MSHCP Consistency Analysis for An Approximate 20.0 Acre Lot Located at the Northeast Corner of Rancho California Road and Calle Contento, in the County of Riverside, California

Assessor Parcel Number: 943-250-019

Plot Plan (PPT) 220010 "Chimney's Winery"
Environmental Assessment (CEQ / EA) Number CEQ220018

Located within a non-sectioned area of Township 7 South
Range 2 West of the Bachelor Mtn., CA Quadrangle

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RESOURCE MANAGEMENT

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1.0 Executive Summary

The proposed project, a proposed winery and associated uses, is located at 24850-23980 Catt Road, Wildomar, California 92595. It lies within the Riverside County wine country area, east of the City of Temecula, at the northeast intersection of Rancho CA Road and Calle Contento.

Reserve Assembly Analysis: The property lies outside of any designated conservation areas of the *Western Riverside Multi-Species Habitat Conservation Plan* (MSHCP). Hence, the property is not with a Criteria Cell, and so it does not require evaluation for conservation under the Plan. This is discussed in *Section 3.0 – Reserve Assembly Analysis* of this report.

Section 6.1.2 Riparian/Riverine Vernal Pool: Only one small 0.49 acre-area on-site contained likely Riparian/Riverine resources. This potential Riverine resource has been evaluated and mapped. This area is comprised of a small section of an earthen flood control channel that conveys stormflows out of Long Valley (a name which seems to have fallen into disuse) and flows toward Santa Gertrudis Creek to the north. The existing channel is primarily off-site to the south of the site, between Rancho California Road and the subject property, but as the channel curves to the north along Calle Contento, it falls partially within the southwest corner of the property. The proposed project would completely avoid the channel.

Section 6.1.3 Narrow Endemic/Criteria Area Plant Species: The proposed Project site does not lie within a Narrow Endemic Plant Survey Area or Criteria Area Plant Species survey area; as such, no surveys were required. While conducting vegetation and burrowing owl surveys, vegetation detected on-site was identified, recorded, and included in this report as *Appendix B – Floral Species Observed*. No narrow endemic or criteria area plants were incidentally detected during the initial Habitat Assessment and subsequent field surveys.

Section 6.1.4 Urban Wildlands Interface: The proposed Project site is surrounded on two sides by roadways (Rancho California Road and Calle Contento). To the east is an existing rural residential property and to the north is privately-owned and undeveloped and it is routinely mowed. The subject site is not adjacent to other MSHCP-designated Conservation or Quasi-Public lands, and. Nonetheless, the Project was evaluated as to its potential to generate stormwater or nuisance drainage, toxics, lighting, noise and invasive plants that might potentially affect downstream washes or creeks (Santa Gertrudis Creek watershed) such as any Public or Quasi-public sites or other areas conserved prior to or under the MSHCP program.

A Water Quality Management Plan (WQMP) is required for this Project and must be reviewed and approved by the County of Riverside which will implement specified Best Management Practices ("BMP's") and control and manage runoff. This would avoid potential impacts to downstream conserved lands.

Vegetation Mapping (MSHCP Section 6.3.1): Vegetation mapping has been provided in this Consistency Analysis in conformance with MSHCP Section 6.3.1 parameters. MSHCP Permittees (i.e., the County of Riverside) generally require vegetation mapping to be conducted. TERACOR worked in conjunction with 4M Engineering and Development to develop the mapping in a GIS/CADD format for presentation

purposes. TERACOR undertook vegetation mapping of the Project site in a manner consistent with prevailing conventions and standard CDFW recommendations for *CEQA* compliance. We utilized Sawyer/Keeler-Wolf's *A Manual of California Vegetation*, 2nd edition, to classify vegetation communities (i.e., alliances, associations), supplemented with the California Department of Fish and Wildlife (CDFW) CaCode system (05 July 2022 version) to describe and refine our classifications of all on-site vegetative structures.

Additional Survey Needs and Procedures (MSHCP Section 6.3.2): Washes and creeks are known to occur in the general vicinity not far from the Project site. Vernal pools, ponds, riparian vegetation, cienegas, tenajas, billabongs and similar areas are absent on-site, although there are three small single willow shrubs (*Salix* sp.) in the County stormwater channel, discussed above.

Furthermore, the site is not within Narrow Endemic/Criteria Area Plant Species Survey Areas. The *RCA/MSHCP Information Map* indicated no predetermined need for focused surveys for any mammals, amphibians, invertebrates or plants. Lastly, there is no potential for those species for which adequate conservation has not yet been arranged to be present (*Table 5 - Covered Species Not Adequately Conserved* [MSHCP Table 9-3]).

Mammal Surveys: The proposed Project site does not require surveys for any mammal species. Ground squirrel is present in high numbers in the previously-discussed channel due to the presence of riprap which provides highly-suitable cover for squirrels to construct burrows. There were normal numbers of smaller fossorial mammal burrows on the site. There are no mammal survey requirements for the property, and none of the MSHCP-listed species have been detected. Therefore, there are no mammal conservation issues to discuss or analyze further in this report, as further supported by the analysis contained in *Table 5 - Covered Species Not Adequately Conserved* (MSHCP Table 9-3).

Riparian Birds: There are no functional riparian vegetative communities on the Project site that would justify focused surveys for least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo. Three willow shrubs present on-site in the stormwater channel were too small in extent to justify riparian-obligate focused avian surveys. The channel is situated between the existing vineyard and County-maintained roads, well away from the proposed project development. TERACOR determined the site and channel was not suitable for least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo or other riparian-obligate species. Focused riparian bird surveys were not warranted and were not conducted.

Amphibians/Reptiles: The project site does not support suitable habitat for the Section 6.1.2 listed amphibians which included arroyo toad, red-legged frog, and mountain yellow-legged frog. We did not observe any pools, stock ponds, cienegas or tenajas which could provide breeding habitat for western pond turtle. No amphibian larvae were observed at any time on-site as ponding or sustained water flow on the property or in the County stormwater channel was never observed.

Burrowing Owl: The MSHCP required a habitat assessment and the habitat assessment indicated that focused surveys should be conducted for burrowing owl in areas considered potentially-suitable for occupation, although areas of dense growth were excluded. A burrowing owl habitat assessment

survey was performed in Winter 2021, followed by 4 focused surveys in March 2021 through June 2021, in compliance with MSHCP/RCA/EPD guidelines; surveys were negative. Survey methodology and results are presented in a companion report.

Recommendations are included at the end of this report to address potential impacts of the Project (e.g., water quality runoff, follow up surveys prior to development, etc.) although TERACOR did not identify any resources identified as warranting specific mitigation required by the MSHCP.

2.0 Introduction

2.1 Project Area

The subject property is located within the Temecula Valley wine country area, which is a portion of the Western Riverside County Multiple Species Habitat Conservation Plan ("MSHCP" or "Plan") area. *Exhibit 1 – Regional Location*, attached, depicts the Project site's location relative to other geographic features in the area. The following is quoted from Section 1.0 of the MSHCP:

"*The MSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan ("HCP") focusing on Conservation of species and their associated Habitats in Western Riverside County. This Plan is one of several large, multi-jurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region… The MSHCP will allow Riverside County …and its Cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal Endangered Species Acts.*"

2.2 Project Description

The proposed Project includes Plot Plan No. 220010 (PPT 220010) for construction of a Class V Winery on 20.04 gross acres in the "Temecula Valley Wine Country". The site is bounded by Calle Contento to the west, Rancho California Road to the south, agricultural lands to the north, and residential uses to the east; County of Riverside, State of California, and known as Assessor's Parcel Number 943-250-019.

Plot Plan No. 220010

Plot Plan No. 220010 (PPT 220010) proposes a Class V Winery with 18,506 gross square feet of new building area to include tasting room, patio tasting room, offices, restaurant, 10 hotel guest rooms, and special occasions. According to Ordinance No. 348 (Providing for Land Use Planning and Zoning Regulations and Related Functions of the County of Riverside), a Class V Winery is a winery with an established on-site vineyard located on a minimum gross parcel size of twenty (20) acres that is allowed with appurtenant and incidental commercial uses (with an approved permit).

Parking requirements are provided in accordance with ORD. No. 348 Section 18.12 (A). A total of 103 spaces are required during normal demand hours (139 spaces provided), 138 required during peak demand

hours (145 spaces provided). These spaces include 5 electrical vehicle spaces, 5 ADA spaces, 26 compact spaces, and 2 loading spaces. The Project will also provide 4 bicycle parking spaces.

In addition to the 139 spaces provided, a roughly 450' length of dirt road leading from the public street to the building can accommodate an extra ~50 parking spaces for a super peak demand potential of 187 spaces.

Use	Area (Square Feet)
WINERY	
Production/Bottling/Labeling	2,760
Storage	1,620
Business (Office, Conference room, ADA Bathroom)	543
WINE TASTING / RESTAURANT / SPECIAL OCCASION	
Main Entrance / Lobby / Special Event Space	821
Restaurant	982
Wine Tasting	1,081
Business	1,195
Auxiliary Circulation, Hallways, Storage, Bathrooms	3,635
GUEST INN	
Guest Rooms	3,994
Business	622
Auxiliary Circulation, Hallways, Storage, Bathrooms	1,253
TOTAL	**18,506**

Landscaping

Project landscaping includes drought tolerant plant species. Trees are of the evergreen and deciduous varieties. Landscape is provided along the perimeter of the winery building as well as parking areas. Approximately 38,448 sq. ft. of the Project is landscaped. Additionally, the Project will include vineyard planting on approximately 15 acres or 75% of the site.

Circulation

The proposed Project will take access off Calle Contento along the western boundary of the site. Rancho California Road is classified as a mountain arterial (110' right of way) in the County of Riverside Wine County Community Plan. Presently the roadway is improved as a two-lane roadway with a striped turning median lane. The Project has approximately 1,253 feet of frontage along Rancho California Road. However, the Project does not propose any direct access to Rancho California Road. Circulation improvements will completely avoid the 0.51-acre flood control channel in the southwest corner of the site, as well as the off-site portion of the channel along Rancho California Road.

Pedestrian access will be provided per Americans with Disabilities Act (ADA) requirements.

Grading

The site will be mass graded with approximately 7,350 cubic yards (cy) of cut and 6,121 cy of fill, resulting in a net export of 1,229 cy. However, it is anticipated that the remaining soil will be spread onsite to avoid being exported offsite.

Water/Sewer

The Project will connect to existing sewer lines through Eastern Municipal Water District and existing water lines through Rancho California Water District.

2.3 Covered Roads

There are no new MSHCP designated "covered roads" proposed for this Project site.

2.4 Covered Public Access Activities

The Project site does not warrant consideration of Covered Public Access Activities. It is currently privately-owned and the Project is intended for commercial and residential uses.

2.5 General Setting

The subject property is located within the Temecula Valley wine country, east of the City of Temecula. Roadways border the site, but the area would be considered agricultural for the most part comprised of vineyards and associated uses. was constructed over ten years ago to the north and west of the site

Property Location: The property is located within the **County of Riverside** ("County"), California, east of the City of Temecula. The property is bounded by open scrub habitat to the north, Calle Contento to the west (existing road), a rural-residential property to the east, and Rancho California Road and a stormwater channel to the south. The property is geographically located within a non-sectioned area of Township 7 South, Range 2 West of the *Bachelor Mtn., CA Quadrangle,* as depicted in the attached *Exhibit 2 - USGS Topo.*

The subject site is comprised of one (1) parcel approximately 20.0 acres; Assessor Parcel No. 943-250-019. Elevations on-site range from approximately 1310 feet above mean sea level (msl) at the intersection of Rancho California Road and Calle Contento, to 1365 feet msl at the northeast corner of the property, which is the highest portion of the site. There is vertical fall of approximately 35 feet across the gently undulating topography of the property.

The property is mostly a vineyard, crisscrossed by dirt roads. Some remnant native scrub vegetation persists in the northeast corner where there is also substantial historic disturbance.

Topography: Elevations on-site are variable, based on dirt storage and stockpiling that occurred in the past. Elevations range from approximately 1932 feet above mean sea level (msl) along the southeasterly corner of the site down, and 1339 feet above msl at the existing residence pad in the southwesterly corner. Elevations are highest at the top of the large stockpile (1336 feet msl). The north property line is variable but has a block wall constructed on it. Ground elevations along the wall are run approximately from 1335 to 1354 feet msl.

The U.S.G.S. map depicts a much simpler broad alluvial structure ranging from 1440 to 1460 feet msl across the property down to Catt Road along the south property line. All the fill on the site has buried much of the native soil, and resulted in a very different drainage pattern than originally existed. The blueline drainage, which once stretched northward uphill over half a mile has been beheaded and truncated so that it now is a very small relict on-site with fill placed at the upstream and downstream end of it.

Soils: The property was historically comprised of two (2) soil types, according to the NRCS *Web Soil Survey: Western Riverside Area, California*. It should be noted that areas on which fill has been placed are now over-covered with unconsolidated fill. Other areas on-site have been modified to support historic uses. In these disturbed and over-covered areas native soils are not present at the surface. The soils historically present on the property were as follows:

Table 1 - Soil Types, below, describes the soils on-site (as they were naturally arrayed), as well as the basic known characteristics of those soils.

