource discoveries.

On behalf of the Pechanga Band of Luiseño Indians, Tuba Ebru Ozdil identified the project location to be a part of the tribe's ancestral territory and found the general area to be culturally sensitive to the Pechanga people. Therefore, she requested notification when the project begins the entitlement process, copies of all cultural resources documentation associated with the project, further government-to-government consultation with the County of Riverside, and the presence of a qualified archaeologist and a professional Pechanga tribal monitor during all earth-moving activities in the project area, pending review of the environmental documents.

Joseph Ontiveros, Cultural Resources Director for the Soboba Band of Luiseño Indians, also claimed the project location as a part of the tribe's traditional use area and an area considered to be culturally sensitive to the Soboba people. He requested further consultation with the project proponent and the County of Riverside, Native American monitoring of the project by a representative of the Soboba Band, and proper treatment of cultural remains discovered during the project. In addition, Mr. Ontiveros stated that data maintained by the Soboba Band identified "multiple areas of potential impact," and offered to share specific information during future consultation with the County of Riverside.

DISCUSSION

The purpose of this study is to identify any cultural resources within or adjacent to the project area, and to assist the County of Riverside in determining whether such resources meet the official definition of "historical resources" or "tribal cultural resources," as provided in the California Public Resources Code, in particular CEQA. According to PRC §5020.1(j), "'historical resource' includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California."

More specifically, CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically

significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria for the evaluation of historical significance, CEQA guidelines mandate that "generally a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
(2) Is associated with the lives of persons important in our past.
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

For "tribal cultural resources," PRC §21074, enacted and codified as part of a 2014 amendment to CEQA through Assembly Bill 52, provides the statutory definition as follows:

"Tribal cultural resources" are either of the following:
(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
  (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

In summary of the research results presented above, Site 33-028055, representing the remains of a chute that was used during the historic period in association with nearby clay mining operations, is the only potential "historical resource" identified within or adjacent to the project area. Once a part of the clay transportation system from a mining pit north of the project area to the highway and railway on the valley floor below, the chute was eventually abandoned when it was rendered obsolete by the advent of better trucks and, ultimately, the removal of the rail line in the 1970s.

The features recorded at Site 33-028055 are in an extremely dilapidated state today, barely recognizable as the remnants of a chute. As such, they retain poor historic integrity to relate to their original historic context, namely the clay-mining industry in the Temescal Valley. As the fragmented remains of a minor element in the clay-mining industry, the site does not demonstrate a particularly close or important association with this pattern of events or any specific events in history, nor with any persons of recognized historic significance. Furthermore, it does not exhibit any remarkable qualities in engineering or construction, nor does it hold the potential for any important historical information.

Based on these considerations, and in light of the criteria listed above, the present study concludes that Site 33-028055 does not appear to be eligible for listing in the California Register of Historical Resources, and does not qualify as a "historical resource" under CEQA guidelines. No other

potential "historical resources" were encountered throughout the course of this study, nor were any properties of Native American cultural value identified within or adjacent to the project area. With the exception of a few paved and unpaved roads, all built-environment features present in the project area are modern in origin, and the roads, as working components of the modern infrastructure, do not demonstrate any distinctively historical character to be considered potential "historical resources."

In conclusion, no "historical resources" exist within or adjacent to the project area, nor have any "tribal cultural resources" been identified during this study. The final determination on the presence or absence of "tribal cultural resources" in the project area, however, will need to be made by the County of Riverside upon completion of the government-to-government consultations that the County will be conducting with pertinent Native American tribes pursuant to provisions of Assembly Bill 52.

