

Palomar Crossings 2010-090 Western Riverside County MSHCP Compliance Document

Date & Time: Thu Mar 8 08:38:49 PST 2018
Position: 11 N 484934 3733839
Altitude: 1474ft
Datum: WGS-84
Azimuth/Bearing: 360° N00W 6400mils (True)
Elevation Angle: -01.2°
Horizon Angle: -00.4°
Zoom: 1X



June 28, 2018

**ASSESSOR'S PARCEL NUMBERS: 329-090-025, -026, -069, -070, -071, -072,
329-100-025, -026, -027, -030, -031, -033 and -034
TOTAL RECORDED LOT SIZE (all APNs): 67.25 Acres
JUNIPERO ROAD EASEMENT AREA: 1.26 Acres**

**LOCATED IN TOWNSHIP 5 SOUTH, RANGE 3 WEST,
IN SECTION 11 OF THE ROMOLAND
7.5 MINUTE USGS CALIFORNIA QUADRANGLE**

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) compliance document was to provide an analysis for the 67.25-acre subject property and Junipero Road Easement area (approximately 1.26-acres) (Property and/or Site) located in the City of Menifee, California, and determine whether a development project on the Property was consistent with the goals and guidelines of the MSHCP. The analysis herein represents the Property's location within the MSHCP Plan Area and details the results of the required MSHCP assessments. According to the Regional Conservation Authority's (RCA) MSHCP Information Application (Regional Conservation Authority, 2018), the Site was located within a MSHCP Burrowing Owl (*Athene cunicularia*) (BUOW) assessment area. Additionally, a MSHCP Section 6.1.2 *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools* habitat assessment was required. The Site was not located within any other MSHCP-designated assessment areas.

1.2 Site MSHCP Assessment History

Searl Biological Services (SBS) conducted a MSHCP compliance analysis and focused BUOW surveys for a 38.60-acre portion of this Property in March and April 2010, and a 59.06-acre portion in May and August 2012. No BUOW were detected on, or near, the Property over the course of those protocol surveys.

1.3 Property Location

The Property was located on the north-side of State Highway 74 (Hwy 74) (Pinacate Road) between Palomar Road and Menifee Road in the City of Menifee, California. *Figure 1 - Vicinity Map* (Page 2) depicts the general location of the Property.