Table 1 - Soil Types

Code	Soil Type/Description	Location
GyC2	**Greenfield Series** Soils of the Greenfield series are on alluvial fans and terraces. Slopes are 0 to 25 percent. These well-drained soils developed in alluvium consisting mainly of granitic materials. Elevations range from 600 to 3,500 feet. The average annual rainfall ranges from 10 to 18 inches, the average annual temperature from 59° to 64° F., and the average frost-free season from 200 to 280 days. The vegetation is chiefly annual grasses, forbs, sumac, and chamise but includes some scattered oak trees. In a typical profile, the surface layer is brown sandy loam about 26 inches thick. The subsoil is brown sandy loam and pale-brown loam and extends to a depth of about 60 inches. The Greenfield soils are near the Hanford, Pachappa, Arlington, and Ramona soils. Greenfield soils are used for dryland grain and pasture, for irrigated truck crops, alfalfa, potatoes, citrus, and peaches, and for homesites. **Greenfield sandy loam, 2 to 8 percent slopes, eroded** (GyC2) -This gently to moderately sloping soil occurs on alluvial fans and terraces. Following is a typical profile on a southeast-facing slope of 6 percent (1,250 feet north and 380 feet west of the south quarter corner of section 18, T. 3 S., R. 2 W.): Ap-0 to 14 inches, brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) when moist; weak, medium, angular blocky and weak, fine, granular structure; slightly hard, very friable, slightly sticky and slightly plastic; abundant fine and very fine roots; common fine	Found on lower areas of the property, away from the highest elevation zone of the site.

	and very fine pores; slightly acid (pH 6.5); gradual, smooth boundary. Horizon is 5 to 14 inches thick. A1-14 to 26 inches, brown (10YR 5/3) sandy loam, very dark grayish brown (10YR 3/2) when moist; weak, medium, angular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; abundant very fine roots; many very fine and few fine pores; neutral (pH 7.0); gradual, wavy boundary. Horizon is 4 to 16 inches thick. B1-26 to 43 inches, brown (10YR 5/3) sandy loam, very dark grayish brown (10YR 3/2) when moist; moderate, medium, angular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; abundant very fine roots; many very fine and few fine pores; colloidal stains and few bridges; neutral (pH 7.0). Horizon is 8 to 20 inches thick. B2t-43 to 60 inches, pale-brown (10YR 6/3) loam, dark brown (10YR 3/ 3) when moist; moderate, coarse, angular blocky structure; hard, friable, sticky and plastic; few very fine roots; common fine and many very fine pores; mildly alkaline (pH 7.4); few thin clay films in pores and bridges. The A horizon is light brownish gray to dark grayish brown to brown in color and sandy loam to very fine sandy loam in texture. The B horizon is slightly acid to mildly alkaline' sandy loam to loam. The C horizon, where present, is stratified reddish-brown to brown very fine sandy loam to loamy sand alluvium. Included with this soil in mapping are small areas of Hanford coarse sandy loam, Pachappa fine sandy loam, Arlington fine sandy loam, and Ramona sandy loam. Some small areas having a loamy fine sand or gravelly sandy loam surface layer are included. Also, some soils that are slightly wet are included. Permeability of this soil is moderate. Runoff is slow to medium, and the hazard of erosion is slight to moderate. The available water holding capacity is 7.5 to 10.0 inches. The root zone is more than 60 inches deep. Natural fertility is high. This soil is used for dryland grain and pasture, for irrigated alfalfa, potatoes, citrus, and peaches, and for homesites. (Capability unit IIe-1 (19) irrigated; Loamy range site)	
RmE3	**Ramona Series** The Ramona series consists of well-drained soils on alluvial fans and terraces. Slopes range from 0 to 25 percent. These soils developed in alluvium consisting mainly of granitic materials. Elevations range from 500 to 3,500 feet. The average annual rainfall ranges from 9 to 18 inches, the average annual temperature from 59° to 65° F., and the average frost-free season from 220 to 300 days. The vegetation consists chiefly of annual grasses, forbs, chamise, salvia, and flat-top buckwheat. In a typical profile, the surface layer is brown sandy loam and fine sandy loam about 23 inches thick. The sub-soil extends to a depth of about 68 inches. This layer is brown loam and reddish-brown and yellowish-red sandy clay loam. The substratum is strong-brown fine sandy loam. The Ramona soils are near the Tujunga, Hanford, Greenfield, Arlington, Buren, Placentia, and Monserate soils. The Ramona soils are used for dryland grain and pasture and for irrigated peaches, apricots, citrus, alfalfa, truck crops, and grain. They are also used as sites for homes and schools and for other nonfarm purposes. **Ramona and Buren sandy loams, 15 to 25 percent slopes, severely eroded** (RmE3) These soils occupy convex, dissected, old terraces. About 45 percent of the total acreage is Ramona sandy loam; about 40 percent is Buren sandy loam; and the rest is included areas of less eroded Ramona and Buren soils having a sandy loam surface layer 10 to 16 inches thick, as well as small areas of Hanford soils in the drainageways. The Ramona soil is similar to Ramona sandy loam, 2 to 5 percent slopes, eroded, except that the original surface layer is only 10 inches thick or less, the soil is cut by many	Found on upper areas of the property, generally along the north property line in hilly areas.

	gullies, and there are areas of exposed subsoil. The available water holding capacity is 7.5 to 9.5 inches. Runoff is rapid, and the erosion hazard is high. The root zone is more than 60 inches deep. The Buren soil is similar to Buren fine sandy loam, 2 to 8 percent slopes, but its original surface layer is 10 inches thick or less and in places is missing entirely. Many gullies have been formed, and the subsoil is exposed in some places. The available water holding capacity is 2.0 to 3.0 inches. Runoff is rapid, and the hazard of erosion is high. The effective root zone is 12 to 36 inches deep. The soils in this unit are used for dryland pasture and, where the climate is favorable, for irrigated citrus. (Ramona soil, capability unit Vle-1 (19) dryland; Loamy range site. Buren soil, capability unit Vle-8 (19) dry land; Loamy range site)	

Both soils within the property are considered structurally suitable for occupation by BUOW and other burrowing organisms based on the sandy loam composition of each soil. *Exhibit 4 – Soils*, depicts the different soils series present on-site.

Exhibit 4 – Soils, attached, depicts the soils types described above and their historical locations across the property. Native soils are expected exist across the existing vineyard portion of the property. The northeast corner of the site has been previously disturbed and graded to create storage areas for agricultural operations.

Site Disturbance and Development History

Exhibit 5 – Historic Aerial 1938 depicts conditions on the property as existed approximately 85 years ago. The blueline drainage can be detected, but it has been entirely transformed into upland agricultural use. The agricultural activity appears to have been dry farming, as no irrigated type of crops can be seen.

Exhibit 6 – Historic Aerial 1967 indicates that the dry farming may have been abandoned at least temporarily in 1967, but the northeast corner of the property remains disturbed. Additionally, there appear to be trees present in the northwest corner of the site in 1967, but that is not clear at all. There are no structures or well-developed natural areas on the site.

Exhibit 7 – Historic Aerial 2003 shows that conditions have not changed appreciably from 2003 to present.

3.0 Reserve Assembly Analysis

3.1 Public Quasi-Public Lands

The property is not within any designated conservation cells or designed reserve areas. It lies approximately 1.5 miles south of the south edge of **Subunit 4- Cactus Valley/SWRC-MSR/Johnson Ranch** of the *Western Riverside Multi-Species Habitat Conservation Plan* (*MSHCP*). The subject property is roughly three miles west of the edge of **Subunit 3 – Vail** Lake and three miles north of **Subunit 2 – Temecula and Pechanga Creeks**. *Exhibit 9a – RCA MSHCP Information Map Pubic Quasi-Public Conserved Lands* and *Exhibit 9b - RCA MSHCP Information Map – Subunits* shows the subject property's position relative to these

major conservation areas and public lands. As such, there are no outright conservation requirements for the Project that would be required for Reserve Assembly, as the subject site is not within a Criteria Cell. Conservation requirements can apply within certain MSHCP survey overlay zones are in place across the Plan Area. These overlay zones, such as for burrowing owl, can require additional analysis and land avoidance or mitigation if the target organisms are present

3.1.1 Public Quasi-Public Lands in Reserve Assembly Analysis

Exhibit 9a – RCA MSHCP Information Map Pubic Quasi-Public Conserved Lands shows that the Project site is not in a Criteria Cell. The nearest concentration of Criteria Cells is found in Subunit 4 (discussed above) which lies to the north approximately 1.5 miles away. As such, there are no applicable conservation provisions in which the Project could be required to conserve land that would contribute to Reserve Assembly. Further analysis in regard to reserve assembly is therefore not required.

3.1.2 Project Impacts to Public Quasi-Public Lands

There are no Public or Quasi-Public lands adjacent to or near the subject property. However, the Project site is contained with the Santa Gertrudis Creek watershed, therefore, provisions to protect downstream resources are required for the construction phase of the Project. MSHCP provisions require that the Project cannot not degrade water quality or allow contaminants or invasive materials to be discharged from the site.

With implementation of best management practices (discussed in Section 10), no impacts to Public Quasi-Public Lands would be expected to occur.

4.0 Vegetation Mapping

Literature Review: Baseline conditions for the property were initially evaluated through review of existing area biological information and pertinent scientific literature. Primary literature reviewed in determining vegetation community names, associations, and descriptions for the project area were derived from: *The Jepson Manual, Higher Plants of California*, Hickman,1993; California Natural Community List (2019); *A Manual of California Vegetation*, Sawyer and Keeler-Wolf, 2nd edition, 2009, *The Vascular Plants of Riverside County* (Boyd & Sanders, et al, 2004) and the **California Native Plant Society's** ("CNPS") *Inventory of Rare and Endangered Plants* were also utilized. A complete list of references has been provided as Appendix C.

Geographically, the property is located within the California Floristic Province Southwestern California region, specifically in the South Coast subregion. The South Coast subregion extends along the Pacific Coast from Point Conception to Mexico.

Despite disturbances on-site, there are limited natural vegetation alliances present on the property. Designations for these habitat elements and their respective California Natural Community Codes ("CaCodes") have been described in the following text. Vegetation is depicted in the attached *Exhibit 11 - Vegetation Alliances*, which includes acreage totals for each vegetation alliance identified.

Annual Brome Grassland – Fiddleneck Field (CaCode 42.027.00/42.110.00): Brome grasslands are non-native stands of annual grasses which often occur where substantial disturbances have occurred in the past. These disturbances can include over-grazing, farming, off-road vehicular use, or frequent fires. Though they are comprised of non-native species, these grasslands are widespread across southern California and constitute today's functional equivalent (albeit at a reduced level of productivity) of native grasslands. They support native wildflowers, like fiddleneck (*Amsinkia* sp.) and if not too dense can also support small mammals and herpetofauna like lizards and snakes, as well as predatory species which prey on these smaller organisms.

Grasslands are considered suitable for BUOW, however, no evidence of BUOW occupation was observed over the course of surveys conducted in 2021. This area comprised 1.69 acres.

Cockelbur/Mustard/Red Brome/Mediterranean Grass (CaCode 42.024.00): The human-created channel which runs along the southern and southwesterly edge of the property lies mostly off-site, except for the southwest corner of the property which includes the channel at this time. It is maintained by the County Flood Control District and utility companies who maintain poles and lines in the channel. We identified this alliance within the project area in the channel, as well as a few small arroyo willow shrubs. This 0.49-acre area would likely be considered Riverine under provisions of the MSHCP, and the project proponent has proposed complete avoidance of the area. The arroyo willow shrubs, discussed below, add 0.02 acre to the human-created riverine channel, which would bring the total riverine area to be avoided on-site to 0.51 acre.

Disturbed open stormwater channels can be occupied by burrowing owl, and owls are known to extensively use canal banks in the agricultural zones near El Centro in southeastern California. Therefore, TERACOR walked the edge of the entire channel during each survey due to its adjacency to the subject property. No burrowing owls were ever observed, nor was the evidence of owl occupation despite the relatively high number of fossorial mammal burrows noted in the channel. This area comprised 0.49 acre.

California Buckwheat (CaCode 32.040.00): Stands of the California buckwheat alliance are present in the northeast corner of the property. Buckwheat comprises 1.3 acres of the site. Under some circumstances sparse California buckwheat areas can be suitable for BUOW, but in this case the buckwheat was relatively dense and too tall for owl to successfully utilize this habitat type. Nonetheless, it was included in the surveys conducted for the property. This area consisted of 1.3 acres.

Coast Live Oak (CaCode 71.060.00): The coast live oak alliance usually is applied to stands of multiple trees, however, in this case only one relatively small coast live oak is present near the top of the hill on the site. We mapped it so as to disclose the presence of the tree on-site. Coast live oak woodland is not suitable for burrowing owl. This area comprised 0.02 acre.

Arroyo Willow (CaCode 61.201.00): A few small arroyo willow shrubs are present on the property in the stormwater channel. They comprised only 0.02 acre of the property, and could be considered under provisions of the MSHCP to be Riparian/Riverine. No disturbances to the channel are proposed by the project as complete avoidance of the channel was deemed the most appropriate approach by the project proponent. This area consisted of 0.02 acre.

Agricultural (Vineyard) (No corresponding CaCode): Agricultural fields and vineyards, if actively managed, seldom support burrowing owl due to the tilling, disking, irrigation, and application of pesticides and herbicides in most fields. However, BUOW often can occur in disturbed open areas near agricultural areas. Therefore, TERACOR included the margins and roads around the vineyard in the survey zone. No burrowing owls were detected at any time during the surveys. This area consisted 14.72 acres.

Ornamental - Eucalyptus (CaCode 79.100.00): Ornamental trees primarily occur off-site, but overhang the subject property causing TERACOR to include up to 0.13 acre of Ornamental landscaping in the vegetation mapping. The *Eucalyptus* trees present along the east property line are unsuitable for burrowing owl. This area consisted of 0.13 acre.

Disturbed (No corresponding CaCode): It was included in the survey area, and primarily consisted of dirt roads, turn around areas, and previously-graded areas near the top of the hill in the northeast corner of the property. No owls were present in the disturbed areas. This area comprised 1.66 acres.

Table 2 – Vegetation Alliances

Vegetation Alliances	CA – Code	Acres
Annual Brome Grassland – Fiddleneck Field	42.027.00 / 42.110.00	1.69
California Buckwheat	32.040.00	1.3
Coast Live Oak	71.060.00	0.02
Cocklebur – Mustard – Red Brome – Mediterranean Grass	42.024.00	0.49
Agricultural (Vineyard)	No CA-Code	14.72
Arroyo Willow	61.201.00	0.02
Disturbed	No CA-Code	1.66
Ornamental/Eucalyptus	79.100.00	0.13
Total		**20.03 Acres**

5.0 Protection of Species - Riparian/Riverine/Vernal Pool Analysis (MSHCP Section 6.1.2)

Section 6.1.2 of the MSHCP describes the process through which protection of riparian/riverine areas and vernal pools (R/R/VP areas) would occur within the MSHCP Plan Area. Protection of riparian/riverine areas and vernal pools is important to conservation of the amphibian, bird, fish, invertebrate, and plant species which occur primarily or exclusively within these habitats. These species include: amphibians (for example arroyo toad); birds (such as least Bell's vireo), fish (e.g., Santa Ana sucker); invertebrates/crustaceans (e.g., Riverside fairy shrimp) and plants (including species such as California Orcutt grass, Orcutt's brodiaea, and spreading navarretia). The stated purpose contained in Section 6.1.2 states:

"The purpose ...is to ensure that the biological functions and values of these areas... are maintained such that Habitat values for species inside the MSHCP Conservation Area are maintained."

TERACOR first evaluated the site in the field on 10 January 2021. The last of several site evaluations occurred on February 2022. A burrowing owl habitat and focused survey was conducted in Spring 2021.

Vegetation mapping was performed to provide thorough consideration of alliances and disturbance history. All native and naturalized vegetation was recorded and organized into a compendium. Walkovers for identification of R/R/VP resources were conducted on each site visit, and potential R/R/VP resources were staked and flagged in the field and subsequently professionally surveyed for mapping purposes. The completion of all site investigations allowed consideration of the likelihood of occurrence of the riparian/riverine/vernal pool species which occur inside the MSHCP Conservation area. These species evaluations are presented below in *Table 3 - Riparian/Riverine and Vernal Pool Species*.