CONCLUSION AND RECOMMENDATIONS

CEQA establishes that a project that may cause a substantial adverse change in the significance of a "historical resource" or a "tribal cultural resource" is a project that may have a significant effect on the environment (PRC §21084.1-2). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

As stated above, this study has concluded that Site 33-028055, the only property of historical or prehistoric origin in the project area, does not constitute a "historical resource," as defined by CEQA. No other potential "historical resources" or "tribal cultural resources" were identified throughout the course of this study. Therefore, CRM TECH presents the following recommendations to the County of Riverside:

- A finding of *No Impact* on cultural resources appears to be appropriate for this project, pending the completion of Native American consultation process by the County of Riverside pursuant to Assembly Bill 52 to ensure the proper identification of potential "tribal cultural resources."
- No additional cultural resources investigation will be necessary unless project plans undergo such changes as to include areas not covered by this study.
- If buried cultural materials are discovered inadvertently during any earth-moving operations associated with the project, all work within 50 feet of the discovery should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this archaeological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: December 26, 2017

SIGNED: _____

Print Name: Bai "Tom" Tang

County Registration No.: 114

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2017 Personal communication. Interviewed via telephone on December 7.

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APPENDIX 1:
PERSONNEL QUALIFICATIONS

PRINCIPAL INVESTIGATOR, HISTORY/ARCHITECTURAL HISTORY
Bai "Tom" Tang, M.A.

Education

1988-1993	Graduate Program in Public History/Historic Preservation, UC Riverside.
1987	M.A., American History, Yale University, New Haven, Connecticut.
1982	B.A., History, Northwestern University, Xi'an, China.
2000	"Introduction to Section 106 Review," presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno.
1994	"Assessing the Significance of Historic Archaeological Sites," presented by the Historic Preservation Program, University of Nevada, Reno.

Professional Experience

2002-	Principal Investigator, CRM TECH, Riverside/Colton, California.
1993-2002	Project Historian/Architectural Historian, CRM TECH, Riverside, California.
1993-1997	Project Historian, Greenwood and Associates, Pacific Palisades, California.
1991-1993	Project Historian, Archaeological Research Unit, UC Riverside.
1990	Intern Researcher, California State Office of Historic Preservation, Sacramento.
1990-1992	Teaching Assistant, History of Modern World, UC Riverside.
1988-1993	Research Assistant, American Social History, UC Riverside.
1985-1988	Research Assistant, Modern Chinese History, Yale University.
1985-1986	Teaching Assistant, Modern Chinese History, Yale University.
1982-1985	Lecturer, History, Xi'an Foreign Languages Institute, Xi'an, China.

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California's Cultural Resources Inventory System (with Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

PRINCIPAL INVESTIGATOR, ARCHAEOLOGY
Michael Hogan, Ph.D., RPA*

Education

1991	Ph.D., Anthropology, University of California, Riverside.
1981	B.S., Anthropology, University of California, Riverside; with honors.
1980-1981	Education Abroad Program, Lima, Peru.
2002	Section 106—National Historic Preservation Act: Federal Law at the Local Level. UCLA Extension Course #888.
2002	"Recognizing Historic Artifacts," workshop presented by Richard Norwood, Historical Archaeologist.
2002	"Wending Your Way through the Regulatory Maze," symposium presented by the Association of Environmental Professionals.
1992	"Southern California Ceramics Workshop," presented by Jerry Schaefer.
1992	"Historic Artifact Workshop," presented by Anne Duffield-Stoll.

Professional Experience

2002-	Principal Investigator, CRM TECH, Riverside/Colton, California.
1999-2002	Project Archaeologist/Field Director, CRM TECH, Riverside.
1996-1998	Project Director and Ethnographer, Statistical Research, Inc., Redlands.
1992-1998	Assistant Research Anthropologist, University of California, Riverside
1992-1995	Project Director, Archaeological Research Unit, U. C. Riverside.
1993-1994	Adjunct Professor, Riverside Community College, Mt. San Jacinto College, U.C. Riverside, Chapman University, and San Bernardino Valley College.
1991-1992	Crew Chief, Archaeological Research Unit, U. C. Riverside.
1984-1998	Archaeological Technician, Field Director, and Project Director for various southern California cultural resources management firms.

Research Interests

Cultural Resource Management, Southern Californian Archaeology, Settlement and Exchange Patterns, Specialization and Stratification, Culture Change, Native American Culture, Cultural Diversity.

Cultural Resources Management Reports

Author and co-author of, contributor to, and principal investigator for numerous cultural resources management study reports since 1986.

Memberships

* Register of Professional Archaeologists; Society for American Archaeology; Society for California Archaeology; Pacific Coast Archaeological Society; Coachella Valley Archaeological Society.