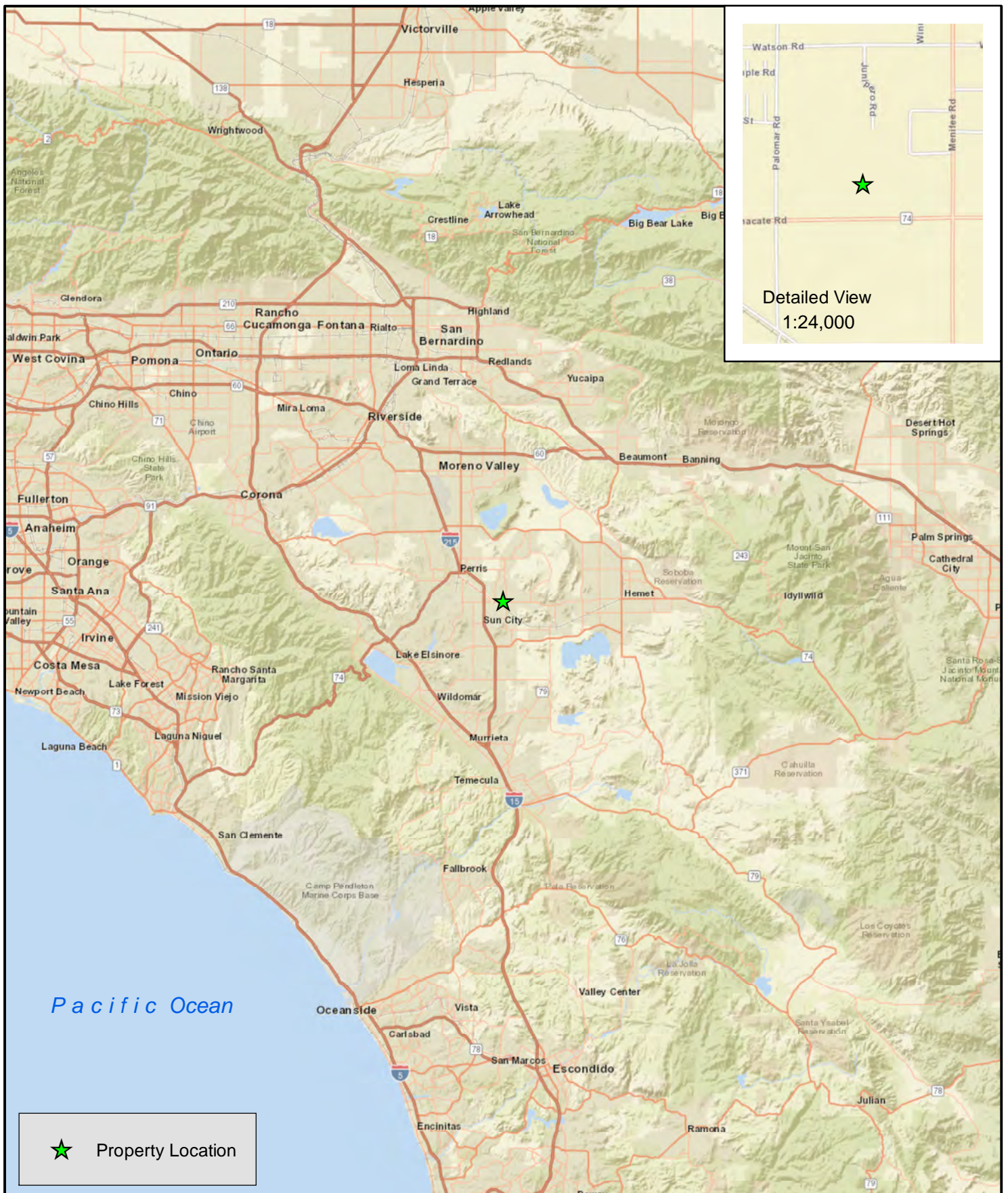
The Site was geographically located in Township 5 South, Range 3 West, in Section 11 of the Romoland 7.5 Minute United States Geological Survey (USGS) California Quadrangle. *Figure 2 - USGS Topographic Map* (Page 3) depicts the Site's geographic location. The Universal Transverse Mercator (UTM) coordinates of the approximate center of the Site was 485302 East, 3733828 North in Zone 11 (North American Datum [NAD] 83).

1.4 Proposed Project

Optimus Building Corporation (Optimus) proposes a mixed land use development project consistent with the Menifee North Specific Plan No. 260 Amendment 3. The development project will include a mix of Commercial and Very High Density Residential land use. A detailed site plan has not yet been submitted; however, the locations of each proposed land use is depicted in Appendix A of this document.

1.5 Property Description

The Property consisted of 13 Assessor's Parcel Numbers (APN) and the proposed "Junipero Road" right-of-way (not within an APN). APNs 329-090-069, -070, -071, -072, 329-100-025, -026, -027, -030, -031, -033, and -034 were a dryland agricultural field though at the time of this assessment fallow. 329-100-034 was a Riverside County Flood Control and Water Conservation District (RCFC) easement within the fallow agricultural field. A Southern California Edison (SCE) easement with two 500 kilovolt (kV) transmission lines was situated north-south in APNs 329-090-069, -070, -071, and -072. APNs 329-090-025 and -026 were vacant lots with the only apparent land use being the occasional weed abatement activity. *Figure 3 - Aerial Photograph* (Page 4) depicts relatively current Site conditions. Appendix B depicts a collection of representative photographs of the Property and surrounding area. The photographs approximate location and direction are depicted on the previously referenced Figure 3. According to Figure 2, elevations on the