Table 3 - Riparian/Riverine and Vernal Pool Species (MSHCP Section 6.1.2)

Section 6.1.2 Species	Organismal Habitat Needs and Life History Parameters/Determination for the Project Site
Brand's star phacelia (*Phacelia stellaris*)	**Not Present**. Known only to occur along the Santa Ana River in Riverside County, this annual herb blooms from March through June. Elsewhere in CA it occurs in open areas within coastal dunes and coastal sage scrub below 400 meters. Habitat on-site is not suitable, and the subject property is outside of this species' known geographic range. Further, this species was not expected, due to habitat conditions, and it did not occur on-site.
California Orcutt grass (*Orcuttia californica*)	**Not Present.** This species is broadly distributed geographically, but confined to vernal pool complexes between fifteen (15) and 660 meters. It blooms from April through August. No vernal pools are present on-site. Habitat on the subject property, therefore, is unsuitable for this species, surveys are not required for the species in this area, and it was not detected on-site.
California black walnut (*Juglans californica*) Formerly *Juglans californica* var. *californica*	**Not Present.** This MSHCP-covered species occurs in western Riverside County. This deciduous tree occurs on slopes and in canyons between 50 and 900 meters along the south coast, south Transverse Ranges, and north Peninsular Ranges. It blooms from March through August. Walnut forest is a much fragmented, declining community. Individual trees themselves are not particularly relevant. Woodland stands would be considered sensitive and might warrant conservation or mitigation, not single trees. Walnut does not occur on the Project site.
Coulter's matilija poppy (*Romneya coulteri*)	**Not Present**. This MSHCP-covered species occurs in Riverside County. The matillja poppy is distinctive in that it has the largest flowers of any plant native to California. It typically blooms from March to July, and occasionally as late as August. It is often found in burned chaparral and coastal scrub in the Peninsular Ranges, Western Transverse Ranges, and the south coast area from 20 to 1200 meters in elevation. Surveys of the site revealed this species is not present.
Engelmann oak (*Quercus engelmannii*)	**Not Present**. This MSHCP-covered species occurs in western Riverside County; however, the subject property is not suitable for this tree species. This southern California oak occurs in chaparral, cismontane woodland, riparian woodland and valley and foothill grassland. Its elevation range is 50 to 1300 meters. This perennial deciduous tree flowers from March through June. It does not occur on-site.

Section 6.1.2 Species	Organismal Habitat Needs and Life History Parameters/Determination for the Project Site
Fish's milkwort (*Polygala cornuta* var. *fishiae*	**Not Present.** This perennial deciduous shrub blooms from May through August and occurs in chaparral, oak woodland and riparian woodland between 100 and 1000 meters in elevation. Vegetation surveys and mapping revealed this variety is not present on the subject property.
graceful tarplant (*Holocarpha virgata* ssp. *elongata*)	**Not Present.** This MSHCP-covered annual plant blooms from May through November and occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland between 60 and 1100 meters in elevation. It was not detected on-site.
lemon lily (*Lilium parryi*)	**Not Present.** This MSHCP-covered bulbiferous plant blooms from July through August and occurs in mesic areas within lower and upper montane coniferous forest, meadows and seeps, and riparian forest between 1220 and 2745 meters in elevation. The subject property is located outside of this species' known geographic and elevational range, and suitable habitat is not present on-site
Mojave tarplant (*Deinandra mohavensis*)	**Not Present.** This MSHCP-covered species is primarily a species found in the San Jacinto Mtns., however, it is also known to occur along washes at the eastern fringes of western Riverside Co. This annual herb blooms from May through January and occurs in mesic areas in chaparral, coastal scrub and riparian scrub between 640 and 1,600 meters in elevation. The subject property is outside this species' known geographic distribution, and this tarplant does not occur on-site.
mud nama (*Nama stenocarpa*) Formerly known as *Nama stenocarpum*	**Not Present**. This MSHCP-covered species is very scarce in Riverside County, known only from the north shore of Mystic Lake (Boyd et al). This herb blooms from January through July and occurs on marshes, swamps, lake margins and streambanks between 5 and 500 meters. Habitat on-site is not suitable and it has a restricted distribution that does not include the Lakeview Mountains. It does not occur on-site.
ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*)	**Not Present**. This perennial bulbiferous herb blooms from March through August and occurs often in shaded stream settings or in mesic openings within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest and riparian woodland between 30 and 1800 meters in elevation. Suitable habitat is not present on-site for this tall, conspicuous and easily-detected lily.
Orcutt's brodiaea (*Brodiaea orcuttii*)	**Not Present.** Boyd et all note that this MSHCP-covered species occurs in the southern Santa Ana Mtns. and on the Santa Rosa Plateau. This perennial bulbiferous herb blooms from May through July and occurs on mesic and clay soils in closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland and vernal pools between 30 and 1,692 meters in elevation. Suitable habitat is not present on-site, and the subject property is not located within the known geographic distribution of this species. Orcutt's brodiaea is not present on-site.

Section 6.1.2 Species	Organismal Habitat Needs and Life History Parameters/Determination for the Project Site
Parish's meadowfoam (*Limnanthes alba* ssp. *parishii*) Formerly known as *Limnanthes gracilis* var. *parishii*	**Not Present.** This annual herb blooms from April through June and occurs in vernally mesic areas and along edges of ephemeral streams in lower montane coniferous forest, meadows and seeps, and vernal pools between 600 and 2000 meters in elevation. Suitable habitat is not present on-site, and the subject property is outside this subspecies' known geographic distribution. This subspecies is not present on-site.
prostrate vernal pool navarretia (*Navarretia prostrata*)	**Not Present.** This MSHCP-covered species occurs in western Riverside County. This annual herb blooms from April through July and occurs in mesic areas in coastal scrub, meadows and seeps, alkaline valley and foothill grassland, and vernal pools between three (3) and 1210 meters in elevation. Suitable habitat is not present on-site. This species is not found on the subject property.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	**Not Present.** This MSHCP-covered this herb blooms from April through June and occurs in mesic areas in coastal scrub, valley and foothill grassland, vernal pools and marshes between 20 and 620 meters in elevation. Suitable habitat is not present on-site and it is our understanding it only occurs in vernal pools on the Santa Rosa Plateau.
San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*)	**Not Present.** This annual herb occurs in alkaline playas, mesic valley, foothill grasslands and vernal pools from 139 to 500 meters in elevation and blooms April through August. Threats include flood control, agriculture, non-native plants, urbanization, vehicles, road maintenance, and pipeline construction. According to the MSHCP, this species is primarily restricted to the alkali floodplains of the San Jacinto River, Mystic Lake and Salt Creek in association with Willows, Domino and Traver soils. This variety is also known to occur north of Diamond Valley Lake and on Willows soils at Alberhill Creek near Lake Elsinore. Suitable habitat is not present on-site. It is not found on the property.
San Miguel savory (*Clinopodium chandleri*) Formerly known as *Satureja chandleri*	**Not Present.** This MSHCP-covered species is a perennial shrub that occurs in western Riverside County, in rocky, gabbroic or metavolcanic areas in chaparral, cismontane woodland. It blooms from March through July. The property overlies granitic alluvial material which is low in mafic minerals. Suitable habitat and parent material rock for this species is absent on the subject property.
Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*)	**Not Present.** This MSHCP-covered perennial herb occurs in sandy or gravelly washes, floodplains, and dry riverbeds in chaparral and alluvial fan sage scrub from 91 to 610 meters in elevation. It blooms from April through September. This subspecies primarily occurs along the Santa Ana River from San Bernardino to Riverside. Structurally-suitable habitat may have been present a century ago, but the species was not detected and the altered condition of the wash suggests it is unlikely to occur.

Section 6.1.2 Species	Organismal Habitat Needs and Life History Parameters/Determination for the Project Site
slender-horned spineflower (*Dodecahema leptoceras*)	**Not Present.** Occurs in Riverside County mostly on old alluvial benches along the San Jacinto River, Bautista Canyon, Temescal Valley, and lower Agua Tibia Mtns. Listed as federally endangered on 28 September 1987 and state endangered in January 1982, this annual herb requires flood deposited terraces and washes in chaparral/coastal scrub and cismontane woodland between 200 and 760 meters. It is also found at Vail Lake on sandstone. It blooms from April through June. This species was not expected due to lack of support habitat and was not found on-site.
smooth tarplant (*Centromadia pungens* ssp. *laevis*)	**Not Present.** This MSHCP-covered species occurs in Riverside County and blooms from April through September and occurs below 640 meters in elevation. Smooth tarplant occurs in open, poorly drained flats, depressions, waterway banks and beds, grassland and disturbed sites. CNPS states that this subspecies occurs in alkaline areas in chenopod scrub, meadows and seeps, playas, riparian woodland and grassland. High porosity of sandy loam soils on-site suggests the site is not suitable.
spreading navarretia (*Navarretia fossalis*)	**Not Present.** This MSHCP-covered species occurs in southwest Riverside County. This annual blooms from April through June and occurs in vernal pools, ditches, chenopod scrub, marshes and swamps with assorted shallow freshwater, and playas. Habitat on-site is not particularly suitable for this species due to substantial alterations and hydrological alterations, and it was not detected on-site.
thread-leaved brodiaea (*Brodiaea filifolia*)	**Not Present**. This MSHCP-covered species occurs in western Riverside County. It is a bulbiferous perennial herb that blooms from March through June and is known to occur in chaparral openings, cismontane woodland, coastal scrub, playas, valley and foothill grasslands, and most often in vernal pool complexes and clay soils. It can be locally common in vernal pools complexes on the Santa Rosa Plateau and on alkali flats along the San Jacinto River. Suitable habitat is not present. This species was not detected and does not occur on-site.
Vernal barley (*Hordeum intercedens*) Now known as bobtail barley	**Not Present**. This MSHCP-covered species occurs in vernal pools, alkali flats and ephemeral saline streams within coastal dunes, coastal scrub and grasslands below 1000 meters throughout southwestern California. An annual herb, it blooms from March through June. Suitable habitat is not present on-site, and this species was not detected on the subject property.
Riverside fairy shrimp (*Streptocephalus woottoni*)	**Not Present.** The property was determined to be unsuitable for this species due to the lack of ponds, natural or human-induced vernal pools, clayey surface soils, and similar support features. This species of fairy shrimp is endemic to western Riverside, Orange, and San Diego Counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. It inhabits seasonally astatic pools filled by Winter/Spring rains, and hatches in warm water later in the season. Suitable habitat is not present as vernal pools and ponding were not found on the site.

Section 6.1.2 Species	Organismal Habitat Needs and Life History Parameters/Determination for the Project Site
vernal pool fairy shrimp (*Branchinecta lynchi*)	**Not Present.** TERACOR's on-site and off-site analysis found no evidence of vernal pools and thus the site was determined to be unsuitable for this species. Potential habitat includes short lived, cool temperature vernal pools. Vernal pools were not detected on-site; therefore, suitable habitat for this fairy shrimp is not present on the subject property.
arroyo toad (*Anaxyrus californicus*) Formerly known as (*Bufo californicus*)	**Not Present.** This species has no potential to occur on-site. The arroyo toad breeds in sandy river washes and inundated arroyos; hence the name arroyo toad. This species has a very specialized breeding habitat in that it requires shallow, slow moving water or overflow pools within a stream system comprised of silt-free sandy or gravelly substrates. This species also requires streamside terraces for burrowing. Suitable breeding habitat is not present on the subject property. Distance from the nearest natural suitably waterbody precludes its non-breeding presence outside of the breeding season as well.
California red-legged frog (*Rana draytonii*) Formerly known as *Rana aurora draytonii*	**Not Present.** Populations of this frog are in serious decline primarily due to the introduction of non-native predators such as the American bullfrog (*Lithobates catesbeianus*), habitat loss, on-going drought and pollutants. This species prefers pond habitats for breeding; however, it will also utilize slow, permanent streams. Necessary habitat is not present on-site.
southern mountain yellow-legged frog (*Rana muscosa*) Formerly known as the mountain yellow-legged frog	**Not Present.** This species has no potential to occur on-site. This frog species, once abundant, has lost approximately 99% of its former range. Chytrid fungus, introduction of bullfrogs and trout species, pollution, fires, drought and cattle grazing are just a few of the suspected causes of this, likely fatal, decline of the species. Suitable habitat is not present. This species is not present on-site.
Santa Ana sucker (*Catostomus santaanae*)	**Not Present.** The property contains no perennial aquatic habitat and was determined to be unsuitable for this species. This species is not present on the subject property.
bald eagle (*Haliaeetus leucocephalus*)	**Not Present**. Bald eagles typically nest in forested areas adjacent to large bodies of water and avoid heavily developed areas when possible. This species tolerates human activity when feeding, and may congregate around fish processing plants, dumps, and below dams where fish concentrate. Bald eagles prefer tall, mature coniferous or deciduous trees for perching, and can be seen in open, dry uplands if there is access to open water for fishing in winter. Bald eagles are becoming increasingly widespread again following cessation of the pesticide DDT, recovery efforts and public education. They forage throughout the MSHCP Plan area now with increasing frequency. The nearest substantial bodies of water are Mystic Lake, the San Jacinto Wildlife Refuge, Lake Mathews and Lake Perris. Suitable foraging and nesting habitat is generally not present on-site. This eagle would not occur on-site except perhaps to opportunistically consume larger conspicuous carrion in accessible areas like on area roadways.

Section 6.1.2 Species	Organismal Habitat Needs and Life History Parameters/Determination for the Project Site
least Bell's vireo (*Vireo bellii pusillus*)	**Not Present**. This riparian-obligate subspecies generally requires lesser-disturbed areas of dense willow-associated riparian habitat and prefers areas with standing water. The habitat on-site does not support standing water even seasonally nor does it support well-developed riparian woodland vegetation. This subspecies does not occur on-site.
Peregrine falcon (*Falco peregrinus anatum*) Formerly known as the peregrine falcon (*Falco peregrinus*)	**Not Present.** This MSHCP-covered species can occur in western Riverside County. This subspecies occurs along the coast year-round, breeding from Santa Barbara to northern California. This subspecies also breeds in the Sierra Nevada and the Salton Sea. The wintering range for this subspecies extends into the Central Valley and more inland in southern California. Most commonly occupied habitats contain cliffs for nesting, with open gulfs of air and generally open landscapes for foraging. In addition to natural habitats, many artificial habitats are now used by this subspecies (urban, human-built environments such as towers, buildings, etc.). Suitable nesting habitat is not present, and we did not observe this species foraging on or near the subject property.
southwestern willow flycatcher (*Empidonax traillii extimus)*	**Not Present.** The property was determined to be unsuitable for this species based on the absence of willow scrub on-site and because there is no seasonal standing water. The subspecies southwestern willow flycatcher occupies the southernmost breeding range of the willow flycatcher. Habitat loss and parasitism from brown-headed cowbirds have reduced the populations to the threshold of extinction in many ways. This species would not utilize the site.
western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	**Not Present**. The property is not suitable for this species. The western yellow-billed cuckoo prefers dense riverine woodlands. This subspecies is common in parts of its range, but has experienced serious declines due to habitat loss and fragmentation. This subspecies is not present on-site.

5.1 Riparian/Riverine

5.1.1 Methods

The MSHCP specifies that if any site contains stream resources (ephemeral, intermittent or perennial), or areas exhibiting ponding or similar detention of water (seasonal or permanent "waters") on the site, then jurisdictional criteria are applied in conformance with current professional delineation standards for both agencies. These areas would be mapped, measured, delineated, and evaluated with respect to vegetative composition and presence of hydric soils, using the resources and methodologies mandated by the respective resource agencies.

In the case of the subject site, the entire property was investigated and only one potentially-jurisdictional area was identified and mapped. Based on both on-site field investigation and the stated intention of the project proponent to avoid the 0.49-acre stormwater channel on-site, it is does not appear necessary to prepare a Preliminary Jurisdictional Delineation (PJD) report for either the U.S. Army Corps of Engineers ("Corps") or the California Department of Fish and Wildlife (CDFW). The area TERACOR mapped as falling

under Riverine provisions were considered using MSHCP criteria for this analysis, as well as identifying field evidence for presence of surface "waters". The riverine channel is earthen on its bottom and riprap has been installed on its margins. It was mapped using GPS/GIS cartographic methods by skilled delineation and survey personnel, and it clearly falls outside of the development footprint.