0 10 20 40 Miles

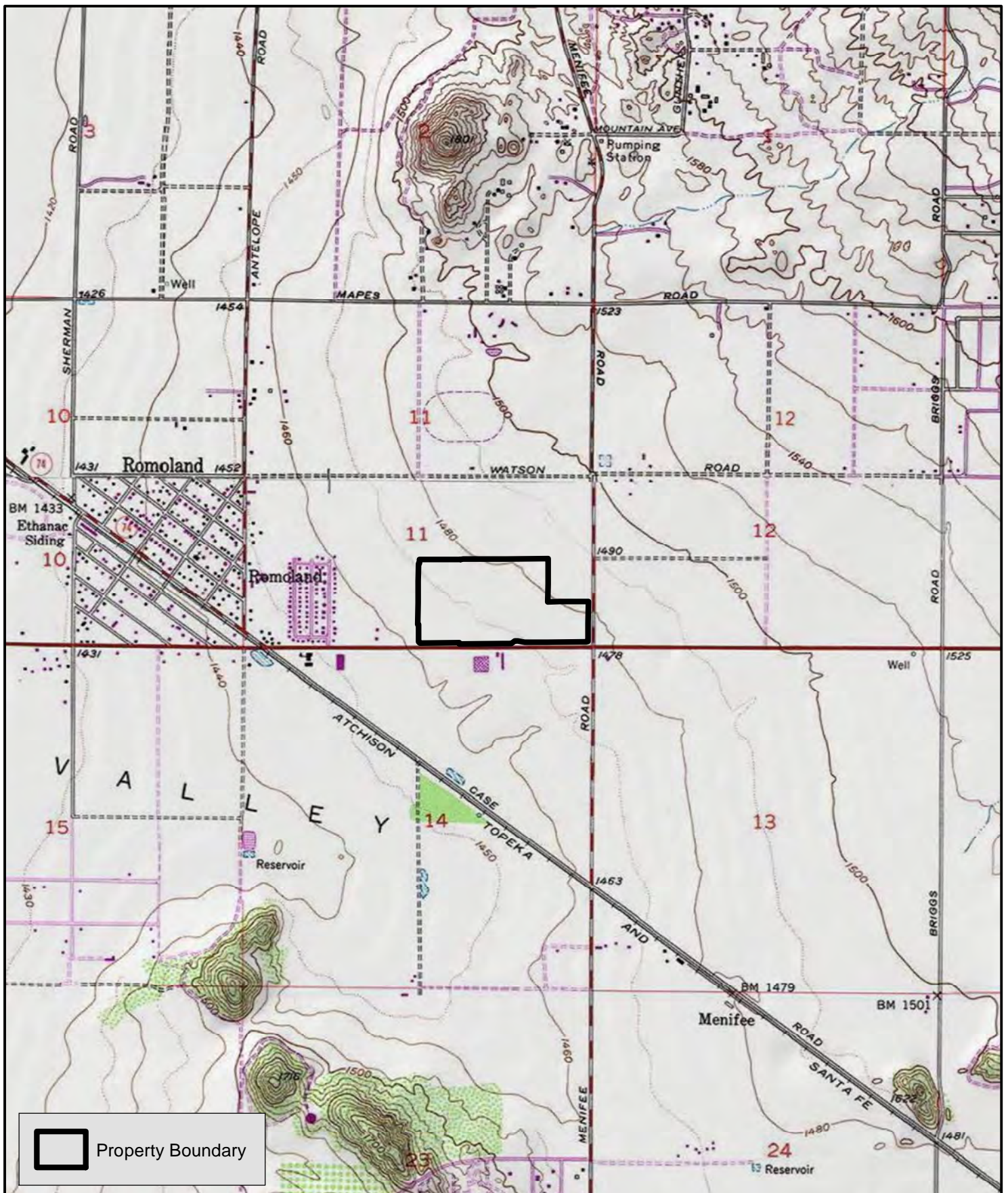


FIGURE 2
USGS Topographic Map

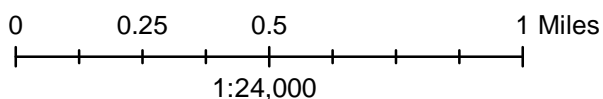
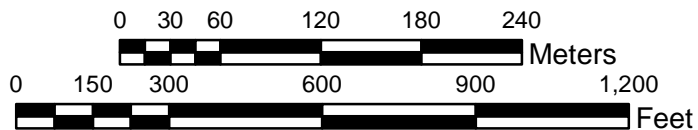




FIGURE 3
Aerial Photograph



Site ranged from 1,460 feet above mean sea level (msl) in the southwestern portion to 1,480 feet msl in the eastern portion.

1.5.1 Soils

The Property was comprised of five soil series as depicted by *Figure 4 – Soils Map* (Page 6). A brief description, as described by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (United States Department of Agriculture Natural Resources Conservation Service, 2010) is presented in *Table 1 – Property Soils* (below).

Table 1 - Property Soils

ACRONYM	SOIL NAME	SOIL DESCRIPTION	ACRES ¹
EnC2	Exeter sandy loam, 2 to 8 percent slopes, eroded	A well-drained alluvium soil derived from granite. Generally, 20 to 40 inches deep until duripan is reached with the water table occurring at more than 80 inches.	0.47
GyC2	Greenfield sandy loam, 2 to 8 percent slopes, eroded	GyC2 is a well-drained alluvium soil derived from granite. The depth to the restrictive layer and the water table generally occurs at 80 inches or more.	32.68
PaC2	Pachappa fine sandy loam, 2 to 8 percent slopes, eroded	A well-drained alluvium soil derived from granite. The depth to the restrictive layer and the water table generally occurs at 80 inches or more.	0.06
RaA	Ramona sandy loam, 0 to 2 percent slopes, MLRA 19	A well-drained alluvium soil derived from granite. The depth to the restrictive layer is typically more than 80 inches.	0.06