The MSHCP defines a riparian/riverine area as: *"...lands which contain Habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year..."* (MSHCP 6-21).

The MSHCP requires assessment of Riparian/Riverine resources, including but not limited to consideration of hydrology, species composition and utilization, topography, and soil analysis.

These areas, even when they are not located in targeted conservation lands, can sometimes require on-site preservation of Riparian/Riverine areas or additional off-site mitigation as negotiated. Vernal Pool assessment methodology, investigations and findings are discussed below in Section 5.2 Vernal Pools. The subject riverine area, which is 0.49 acre in size, is being completely avoided by the proposed project.

Functions and Values: The MSHCP requires assessment of riparian/riverine areas and vernal pools including consideration of species composition, topography/hydrology, and soil analysis, where appropriate. Section 6.1.2 states:

> *"Factors to be considered include hydrologic regime, flood storage and flood flow modification, nutrient retention and transformation, sediment trapping and transport, toxicant trapping, public use, wildlife Habitat, and aquatic Habitat. The functions and values assessment will focus on those areas that should be considered for priority acquisition for the MSHCP Conservation Area, as well as those functions that may affect downstream values related to Conservation of Covered Species within the MSHCP Conservation Area"* (MSHCP 6-22).

Artificial (Human-Created) Areas: Section 6.1.2 language clarifies that "*...areas demonstrating characteristics as described above which are artificially created are not included in these definitions.*" Exceptions to this are as follows: "*...wetlands created for the purpose of providing wetlands Habitat or resulting from human actions to create open waters or from the alteration of natural stream courses...*"

Human-affected Areas: Through both 1) on-site field analysis and 2) utilization of off-site information (i.e., federal government soils information, historic aerial photos, and vegetation mapping-derived data) TERACOR found that a U.S.G.S.-designated blueline formerly traversed the southerly and westerly boundary of the site, but the wash was channelized by the County of Riverside for flood control purposes.

Human-affected stream course areas, even when they are not located in targeted conservation lands, can also sometimes require on-site preservation of R/R/VP areas or specific off-site mitigation for impacts both temporal and permanent to those human-affected stream course areas. In this instance, the wash is already channelized and controlled by the County of Riverside.

MSHCP-Defined Riparian/Riverine and Vernal Pool Protected Habitat: MSHCP Section 6.1.2 describes the process by which protection of riparian/riverine areas and vernal pools occurs within the MSHCP Plan Area. Protection of riparian/riverine areas and vernal pools is important to conservation of specified amphibian, bird, fish, invertebrate, and plant species which occur within these habitats. These species include:

- Amphibians: arroyo toad, mountain yellow-legged frog, and California red-legged frog;
- Birds: bald eagle, peregrine falcon, least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo;
- Fish: Santa Ana sucker;
- Invertebrates - Crustaceans: Riverside fairy shrimp and vernal pool fairy shrimp;
- Plants: Brand's phacelia, California Orcutt grass, California black walnut, Coulter's matilija poppy, Engelmann oak, Fish's milkwort, graceful tarplant, lemon lily, Mojave tarplant, mud nama, ocellated Humboldt lily, Orcutt's brodiaea, Parish's meadowfoam, prostrate navarretia, San Diego button-celery, San Jacinto Valley crownscale, San Miguel savory, Santa Ana River woolly-star, slender-horned spine flower, smooth tarplant, spreading navarretia, thread-leaved brodiaea, and vernal barley.

Of the 23 plant species listed above, none were detected or expected to occur. None of the eleven (11) animal species listed above was detected or believed present on the Project site due to site conditions. These stream and pool-associated organisms are discussed in *Table 3 - Riparian/Riverine and Vernal Pool Species (MSHCP Section 6.1.2)*, previously presented.

5.1.2 Existing Conditions and Results

Existing conditions were evaluated in the field and remotely as previously described. The *MSHCP* protected species listed above in *Table 2*, above, were found unlikely to occur or absent, based on the methodologies recommended in the *MSHCP*, by the RCA, and in accordance with standard professional practice for consulting biologists in southern California.

Regarding Riparian/Riverine resources, TERACOR also utilized the MSHCP functional assessment parameters to guide the evaluation of the riverine area on the subject site.

MSHCP Section 6.1.2 indicates that eight (8) functions and values (all listed and considered below) should be described "... *with respect to the species listed above*..." (i.e., the Section 6.1.2 animals and plants). While all eight (8) functions and values need not be present to be considered Riparian or Riverine, it is the our opinion that a prevalence of these functions should be present to legitimately assert the applicability of Section 6.1.2 to surface water features.

Using the eight (8) criteria (functions and values) that are specifically described in Section 6.1.2, we applied those criteria to the flood control channel on-site that could be either observed or reasonably inferred:

- *Hydrologic Regime*: Determined Present in the 0.49 acre channel area, albeit in low

frequency. Evidence of water collection was detected, and this area was found to be "ephemeral".

- *Flood storage and Flood Flow Modification*: Determined Present in the 0.49 acre area. Much of the water entering or falling onto the site is absorbed into highly sandy substrate thereby naturally reducing downstream runoff. Substantial rainfall events, however, produce enough water volume within the channel.

- *Nutrient Retention and Transformation*: Determined Possibly Present in the 0.49 acre area. Nutrient Retention is hypothetically possible in any intermittent water feature, though contaminant levels entering and leaving the site in the stormwater channel could not reasonably be tested or even estimated.

- *Sediment Trapping and Transport*: Sediment Trapping is Present. Sediment in the form of sand and silt was clearly present throughout the bottom of the flood control channel and it can be reasonably inferred that this sediment is transported during storm events to downstream riverine areas.

- *Toxicant Trapping*: Presumed Potentially Present. Toxic substances could be present in the stormwater channel derived from legal vineyard operations and roadway sources of oil, grease and other petroleum products.

- *Public Use*: Determined Absent. There is no authorized public use of the site.

- *Wildlife Habitat*: Determined Absent for MSHCP species, except for common species like ground squirrel, Pacific rattlesnake and coyote. Not suitable habitat for any MSHCP Section 6.1.2 organisms or Table 9-3 organisms. Therefore, wildlife habitat for MSHCP species is not present.

- *Aquatic Habitat*: Determined Absent. Presence of water in the channel is ephemeral, and would not be expected to support aquatic life due to the infrequency of stormwater present in the channel and the porous nature of the substrate.

Summary of Functions and Values: The 0.51 acre avoided channel exhibits 5 of the 8 possible functions and values. All values will be 100% retained with implementation of the proposed project.

Conclusion Regarding Functions and Values: TERACOR has concluded that no Riparian area or Vernal pool features are present on-site, but the 0.51 acre stormwater channel is Riverine.

Table 4 – Potential Riparian/Riverine/Vernal Pool Resources

Potential Features	Potential Acreage	Determined R/R/VP	Affected Acreage	Total Affected Acreage R/R/VP
County Stormwater Channel	0.49	Yes	0.0	0.0
Total	**0.49**	0.49	**0.0**	**0.0**

5.1.3 Impacts

The Proposed Project completely avoids the County's flood control channel, therefore, no direct impacts to Riverine resources are expected to occur.

5.1.4 Mitigation

There are no direct impacts to the Riverine area on-site, therefore, no impacts to Riparian or Riverine resources are expected to occur, and no off-site mitigation for R/R resources is required. Best Management Practices (BMP's) must be utilized, however, in accordance with the approved SWPPP for the Project after approval by the County.

5.2 Vernal Pools

5.2.1 Methods

The MSHCP describes a vernal pool as *"... seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics, and the definition of the watershed supporting vernal pool hydrology, must be made on a case-by case basis. Such determinations should consider the length of the time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been subjected, and weather and hydrologic records* (MSHCP 6-22).

The methodology for detecting vernal pools consists of both on-site and off-site analysis. We begin by compiling information and data about the history of site use and development via historic aerial photography, analysis of underlying soils information obtained from the USDA, analysis of topographic conditions on-site and off-site in the contributing watershed, and review of any site-specific hydrological information and mapping if available. We sometimes interview the site owner or long-time nearby residents if they are available to do so, as area residents can sometimes provide useful anecdotal information (e.g., flooding, presence of predators, etc.).

If a state or federal preliminary jurisdictional delineation is being performed or has been performed, then criteria would be applied both in the field and in the preparation of the assessment off-site which would consider all the parameters listed by both the U.S. Army Corps of Engineers and the California Department of Fish and Wildlife (CDFW) to establish jurisdictional status. This information, particularly hydrological information, soils sampling, and compiling vegetative profiles in potential jurisdictional areas, would be very helpful. If any site is only upland in composition, then that information would not exist, and jurisdictional areas would be considered absent. In that event, TERACOR utilizes other information to establish vernal pool presence or absence. We purposely do not conduct soil sampling in areas under evaluation which might support endangered or threatened fairy shrimp species as a matter of avoiding any possibility of alleged "take" of a species. In that case we utilize information gathered from the surface such as evidence of ponding, surface soil color, presence of surface water, water-stained debris, and other non-invasive techniques for establishing the presence of a wetland, in conformance with Army Corps guidance and practice. We refer questionable sites (e.g., those with human-induced seasonal ponding) to fairy shrimp specialists.

5.2.2 Existing Conditions and Result

TERACOR field personnel utilized the methodology discussed above, and explored the property thoroughly to determine if vernal pools or their functional equivalents were present based on the methodology described above and the MSHCP-Section 6.1.2 defined criteria. We conducted a review of aerial photography, both recent and historic dating back to 1938, and subsequently performed comprehensive evaluation of the property to assess if any areas on-site met the criteria established in MSHCP Section 6.1.2 to be considered as a vernal pool.

There are no natural vernal pools or incipient ponding found on the property. The sandy loam soils and gradients on-site are not conducive to ponding.

5.2.3 Impacts

Based on the information gathered by TERACOR remotely and in the field, no impacts to vernal pools are expected to occur on the proposed Project site.

5.2.4 Mitigation

Based on the absence of natural or human-induced vernal pools or ponding, we concluded that further analysis was not required, and that vernal pool mitigation was not necessary to recommend.

5.3 Fairy Shrimp

Based on the information analyzed and reported above, it is the opinion of TERACOR that fairy shrimp species listed in the MSHCP would not occur on the site.

5.3.1 Impacts

TERACOR found there is no functional support habitat on-site for fairy shrimp species, therefore, no impacts are expected to occur.

5.3.4 Mitigation

There is no functional support habitat on-site for fairy shrimp species, therefore, no impacts are expected to occur, and no specific fairly shrimp mitigation is necessary.

5.4 Riparian Birds

There is no riparian vegetation present on-site capable of supporting any riparian bird species, therefore, further analysis is not required.

No impacts to Least Bell's vireo, southwestern willow flycatcher and yellow-billed cuckoo will occur on the proposed Project site with Project implementation.

5.5 Other Section 6.1.2 Species

No "other species" are expected to occur on the Project site.

6.0 Protection of Narrow Endemic Plant Species (MSHCP Section 6.1.3)

The proposed Project site does not lie within a Narrow Endemic Plant Survey Area or Criteria Area Plant Species survey area. As such, no surveys were required. While conducting vegetation and burrowing owl surveys, all plants encountered on-site were identified and no narrow endemic or criteria area plants were detected in Spring surveys from 23 March 2021 through 17 June 2021.

No narrow endemics were identified on the project site during vegetation surveys. No impacts to narrow endemic plant species would be expected as a result of Project implementation.

TERACOR queried the *California Natural Diversity Database* (*CNDDB*) for any recorded nearby target plant occurrences, and has included *Exhibit 10 – CNDDB Occurrences* for reference. No species were recorded nearby.

No mitigation for narrow endemic plant species is required as no impacts will occur to these plant species.

7.0 Additional Survey Needs and Procedures (MSHCP Section 6.3.2)

The proposed project is not located within a Section 6.3.2 survey area.

Criteria Area and Narrow Endemic Plant Species: The Proposed project does not fall within a mapped survey area for Criteria Area or Narrow Endemic plant species. Vegetation surveys did not incidentally detect any of these species. No impacts would occur, and no mitigation is necessary.

Amphibians: The Proposed project site does not fall within a mapped survey area for amphibian species. Site resources do not appear adequate for providing habitat for MSHCP-listed amphibian species. No impacts are expected to occur, and no mitigation is necessary.

Mammals: The proposed project does not fall within a mapped survey area for mammal species. The project site is within the Stephen's Kangaroo rat (SKR) fee area. SKR are known to occur in the area.

Burrowing Owl (BUOW): TERACOR conducted a burrowing owl habitat assessment and focused survey. The Habitat Assessment and Field Survey Methodology is described in detail in the BUOW Report. As described in the report, we followed the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (EPD 2006).

Burrowing Owl (BUOW): The subject property was required to conduct a burrowing owl habitat assessment. TERACOR performed the habitat assessment and concluded that portions of the property had some possibility of supporting BUOW, therefore focused surveys were undertaken in 2021. The Habitat Assessment and Field Survey Methodology is described in detail in the BUOW Report. The report is entitled *Step I Habitat Assessment, Step II, Part A Focused Burrow Survey and Step II, Part B Focused Burrowing Owl Survey For An Approximate 20.0 Acre Lot Located at the Northeast Corner of Rancho California Road and Calle Contento, in the County of Riverside, California,* dated 15 October 2022, and is a companion report to this Consistency Analysis. No burrowing owls were detected on the property. As described in the report, we followed the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (EPD 2006). No burrowing owls were detected on the property. No impacts are expected to occur.

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

8.0 Information on Other Species (MSHCP Table 9 - 3 Species)

8.1 Delhi Sands Flower-loving Fly (DSF)

The subject property is a great distance from areas mapped as potentially-suitable for DSF. These DSF occupied lands are generally north of the Santa Ana River. The organism is endemic the Delhi sands and similar aeolian sand-deposited substrates. A site-specific habitat assessment and surveys, of course, were not necessary.

8.1.1 Methods

The proposed project does not fall within an area with Delhi soils mapped within the MSHCP baseline data.

8.1.2 Existing Conditions and Results

The proposed project does not fall within an area with Delhi soils mapped within the MSHCP baseline data.

8.1.3 Impacts

The proposed project does not fall within an area with Delhi soils mapped within the MSHCP baseline data.

8.1.4 Mitigation

The proposed project does not fall within an area with Delhi soils mapped within the MSHCP baseline data, therefore, no mitigation is required.

8.2 Species Not Adequately Covered

No Species considered "Not Adequately Conserved" were found on the proposed Project site.

Table 5 - Covered Species Not Adequately Conserved (MSHCP Table 9 – 3)

Species	Conservation Requirement Status	Suitability of Subject Property for Organism - Life History and/or Habitat Description
Plants		
beautiful hulsea (*Hulsea vestita* ssp. *callicarpha*)	Met	**Not Present**. This MSHCP-covered species is a perennial herb which blooms from May through October and occurs on open gravel, talus slopes, rocky and granitic areas in montane chaparral and coniferous forest between 915 and 3050 meters in elevation. Suitable habitat is not present on-site, and the subject property is outside this subspecies' known geographic and elevational range.