RaB2	Ramona sandy loam, 2 to 5 percent slopes, eroded	RaB2 is a well-drained alluvium soil derived from granite. The depth to the restrictive layer and the water table generally occurs at 80 inches or more.	35.24

1.5.2 Vegetation and Land Covers

Vegetation community classifications are typically conducted in accordance with the California Department of Fish and Wildlife's (CDFW) Vegetation Classification and Mapping Program (VegCAMP) *List of Vegetation Alliances and Associations* (Natural Communities List) (California Department of Fish and Wildlife, 2010) and *A Manual of California Vegetation*. Vegetation communities and land covers are mapped in the field utilizing both Collector for ArcGIS (Collector) installed on an iPhone 7 and paper maps (i.e., aerial photographs and USGS topographic maps).

Some land cover types are not classified in the above-referenced sources (i.e., developed, disturbed, agriculture, etc.); therefore, each land cover is designated with a common name for the purpose of this report. A description of the land cover types on the Property is presented in *Table 2 – Property Land Covers* (Page 8). The distribution of vegetation communities and land covers on the Property are depicted on *Figure 5 – Vegetation/Land Covers Map* (Page 7). A complete list of vascular plant species observed on the Property is provided in Appendix C.

¹ These numbers are generated using ArcGIS and are to be considered approximations given that the Riverside County TLMA "ParcelAssessor" file often does not match perfectly with the recorded lot sizes.