Species	Conservation Requirement Status	Suitability of Subject Property for Organism - Life History and/or Habitat Description
California bedstraw (*Galium californicum* ssp. *primum*) Now known as Alvin Meadow bedstraw	No	**Not Present**. This subspecies is found on granitic or sandy substrates in chaparral and lower montane coniferous forests. Its blooming period is May through July and elevation range is 1350 to 1700 meters above sea level. Suitable habitat is not present, and the subject property is below the subspecies' known elevational range.
California muhly (*Muhlenbergia californica*)	No	**Not Present**. This now uncommon perennial rhizomatous herb blooms from June through September and occurs in seeps and streambanks in chaparral, forests, scrub and meadows throughout the western Transverse Ranges and south coast regions. Its elevation range is between 100 and 2000 meters. Habitat on-site is considered unsuitable for this species to occur on the subject property as seeps and moist streambanks are absent, and installation of granite riprap in the manmade stormwater channel appears quite unlikely.
chickweed oxytheca (*Sidotheca caryophylloides*) Formerly known as *Oxytheca caryophylloides*	No	**Not Present.** This annual herb occurs on sandy substrates in lower montane coniferous forest. It blooms from July to October and its elevation range is 1114 to 2600 meters. The subject property is outside of this species' known elevational and geographic ranges, and suitable habitat is not present on-site. It occasionally can be found in the San Jacinto River wash.
Cleveland's bush monkeyflower (*Diplacus clevelandii*) Formerly known as *Mimulus clevelandii*	No	**Not Present.** This MSHCP-covered plant occurs in upper elevation chaparral in the Santa Ana and Agua Tibia Mtns. As a perennial rhizomatous herb, it blooms from April through July and occurs in gabbroic, often in disturbed areas, openings and rocky areas in chaparral, cismontane woodland and lower montane coniferous forest between 450 and 2000 meters in elevation. Gabbroic parent material is absent, and the subject property is outside this species' known geographic range.
cliff cinquefoil (*Potentilla rimicola*)	No	**Not Present.** This perennial herb occurs in granitic and rocky crevices in subalpine coniferous forest and upper montane coniferous forest between 2400 and 2800 meters in elevation. This species blooms from July through September. According to the CNPS, cliff cinquefoil is known only to occur in the San Jacinto Mountains. Suitable habitat is not present on-site, and the subject property is outside of this species' known geographic and elevational ranges.

Species	Conservation Requirement Status	Suitability of Subject Property for Organism - Life History and/or Habitat Description
Coulter's matilija poppy (*Romneya coulteri*) This species is also a 6.1.2 species.	Met	**Not Present**. This MSHCP-covered species occurs in Riverside County. The matillja poppy is distinctive in that it has the largest flowers of any plant native to California. It typically blooms from March to July, and occasionally as late as August. It is often found in burned chaparral and coastal scrub in the Peninsular Ranges, Western Transverse Ranges, and the south coast area from 20 to 1200 meters in elevation. It was not detected on-site during vegetation identification and mapping surveys, and does not occur on-site.
Fish's milkwort (*Polygala cornuta* var. *fishiae* This species is also a 6.1.2 species.	Met	**Not Present.** This perennial deciduous shrub blooms from May through August and occurs in chaparral, oak woodland and riparian woodland between 100 and 1000 meters in elevation. This perennial shrub was not detected on the Project site during vegetation identification and mapping surveys.
graceful tarplant (*Holocarpha virgata* ssp. *elongata*) This species is also a 6.1.2 species.	Met	**Not Present.** This MSHCP-covered annual plant blooms from May through November and occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland between 60 and 1100 meters in elevation. It was not detected on-site.
lemon lily (*Lilium parryi*) This species is also a 6.1.2 species.	No	**Not Present.** This MSHCP-covered bulbiferous plant blooms from July through August and occurs in mesic areas within lower and upper montane coniferous forest, meadows and seeps, and riparian forest between 1220 and 2745 meters in elevation. The subject property is located outside of this species' known geographic and elevational ranges, and suitable habitat is not present on-site.
Mojave tarplant (*Deinandra mohavensis*) This species is also a 6.1.2 species.	No	**Not Present.** This MSHCP-covered species is primarily found in the San Jacinto Mtns. It is also known to occur along washes at the eastern fringes of western Riverside Co. This herb occurs in mesic areas in chaparral, coastal scrub and riparian scrub between 640 and 1,600 meters in elevation. The subject property is outside this species' known geographic distribution and at the low end of its elevational range. It was not detected on-site.
ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*) Also a 6.1.2 species.	No	**Not Present**. This perennial bulbiferous herb blooms from March through August and occurs along shaded streams and in openings within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest and riparian woodland between 30 and 1800 meters in elevation. Suitable habitat is not present on-site for this tall, conspicuous and easily-detected lily.

Species	Conservation Requirement Status	Suitability of Subject Property for Organism - Life History and/or Habitat Description
Parry's spineflower (*Chorizanthe parryi* var. *parryi*)	Met	**Not Detected**. This annual herb occurs in sandy or rocky openings in chaparral, cismontane woodland, coastal scrub and grassland between 275 and 1220 meters in elevation. It blooms from April through June and is currently known from approximately 20 occurrences in Riverside County, but does not occur on-site.
peninsular spineflower (*Chorizanthe leptotheca*)	Met	**Not Detected.** This annual herb blooms from May through August and occurs on natural alluvial fans and granitic areas in chaparral, coastal scrub and lower montane coniferous forests from 300 to 1,900 meters in elevation. Suitable habitat is not present on-site. It occurs on alluvial benches at the base of both the Santa Ana and Agua Tibia Mtns (Vail Like).
Plummer's mariposa lily (*Calochortus plummerae*)	**Met**	**Not Present**. This distinctive and easily detected perennial bulbiferous herb is usually found on granitic, rocky slopes within chaparral, cismontane woodland, coastal scrub, and grassland from 100 to 1700 meters. Boyd et al cite the northeastern Santa Ana Mtns, Box Springs Mtn, and Skinner Lake as occurrences. This species was not detected.
Rainbow manzanita (*Arctostaphylos rainbowensis*)	Met	**Not Present.** This MSHCP-covered species occurs in western Riverside County in both the Aqua Tibia Mountains and the hills above Murrieta in chaparral on basalt flows. This perennial evergreen shrub blooms from December through March and occurs on granitic outcrops in chaparral between 205 and 670 meters in elevation. Suitable habitat for this shrub is not present, and this species is not known to occur within this immediate area. Rainbow manzanita is not on the site.
shaggy-haired alumroot (*Heuchera hirsutissima*)	No	**Not Present.** This perennial rhizomatous herb blooms from May through July and occurs in rocky and granitic areas in subalpine coniferous forest and upper montane coniferous forest between 1520 and 3500 meters in elevation. The subject property is outside of this species' known geographic and elevational ranges, and suitable habitat is not present on-site.
small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*)	Met	**Not Present.** This MSHCP-covered herb occurs in western Riverside County; in heavy clay soils associated with vernal pools, grasslands and similar habitats. It blooms from March through May and occurs below 1070 meters in the South Coast region, Peninsular Ranges and San Jacinto Mountains. Suitable habitat is not present on-site.
sticky dudleya (*Dudleya viscida*) Formerly known as sticky-leaved dudleya	No	**Not Present.** This MSHCP-covered species occurs in western Riverside County. This perennial herb blooms from May through June and occurs in steep, rocky scrub, chaparral, and cismontane woodland between ten (10) and 550 meters in elevation. This dudleya is not detected on-site.
Reptiles		

Species	Conservation Requirement Status	Suitability of Subject Property for Organism - Life History and/or Habitat Description
California mountain kingsnake (San Bernardino population) (*Lampropeltis zonata [parvirubra]*) **California mountain kingsnake (San Diego population)** (*Lampropeltis zonata [pulchra]*)	No	**Not Present**. These MSHCP-covered subspecies can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. The California mountain kingsnake inhabits mountainous regions across southern California. It prefers moist woods, coniferous forests, oak woodlands, and chaparral above 1000 meters. They are quite secretive, residing in rock crevices or beneath rock and debris piles. They may also utilize rotting logs and seek cover under dense shrubs. Habitat on-site is not particularly suitable, and the subject property is located below these snakes' known elevational range.
southern rubber boa (*Charina umbratica*) Formerly known as *Charina bottae umbratica*	No	**Not Present**. This MSHCP-covered species possibly occurs on-site though ATV and dirt bike trespassing may have impacted the species locally. The southern rubber boa frequents grassland, broken chaparral, woodland, and forest, in and beneath rotting logs, under rocks, and under bark of fallen and standing dead trees. Habitat on-site is not suitable due to disturbance factors and the lack of dead-wood on-site.
southern sagebrush lizard (*Sceloporus graciosus vandenburgianus*)	No	**Not Present**. This MSHCP-covered subspecies occurs in western Riverside County; however, this lizard is found within the San Jacinto and Santa Rosa Mountains above 1,524 meters in elevation. Suitable habitat includes montane chaparral, sagebrush (*Artemisia* sp.), hardwood and conifer forests and woodlands and juniper woodlands. Habitat on-site is not suitable, and the subject property is outside of this subspecies' known geographic range.
Birds		
California spotted owl (*Strix occidentalis occidentalis*)	No	**Not Present**. The California spotted owl has a sparse distribution within the Santa Ana Mountains, San Bernardino Mountains and the San Jacinto Mountains within the MSHCP Plan Area within montane coniferous forest and oak-deciduous woodlands and forests. Suitable habitat is not present on-site, and the subject property is outside this owl's known geographic range. This subspecies would not occur on the subject property.
grasshopper sparrow (*Ammodramus savannarum*)	Partially met	**Not Detected.** This MSHCP-covered species is not likely to utilize the subject property. The species prefers grasslands with sparse shrub cover. It occurs mainly on hillsides and mesas in coastal districts, but has bred up to 1500 meters in the San Jacinto Mountains. It was not detected on the subject property.

Species	Conservation Requirement Status	Suitability of Subject Property for Organism - Life History and/or Habitat Description
Lincoln's sparrow - breeding (*Melospiza lincolnii*)	No	**Not Present.** The Lincoln's sparrow has a sparse and widespread distribution throughout the MSHCP Plan Area within a wide variety of habitats. This species occurs within the lowland and foothills of the Plan Area as a transient in the Spring and Fall and may overwinter within the area. This sparrow prefers dense, low underbrush often in disturbed edges with grasses and weeds mixed with shrubs. It occurs in a variety of habitats including willow-sedge swamp, scrub-meadow, and flat land aspen. Breeding in southern California occurs in wet montane meadows of corn lily, sedges and low willows. At lower elevations, this organism prefers mesic willow shrubs and can be found in mixed deciduous groves such as aspen and cottonwoods, mixed shrub-willows, bogs as well as a variety of other riparian habitats. Suitable habitat is absent.
Williamson's sapsucker (*Sphyrapicus thyroideus*)	No	**Not Present**. This species has declined throughout its range presumably from loss of large snags for nesting. Habitat includes montane coniferous forest dominated by lodge pole pines and firs, and oak woodlands and forests in the San Bernardino and San Jacinto Mountains. Suitable habitat is not present on-site, and the subject property is outside this species' known range.
Mammals		
San Bernardino flying squirrel (*Glaucomys oregonensis californicus*) Formerly *Glaucomys sabrinus californicus*	No	**Not Present.** This MSHCP-covered species occurs in Riverside County; however, habitat for the San Bernardino flying squirrel in the Plan Area only occurs in the San Jacinto Mountains. Suitable habitat is not present on-site. This squirrel would, therefore, not occur on the subject property.

9.0 Urban/Wildlands Interface

The Project site lies outside of any Criteria Cells designated and described for conservation. The Project, therefore, has very limited negative affect adjacent and downstream conserved areas.

Drainage – Pre-Construction: No pre-construction measures are required to be implemented.

Drainage – Post-Construction: Urban runoff will be treated on-site prior to being discharged, as must be described in a Water Quality Management Plan (WQMP) that is required by the County of Riverside. The

approved WQMP will require on-site Best Management Practices (BMP's) to address runoff and low flow stormwater quality.

Best Management Practices (BMP's) Construction and Operational: During project grading, a number of BMPs will be implemented to protect off-site downstream areas. These measures will likely include construction of temporary detention basins, use of straw bales and fiber roles (straw wattles) to detain and filter sheet-flow, use of silt fencing where appropriate, utilization of sandbags, installation of mitigation devices to be installed to control dust and dirt in ingress/egress areas for vehicular traffic, dust control via watering, and/or similar measures. The Water Quality Management Plan (WQMP) is reviewed and approved by the County of Riverside and must include a detailed account of the BMPs that will be utilized. Permanent treatment facilities must also be constructed to treat water derived from hardscape surfaces associated with the new project to protect downstream water quality as part of the proposed Project.

Toxics – Potential toxics in runoff and stormwater will be treated on-site in the post-construction phase. No toxic material would affect existing or future Reserve areas because drainage generated from the proposed Project will be controlled and treated prior to discharge.

Lighting – The proposed Project will be expected to generate night-time light, however, it would not affect any MSHCP-conserved areas. A lighting plan will be prepared as required by the County of Riverside to reduce lighting effects.

Noise – The proposed Project will generate both construction and operational noise. However, the Project site is distant from MSHCP-conserved lands and this noise would not substantially negatively MSHCP Reserve areas.

Invasives – The Project will not be allowed to utilize plants included in *Table 6-2 Plants that Should be Avoided Adjacent to the MSHCP Conservation Area* within Section 6.1.4 of the MSHCP. All proposed landscaping must be included in a landscape plan which will be reviewed by the County of Riverside to insure that landscape materials do not include the use of invasives and utilizes native and drought tolerant plant materials. The plan must avoid the use of invasive species due to transport by wind, water and biota.

Barriers – The property face public roadways to the south and west. The property to the north is natural and currently undeveloped. The property to the east is a rural residential homesite with non-native vegetation dominant on the site. No barriers are considered necessary.

Grading/Land Development – Grading and development of the property has no significant potential to negatively affect MSHCP-conserved areas. The implementation of BMP's and specific conditions of approval which may be required by the County of Riverside would reduce the impact of development via implementation of the measures described above.

Fuels Management - The MSHCP states: "*Fuels management focuses on hazard reduction for humans and their property… management …shall continue in a manner that is compatible with public safety and conservation of biological resources.*". MSHCP Section 6.4 outlines a framework for working to minimize

effects of establishing and maintaining fuel modification zones within designated conservation areas. Because the Project site is located in an agricultural and recreational area which contains numerous and varied commercial uses, no fuel management is necessary.

10.0 Best Management Practices

During project construction, a number of BMPs will be implemented and enforced by the County of Riverside Building and Safety Department to protect downstream water resources and sensitive human receptors in the area. Sensitive human receptors include children (disproportionately outdoors and more subject to effects of contamination), the disabled, breathing-impaired or immune-compromised individuals, and the elderly. These groups are more susceptible to the negative effects of uncontrolled dust, pollution from poorly-maintained or older construction equipment, and noise. A Preliminary Water Quality Management Plan ("WQMP"), which includes a detailed account of the BMPs that will be utilized, will be submitted to the County of Riverside. The following types of BMPs will be implemented for erosion, dust and sediment control, although all of them may not be required:

1. Dust control: Controlled by use of water trucks and cessation of work on windy days.
2. Fiber rolls (wattles): Fiber rolls are placed on the ground to intercept surface waters which contain dirt and sand.
3. Stabilized construction entrances – These facilities prevent mud and dirt from leaving the construction site if tires are very dirty or muddy.
4. Check dams: Temporary check dams hold back surface flows on-site during storm events.
5. Silt fencing: Silt fencing detours and redirects contaminated flow into basins or similar containment features.
6. Straw bale dikes: Straw bales stabilize dirt surfaces and prevent run-off into streets.
7. Sandbags: Sand bags detain and help filter dirty stormwater.
8. Detention basins: temporary areas to detain and filter dirty water.