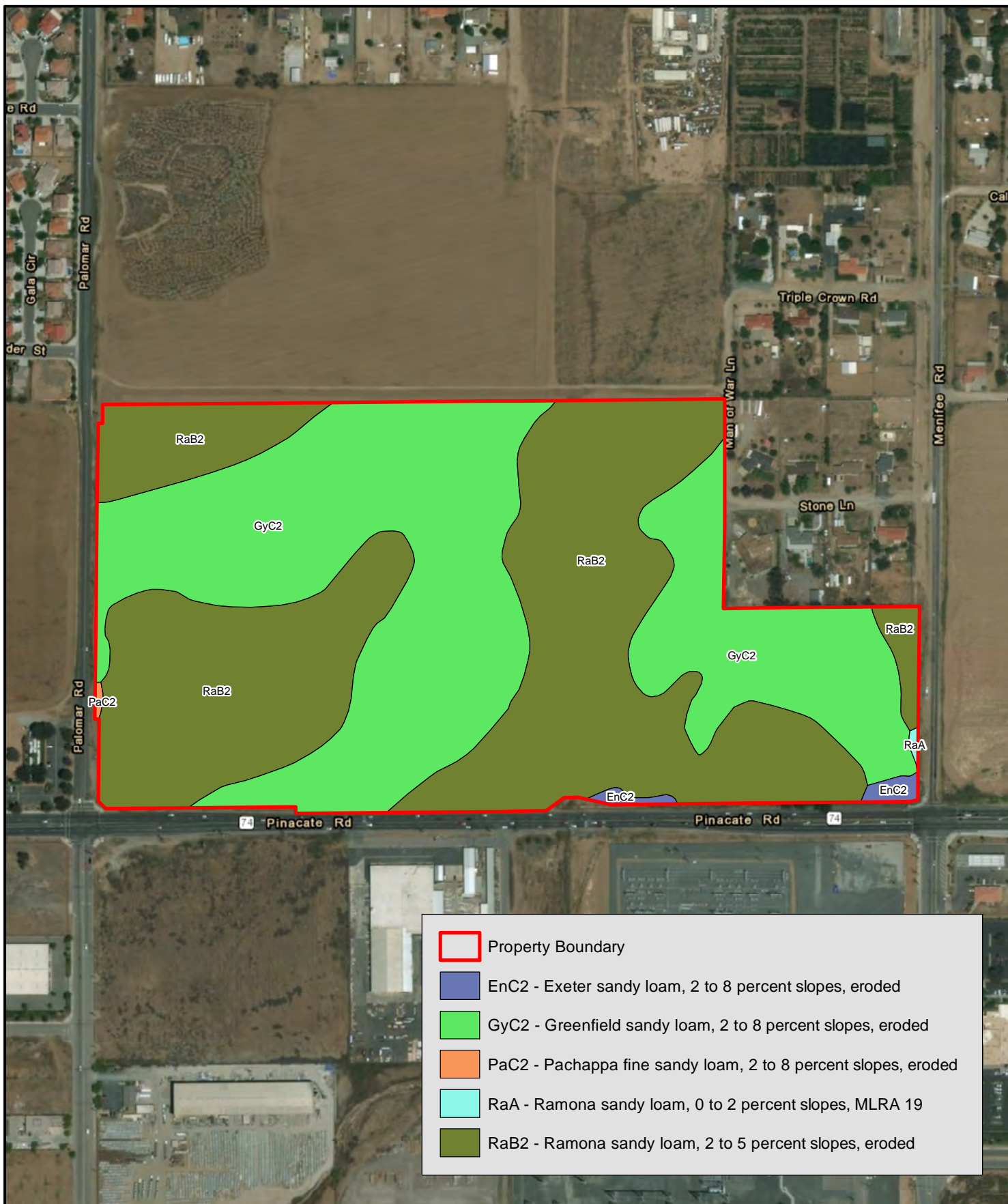
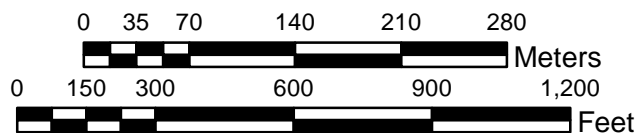


FIGURE 4
Soils Map



DATE: April 30, 2018

COORDINATE SYSTEM: NAD 1983 State Plane Zone VI (feet)

SOURCE: ESRI World Imagery, NRCS Web Soil Survey

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FIGURE 5
Vegetation/Land Covers Map

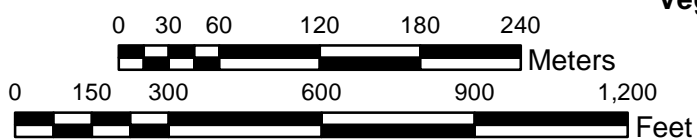


Table 2 - Property Land Covers

COMMON NAME	VEGCAMP COMMUNITY	DESCRIPTION	ACRES ²
Eucalyptus Woodland	Eucalyptus (globulus, camaldulensis) Semi-Natural Alliance 79.100.02	Eucalyptus (<i>Eucalyptus</i> spp.) woodland was present in the eastern portion of the Site. Eucalyptus was dominant with a few scattered Peruvian pepper tree (<i>Schinus molle</i>) in the southern portion. The understory of the woodland consisted entirely of ruderal/non-native grassland with London rocket (<i>Sisymbrium irio</i>) and wall barley (<i>Hordeum murinum</i>) dominant.	2.74
Fallow Dryland Agriculture	No Corresponding VegCAMP Classification	The fallow dryland agricultural field consisted of volunteer domestic wheat (<i>Triticum aestivum</i>); however, ruderal/non-native plants such as London rocket, shortpod mustard (<i>Hirschfeldia incana</i>), wall barley, cheeseweed (<i>Malva parviflora</i>), and lamb's quarters (<i>Chenopodium album</i>) were dominant.	59.29
Non-native Grassland	Brassica nigra and other mustards Semi-Natural Alliance Upland mustards 42.011.00	This community was similar in plant species composition to the ruderal/non-native grassland communities above with London rocket, shortpod mustard, wall barley, cheeseweed, and lamb's quarters being dominant.	6.48

1.6 Wildlife

All wildlife species and their respective sign observed during the field investigation was identified and recorded in the field. A sample of the species detected on, above, or near the Site included House Sparrow (*Passer domesticus*), California Horned Lark (*Eremophila alpestris actia*), Western Meadowlark (*Sturnella neglecta*), European Starling (*Sturnus vulgaris*), California ground squirrel (*Spermophilus beecheyi*), and Botta's pocket gopher (*Thomomys bottae*). A complete list of the wildlife species observed on and in close proximity to the Site is provided in Appendix D.

1.7 Field Surveys and Weather

Field surveys were conducted on March 8, March 30, April 11, and April 26, 2018 by SBS biologist Tim Searl. The weather conditions encountered during surveys (includes both start and end conditions), the annual precipitation data to-date, and astronomical data (i.e., sunrise/sunset times and moon phase) is presented in *Table 3 – Survey Date, Weather, and Astronomical Data* (Page 9).

2.0 MSHCP CRITERIA AREA ANALYSIS

2.1 MSHCP Background

The MSHCP "...is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on Conservation of species and their associated Habitats in Western Riverside County" (Dudek & Associates, Inc., 2003). The MSHCP encompasses approximately 1.26 million acres of land that stretches from the crest of the San Jacinto Mountains west to the Orange County boundary.