Post-Construction BMPs

Once the project is constructed, a single Best Management Practice (BMP) will be in operation and will need to be approved by the County of Riverside. These permanent systems are designed to control erosion, collect sediment, and improve water quality from runoff generated by the site.

The Stormwater Filtration System usually consists of basins and/or bioswales which are designed to capture low flows generated on the Project site and detain those flows on-site while biological processes breakdown and absorb deleterious compounds and substances.

The design of the water treatment system will be approved in advance by the County and will be detailed in the above mentioned WQMP which will be on file with the County of Riverside.

11.0 MSHCP Project Impacts and Recommended Mitigation Measures

MSHCP Project Impacts

Project-associated impacts within the MSHCP Plan Area are typically offset and mitigated via a number of processes. When projects are within Criteria Cells various combinations of avoidance, fee-payment, land dedication/purchase, and other mechanisms as applicable can be utilized to offset impacts to sensitive species and habitats of all types. Some project areas are required to survey for specific biological resources, such as burrowing owl or fairy shrimp. When those focused surveys are positive and target organisms or their habitats are identified on-site, then avoidance is usually required, and land dedication and other mitigation measures unique to that resource may be necessary. There are no burrowing owls present, therefore, at this time no specific BUOW-related mitigation is necessary. MSHCP fee payment is, however, required to offset the loss of biological resources described in this report that would occur with Project implementation.

Project implementation would result in loss a minimal amount of semi-natural habitat. These natural and naturalized upland habitat areas would be permanently removed. Impacts to all upland vegetation communities would be mitigated as described above, through MSHCP fee payment and SKR-fee payment. No impacts to riverine or riparian resources have been identified.

With the implementation of the mitigation measures described below, none of these effects are considered to be significant.

Recommended Mitigation Measures

1. Prior to the commencement of grading activities, the developer of the site shall make the appropriate mitigation fee payment into the MSHCP Stephens' kangaroo rat fee payment program for conservation of Stephens' kangaroo rat-occupied habitats in order to offset the loss of potentially suitable Stephens' kangaroo rat habitat on-site through project implementation.

2. Prior to the issuance of certificate of occupancy permits the developer of the site shall make the appropriate MSHCP mitigation fee payment that will contribute to conservation and management of conservation land for all MSHCP-covered organisms.

3. Prior to vegetation clearance, the Project applicant shall retain a qualified biologist to conduct a pre-disturbance nesting bird survey in accordance with the following:

a) The survey shall be conducted no more than three (3) days prior to the initiation of clearance/construction work;

b) If pre-disturbance surveys indicate that bird nests are not present or are inactive, or if potential habitat is unoccupied, no further mitigation is required;

c) If active nests of birds are found during the surveys, a species-specific no-disturbance buffer zone shall be established by a qualified biologist around active nests until a qualified biologist determines that all young have fledged (i.e., no longer reliant upon the nest).

d) It is recommended that close coordination between the developer of the site, the County of Riverside, the project engineer, and the consulting qualified biologist to consider vegetation clearance outside of the normal bird nesting season (usually February 15 – Sept 15) to avoid impacts to nesting birds which would potentially violate the federal Migratory Bird Treaty Act. It should be noted that bird nesting season is increasingly less-definitive for some year-round resident species such as hummingbirds and raptors. Further, ground-dwelling birds such burrowing owls, can be affected nearly any time of the year if present. It is therefore advisable to conduct a preconstruction bird survey no matter the time of year.

e) Removal of vegetation necessitates installation of appropriate Storm Water Pollution Prevention Plan "SWPPP" measures, particularly if grading is not undertaken immediately, therefore careful timing of the project schedule and implementation measures is necessary to avoid water quality impacts.

4. The Project Developer shall retain a qualified biologist to conduct a 30-day pre-construction survey for BUOW. The results of the single one-day survey would be submitted to the County of Riverside prior to obtaining a grading permit. If BUOW are not detected during the pre-construction survey, no further mitigation is required. If BUOW are detected during the pre-construction survey, the Project applicant and a qualified consulting biologist will be required to prepare and submit for approval a BUOW-relocation program. The report shall be submitted to the Applicant and the County of Riverside concurrently.

5. In accordance with MSHCP provisions limiting the use of exotic/invasive plant species, the Project's landscape plan shall exclude invasive species such as crimson fountain grass (*Pennisetum setaceum*), pampas grass (*Cortaderia selloana*), giant reed (*Arundo donax*), tree of heaven (*Ailanthus altissima*), *Eucalyptus*, and other ornamental landscape elements on the list of exotic invasive plants utilized by the Riverside Conservation Authority.

6. The Project Developer shall implement dust control and all other project-specific Storm Water Pollution Prevention Plan ("SWPPP") measures during grading and construction required by the County of Riverside.

7. TERACOR has determined that Riverine resources are present in the County flood control channel adjacent to and partially within the subject site. The Proposed Project has been designed to completely avoid this riverine area. No Riparian or Vernal Pool resources are present.

8. The subject site likely contains a small portion of a flood control channel (0.49 acre) which likely falls under the jurisdiction of the U.S. Army Corps of Engineers and/or the California Department of Fish and Wildlife (CDFW) and/or the California Regional Water Quality Control Board – San Diego Region (Water Board). The County has worked with the Applicant to design the Project in a manner that would completely avoid any potential jurisdictional area.

Level of Significance After Mitigation

Implementation of the proposed mitigation measures described above would reduce all the impacts to the biological resources discussed in this biological assessment to a level considered not significant.

12.0 References

Attached as *Appendix C – References.*

CERTIFICATION: I hereby certify that the statements and exhibits contained in this report present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge.

15 October 2022

Samuel Reed, Principal — Date
U.S. Fish & Wildlife Service Recovery Permit No. 839896-6
Scientific Collecting Permit No. 002267

Appendix A
Faunal Species Observed

Birds

Birds were observed with 10x40 binoculars. Birds were identified following *The Sibley Field Guide to Birds 2nd Edition* (2014), and updated to conform to changes in nomenclature consistent with the most recent American Ornithological Society checklist. Non-native species have been noted below with an asterisk (*) following the scientific name.

Scientific Name	Common Name
Accipitridae	**Hawks, Eagles, Kites, Harriers, Ospreys**
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Aegithalidae	**Bushtits**
Psaltriparus minimus	bushtit
Ardeidae	**Bitterns**
Ardea alba	great egret
Cathartidae	**American Vultures**
Cathartes aura	turkey vulture
Columbidae	**Pigeons and Doves**
*Columba livia**	rock pigeon
Zenaida macroura	mourning dove
Corvidae	**Crows, Jays and Magpies**
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Cuculidae	**Anis, Cuckoos, Roadrunners**
Geococcyx californianus	greater roadrunner
Falconidae	**Falcons**
Falco sparverius	American kestrel
Fringillidae	**Finches**
Haemorhous mexicanus	house finch
Spinus lawrencei	Lawrence's goldfinch
Spinus psaltria	lesser goldfinch
Spinus tristis	American goldfinch

Scientific Name	Common Name
Icteridae	**Blackbirds**
Icterus cucullatus	hooded oriole
Sturnella neglecta	western meadowlark
Mimidae	**Mockingbirds, Thrashers**
Mimus polyglottos	northern mockingbird
Motacillidae	**Wagtails and Pipits**
Anthus rubescens	American pipit
Parulidae	**Wood Warblers**
Setophaga coronata	yellow-rumped warbler
Passerellidae	**New World Sparrows**
Melozone crissalis	California towhee
Passerculus sandwichensis	savannah sparrow
Melospiza melodia	song sparrow
Zonotrichia atricapilla	golden-crowned sparrow
Zonotrichia leucophrys	white-crowned sparrow
Passeridae	**Old World Sparrows**
*Passer domesticus**	house sparrow
Picidae	**Woodpeckers**
Picoides nuttallii	Nuttall's woodpecker
Sturnidae	**Starlings**
*Sturnus vulgaris**	European starling
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Tyrannidae	**Flycatchers**
Tyrannus vociferans	Cassin's kingbird
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus verticalis	western kingbird

Scientific Name	Common Name
Tytonidae	**Barn Owls**
Tyto alba	barn owl (carcass)

Mammals

Species seen or detected via sign are listed. Nomenclature follows *Peterson Field Guides: Mammals of North America* (Reid 2006). Non-native species have been noted below with an asterisk (*) following the scientific name.

Scientific Name	Common Name
Canidae	**Coyotes, Dogs, Foxes, Jackals, and Wolves**
Canis latrans	coyote
Cricetidae	**Hamsters, Voles, New World Rats and Mice**
Neotoma fusipes	dusky-footed woodrat (likely)
Felidae	**Cats**
Lynx rufus	bobcat (tracks)
Geomyidae	**Pocket Gophers**
Thomomys bottae	Botta's pocket gopher
Leporidae	**Rabbits and Hares**
Lepus californicus deserticola	black-tailed jackrabbit
Sylvilagus audubonii	Audubon's cottontail
Mephitidae	**Skunks and Stink Badgers**
Mephitis mephitis	striped skunk (tracks)
Procyonidae	**Raccoons and Relatives**
Procyon lotor	northern raccoon (tracks)
Sciuridae	**Squirrels, Chipmunks and Marmots**
Ostospermophilus beecheyi	California ground squirrel

Amphibians and Reptiles

Identification of amphibians and reptile species were made visually, with nomenclature following R.C. Stebbins (2003) *A Field Guide to Western Reptiles and Amphibians,* third edition, updated to conform to the most recent changes in nomenclature utilizing The Center for North American Herpetology.

Scientific Name	Common Name
Reptiles	
Lizards	
Phrynosomatidae	**Zebra-tailed, Fringe-toed, Spiny, Tree, Side-Blotched, and Horned Lizards**
Sceloporus occidentalis	western fence lizard
Uta stansburiana	common side-blotched lizard
Snakes	
Colubridae	**Harmless Egg-Laying Snakes**
Pituophis catenifer annectens	San Diego gopher snake

Appendix B
Floral Species Observed

Vegetation List

The species listed below were detected within the subject property during field surveys performed in 2022. Field identifications are a composite list prepared by S. Reed and M. Long. Scientific names follow *The Jepson Manual, Vascular Plants of California - Second Edition*, 2012, and have been updated following the Jepson Online Interchange for California Floristics database (2014). Non-native species have been noted below with an asterisk (*) following the scientific name. Exotic trees were not systematically included in the list, although some well-known species are.

Scientific Name	Common Name
Amaranthaceae	**Amaranth Family**
*Amaranthus albus**	tumbleweed
*Salsola tragus**	Russian thistle
Anacardiaceae	**Sumac Family**
*Schinus molle**	pepper tree
Asteraceae	**Sunflower Family**
Ambrosia sp.	
Ambrosia psilostachya	western ragweed
Artemisia douglasiana	mugwort
Artemisia californica	California sagebrush
Baccharis salicifolia ssp. *salicifolia*	mulefat
Centaurea benedicta	blessed thistle
Corethrogyne filaginifolia	common sandaster
Deinandra sp.	tarplant
Deinandra paniculata	paniculate tarplant
Erigeron canadensis	horseweed
Helianthus annuus	common sunflower
Heterotheca grandiflora	telegraph weed
*Lactuca serriola**	prickly lettuce
Lessingia filaginifolia	California aster
Matricaria discoidea	pineapple weed
*Oncosiphon piluliferum**	stinknet
Pseudognaphalium californicum	California everlasting
*Sonchus asper**	prickly sow thistle
*Taraxacum officinale**	common dandelion
Xanthium strumarium	cocklebur
Aizoaceae	**Fig-Marigold Family**
Mesembryanthemum sp.*	ice plant

Scientific Name	Common Name
Boraginaceae	**Borage Family**
Amsinckia intermedia	common fiddleneck
Amsinckia menziesii	small-flowered fiddleneck
Cryptantha intermedia	common cryptantha
Heliotropium curassavicum var. *oculatum*	alkali heliotrope
Pectocarya linearis ssp. ferocula	slender combbur
Phacelia cicutaria var. hispida	caterpillar phacelia
Plagiobothrys collinus	California popcorn flower
Brassicaceae	**Mustard Family**
*Brassica nigra**	black mustard
*Hirschfeldia incana**	short-pod mustard
*Raphanus sativus**	radish
Lepidium sp.	pepper grass
*Sisymbrium irio**	London rocket
*Sisymbrium orientale**	Oriental hedge mustard
Cactaceae	**Cactus Family**
Opuntia sp.	cane cholla
Opuntia basilaris var. *basilaris*	beavertail cactus
Chenopodiaceae	**Goosefoot Family**
*Chenopodium album**	lamb's quarters
*Salsola tragus**	Russian thistle
Convolvulaceae	**Morning-glory Family**
Convolvulus arvensis	field bindweed
Crassulaceae	**Crassila Family**
Crassula connata	sand pygmy-stonecrop
Euphorbiaceae	**Spurge Family**
Croton setiger	turkey mullein
Euphorbia polycarpa	smallseed sandmat
Fabaceae	**Legume Family**
Acmispon glaber	deerweed
Lotus purshianus	Spanish clover
Lupinus bicolor	miniature lupine
*Melilotus officinalis**	yellow sweetclover

Scientific Name	Common Name
Prosopis sp.	mesquite
Fagaceae	**Oak Family**
Quercus agrifolia	coast live oak
Geraniaceae	**Geranium Family**
*Erodium cicutarium**	redstem filaree
Lamiaceae	**Mint Family**
*Marrubium vulgare**	horehound
Salvia columbariae	chia
Trichostemma lanceolatum	vinegar weed
Lythraceae	**Loosestrife Family**
*Punica granatum**	pomegranate
Malvaceae	**Mallow Family**
*Malva parviflora**	cheeseweed
Myrtaceae	**Myrtle Family**
*Eucalyptus sideroxylon**	red iron bark
*Eucalyptus polyanthemos**	silver dollar
Oleaceae	**Olive Family**
*Olea europaea**	European olive
Onagraceae	**Evening Primrose Family**
Camissonia californica	California sun cup
Camissonia micrantha	miniature sun cup
Camissonia strigulosa	sandysoil sun cup
Papaveraceae	**Poppy Family**
Eschscholzia californica	California poppy
Pinaceae	**Pine Family**
Pinus sp.	pine
Poaceae	**Grass Family**
*Avena barbata**	slender wild oat
*Bromus diandrus**	ripgut grass

Scientific Name	Common Name
Bromus madritensis ssp. *rubens**	red brome
*Bromus tectorum**	cheat grass
*Schismus barbatus**	common Mediterranean grass
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum	California buckwheat
*Rumex crispus**	curly dock
Portulacaceae	**Purslane Family**
Calandrinia ciliata	redmaids
Salicaceae	**Salix Family**
Populus fremontii	Fremont cottonwood
Salix sp.	willow
Salix lasiolepis	arroyo willow
Solanaceae	**Nightshade Family**
Datura wrightii	jimson weed
*Nicotiana glauca**	tree tobacco
*Solanum elaeagnifolium**	white horse-nettle
Urticaceae	**Nettle Family**
*Urtica urens**	dwarf nettle

Appendix C
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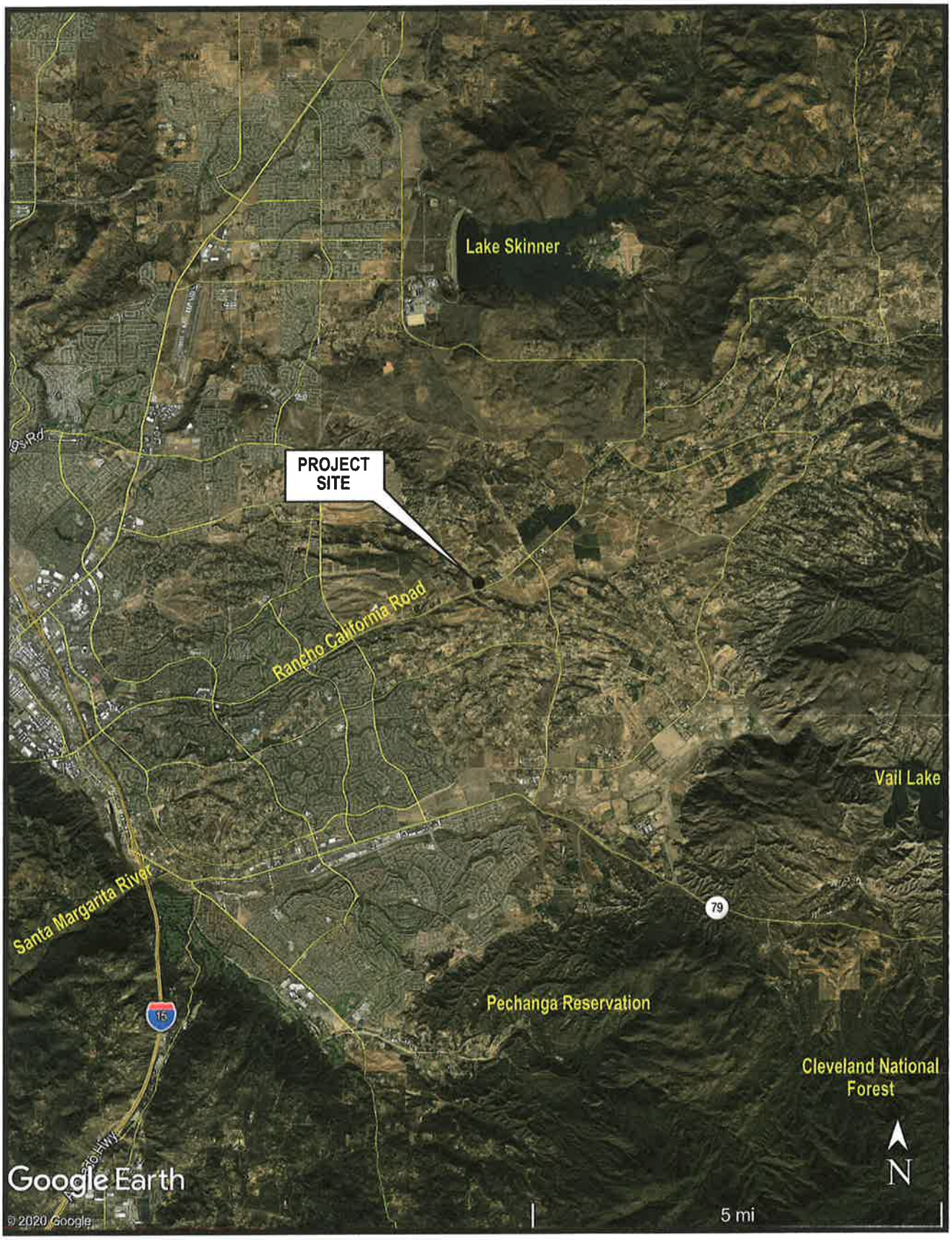
Appendix D
List of Abbreviations/Acronyms

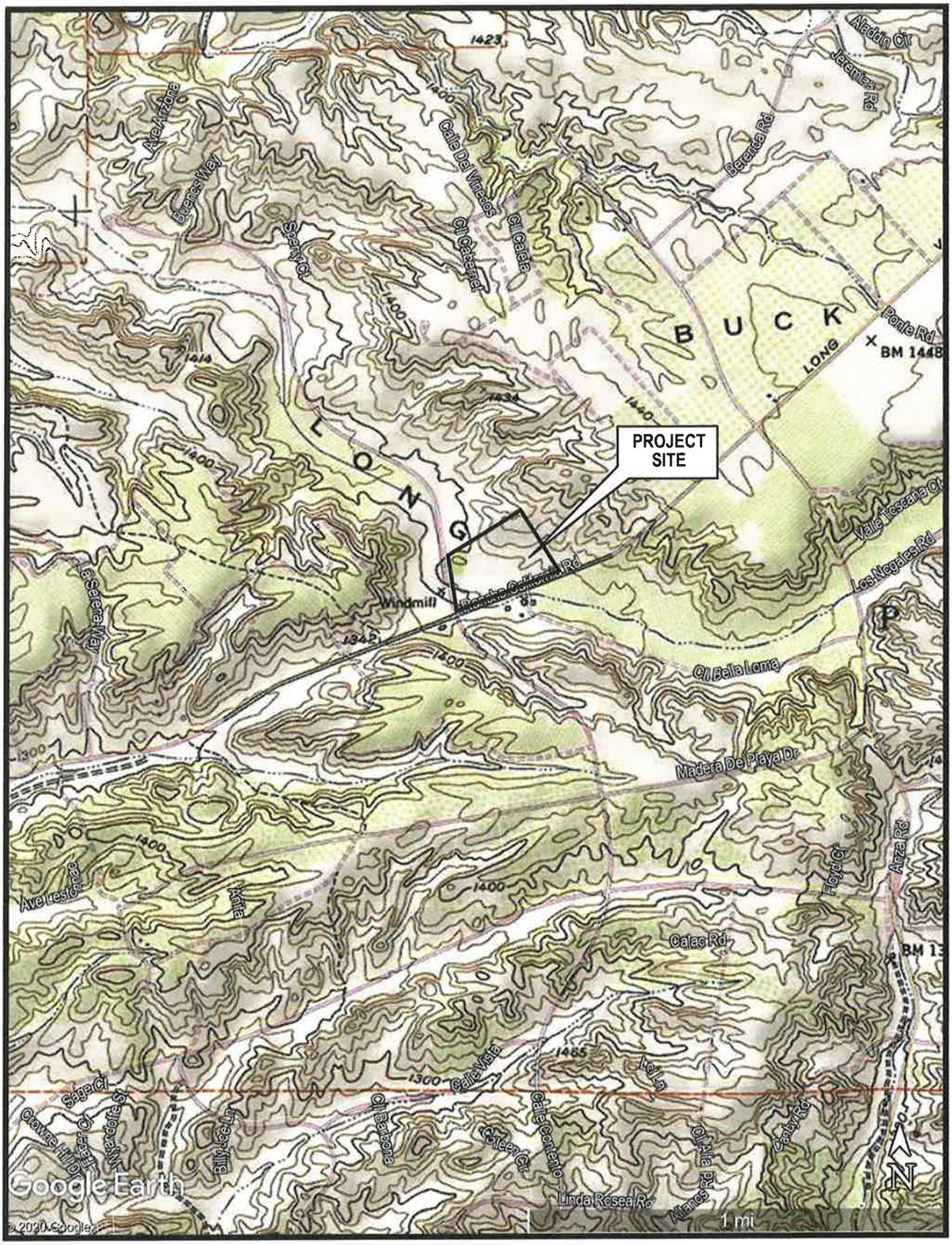
Acronyms	
BUOW	Burrowing Owl
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
FC	Federal Candidate Species
FDL	Federally Delisted
FE	Federally listed as Endangered
FESA	Federal Endangered Species Act
FPD	Federally Proposed for delisting
FPE	Federally Proposed as Endangered
FPT	Federally Proposed as Threatened
FT	Federally listed as Threatened
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
MSL	Mean Sea Level
RWQCB	California Regional Water Quality Control Board – Santa Ana
SCE	State Candidate for Endangered
SCT	State Candidate for Threatened
SDL	State Delisted
SE	State listed as Endangered
SFP	State Fully Protected
SSA	State Special Animal
SSC	Species of Special Concern
ST	State listed as Threatened
SWL	State Watch List Species
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey



TERACOR RESOURCE MANAGEMENT

33990 Rancho California Road
Source: Google Earth Pro

Exhibit 1
Regional Location



TERACOR RESOURCE MANAGEMENT

33990 Rancho California Road
Source: Bachelor Mtn USGS Quadrangle

Exhibit 2
USGS Topo

Photo 1 - East facing photo in the approximate northeast corner of the site.

Photo 2 - Great egret (*Ardea alba*).

Photo 3 - Hooded oriole (*Icterus cucullatus*).

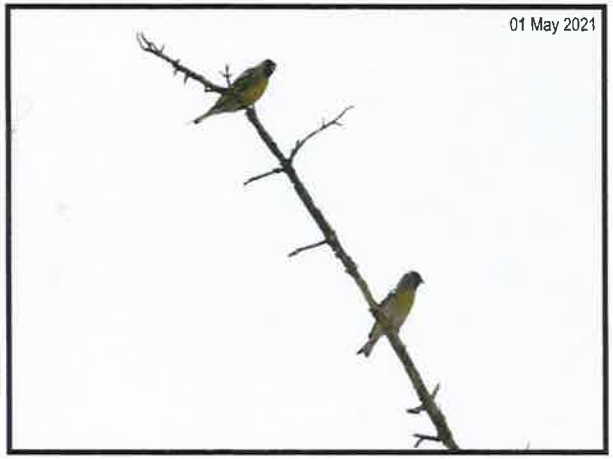


Photo 4 - Lawrence's goldfinch (*Spinus lawrencei*).

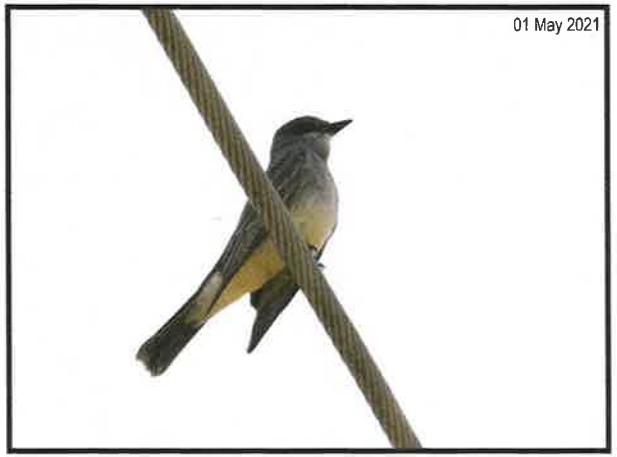
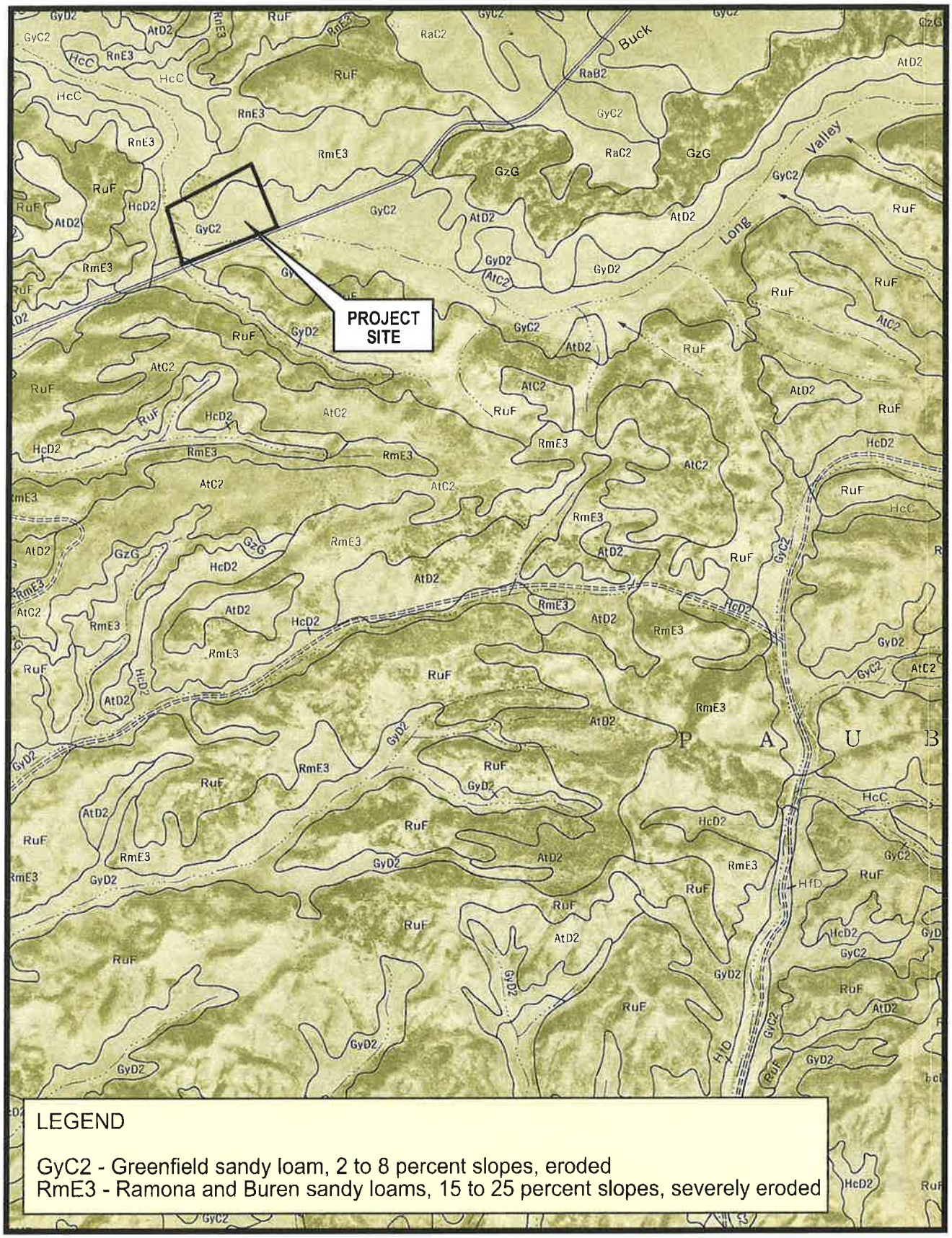


Photo 5 - Cassin's kingbird (*Tyrannus vociferans*).

Photo 6 - West property line along Calle Contento.



TERACOR RESOURCE MANAGEMENT

North

33990 Rancho California Road
Source: USDA Western Riverside Area Soil Survey

Exhibit 4
Soils

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RESOURCE MANAGEMENT

33990 Rancho California Road
Source: Historicaerials.com

Exhibit 5
Historic Aerial 1938

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RESOURCE MANAGEMENT

33990 Rancho California Road
Source: Historicaerials.com

Exhibit 6
Historic Aerial 1967

TERACOR RESOURCE MANAGEMENT

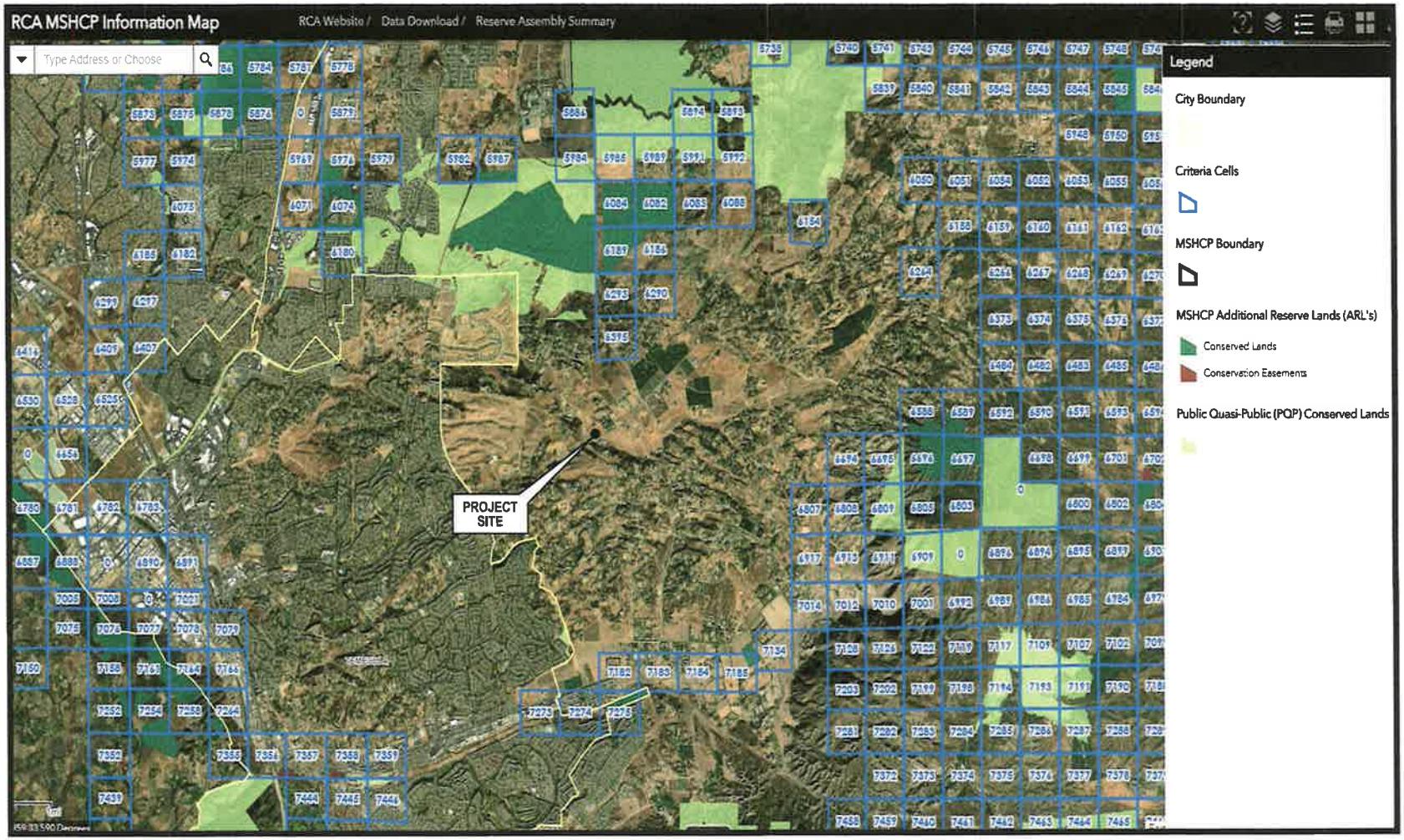
33990 Rancho California Road
Source: Google Earth Pro

Exhibit 7
Aerial 2003

TERACOR RESOURCE MANAGEMENT

33990 Rancho California Road
Source: Google Earth Pro

Exhibit 8
Aerial 2021

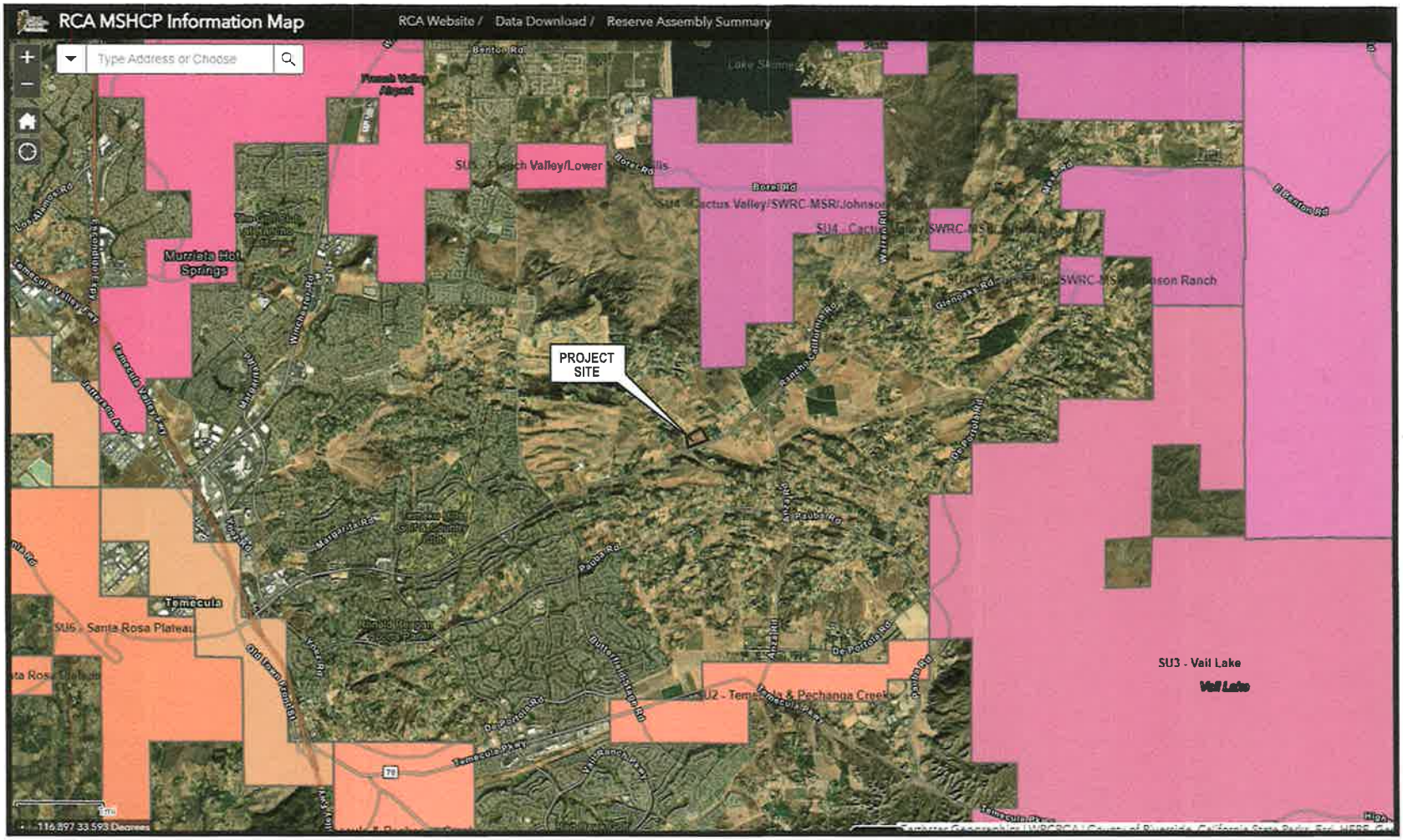


TERACOR RESOURCE MANAGEMENT

North

33990 Rancho California Road
Source: Riverside County Regional Conservation Authority

Exhibit 9a
RCA MSHCP Information Map
Public Quasi-Public Conserved Lands

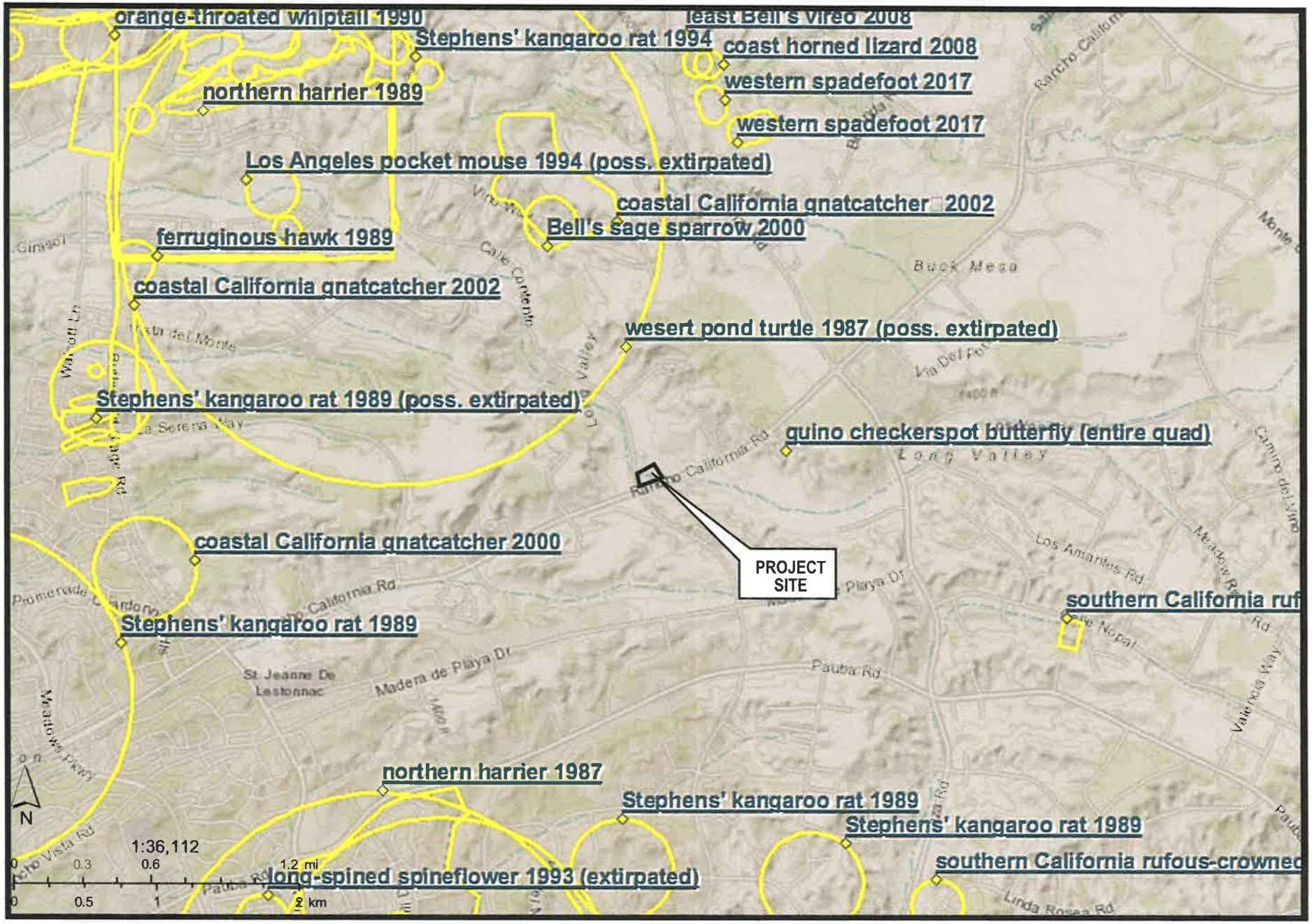


TERACOR RESOURCE MANAGEMENT

North

33990 Rancho California Road
Source: Riverside County Regional Conservation Authority

Exhibit 9b
RCA MSHCP Information Map
Subunits



TERACOR RESOURCE MANAGEMENT

33990 Rancho California Road
Source: CDFW CNDDB

Exhibit 10
CNDDB Locations

COLOR	VEGETATION ALLIANCES	CA-CODE	ACRES
	ANNUAL BROME GRASSLAND-FIDDLENECK FIELD	42.027.00 / 42.110.00	1.69
	CALIFORNIA BUCKWHEAT	32.040.00	1.3
	COAST LIVE OAK	71.060.00	0.02
	ORNAMENTAL / EUCALYPTUS	79.100.00	0.13
	COCKELBUR-MUSTARD-RED BROME-MED. GRASS	42.024.00	0.49
	DISTURBED	NO CA-CODE	1.66
	AGRICULTURAL (VINEYARD)	NO CA-CODE	14.72
	ARROYO WILLOW	61.201.00	0.02
		TOTAL	20.03

GRAPHIC SCALE

0 75 150 300

(IN FEET)
1 inch = 150 ft.

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EXHIBIT 11
VEGETATION ALLIANCES

2020 AERIAL PHOTO

COLOR	VEGETATION ALLIANCES	CA-CODE	ACRES	IMPACTS
	ANG - ANNUAL BROME GRASSLAND-FIDDLENECK FIELD	42.027.00 / 42.110.00	1.69	1.62
	BUC - CALIFORNIA BUCKWHEAT	32.040.00	1.3	0.58
	CO - COAST LIVE OAK	71.060.00	0.02	0.02
	O - ORNAMENTAL / EUCALYPTUS	79.100.00	0.13	0.13
	CM - COCKELBUR-MUSTARD-RED BROME-MED. GRASS	42.024.00	0.49	0.49
	D - DISTURBED	NO CA-CODE	1.66	0.92
	AGV - AGRICULTURAL (VINEYARD)	NO CA-CODE	14.72	0.32
	AW - ARROYO WILLOW	61.201.00	0.02	0.02
		TOTAL	20.03	4.10

GRAPHIC SCALE
0 75 150 300
(IN FEET)
1 inch = 150 ft.

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EXHIBIT 12

VEGETATION ALLIANCES WITH IMPACTS

COLOR	VEGETATION ALLIANCES	CA-CODE	ACRES
	CM - COCKELBUR-MUSTARD-RED BROME-MED. GRASS	42.024.00	0.49
	AW - ARROYO WILLOW	61.201.00	0.02
		TOTAL	0.51

GRAPHIC SCALE

0 75 150 300

(IN FEET)
1 inch = 150 ft.

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EXHIBIT 13
RIVERINE/RIPARIAN

2020 AERIAL PHOTO

COLOR	VEGETATION ALLIANCES	CA-CODE	ACRES	IMPACTS
	CM - COCKELBUR-MUSTARD-RED BROME-MED. GRASS	42.024.00	0.49	0
	AW - ARROYO WILLOW	61.201.00	0.02	0
		TOTAL		0

GRAPHIC SCALE

0 75 150 300

(IN FEET)
1 inch = 150 ft.

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EXHIBIT 14

RIVERINE/RIPARIAN IMPACTS

2020 AERIAL PHOTO