² Same caveat as the soils' acreages

Table 3 – Survey Date, Weather, and Astronomical Data

DATE	BIOLOGIST	SURVEY TYPE	SURVEY TIME	SUNRISE ³	TEMPERATURE ⁴	HUMIDITY	CLOUD COVER	WIND SPEED	ANNUAL PRECIPITATION TO-DATE ⁵	MOON PHASE
3/8/2018	Tim Searl	BUOWHA, BUOWBS, BUOWFS, RRPV, VM	0530-1130	0607	46.6-69.4	73.3-29.8	Mostly Cloudy (high clouds)	<1-<1	4.09	Waning Gibbous 56%
3/30/2018	Tim Searl	BUOWFS	0600-0930	0638	55.0-63.8	61.9-55.4	Clear (slight haze)	0-2.4	4.75	Waxing Gibbous 99%
4/11/2018	Tim Searl	BUOWFS	0630-1000	0622	54.3-68.6	65.7-38.9	Mostly Clear	2.6-4.3	4.75	Waning Crescent 19%
4/26/2018	Tim Searl	BUOWFS	0600-0930	0605	48.9-59.7	88.2-67.5	Mostly Clear (slight haze)	<1-3.3	4.76	Waxing Gibbous 88%
BUOWHA – Burrowing Owl Habitat Assessment BUOWBS - Burrowing Owl Burrow Survey BUOWFS - Burrowing Owl Focused Survey RRPV – MSHCP Section 6.1.2 Habitat Assessment VM – Vegetation Mapping										

³ Sunrise and Moon Phase (plus the percent of the moon's illumination) was obtained from the Menifee, California Weather Underground Website (Weather Underground, 2018).

⁴ Temperature (Degrees Fahrenheit), Humidity (percent), and Wind Speed (mean miles per hour) were obtained in the field with a Kestrel 3500 weather meter.

⁵ Annual Precipitation (July 01 to June 30) To-Date was obtained from the Riverside County Flood Control and Water Conservation District's Rain Gauge Map Website for the "Winchester Station – Station No. 248 (Riverside County Flood Control and Water Conservation District, 2018).

Ultimately, the MSHCP will result in the conservation of more than 500,000 acres (347,000 acres on existing Public/Quasi-Public Lands [PQP] and 153,000 of Additional Reserve Lands [ARL]) that focuses on the 146-species covered by the MSHCP (Dudek & Associates, Inc., 2003).

2.2 MSHCP Reserve Design

The MSHCP is a criteria-based plan of which the County's General Plan Area Plan boundaries were utilized to provide the broad organizational framework for the criteria (Dudek & Associates, Inc., 2003). A Conceptual Reserve Design (CRD) was sketched for each Area Plan using vegetation, planning species occurrence data, and biological issues and considerations as the primary criteria for the CRD (Dudek & Associates, Inc., 2003). Subsequent to sketching the CRD, USGS quarter sections (i.e., approximate 160-acre cells) were then overlain on the CRD such that each "Criteria Cell" is an area in real space with a legal description (Dudek & Associates, Inc., 2003). Criteria Cells were then either aggregated into a Criteria Cell Group or retained as individual Criteria Cells based upon the level of conservation and configuration of the Criteria Cell or Criteria Cell Group (Dudek & Associates, Inc., 2003). Criteria Cells were assigned an identification number and each Criteria Cell Group was assigned a letter code. Conservation Criteria was drafted for each Criteria Cell or Criteria Cell Group to provide an explicit description of the areas to be targeted for conservation (Dudek & Associates, Inc., 2003). Those areas located outside of the designated Criteria Cells and/or Criteria Cell Groups are not targeted to be included within the 153,000 acres of ARL.

2.3 Area Plan

The Site was located in the Harvest Valley/Winchester Area Plan (HVWAP). The HVWAP was approximately 32,147-acres (50.2-square miles). The target conservation acreage for the HVWAP was between 6,320-acres and 6,495-acres (Dudek & Associates, Inc., 2003). The majority of the target acreage was composed of existing PQP lands (5,890-acres) with only a range of 430 acres to 605 acres of ARL (Dudek & Associates, Inc., 2003).

2.3.1 Subunits

The HVWAP has two Subunits; the French Valley/Diamond Valley Lake and Hemet Vernal Pool Areas West. The Property was located outside these Subunits.

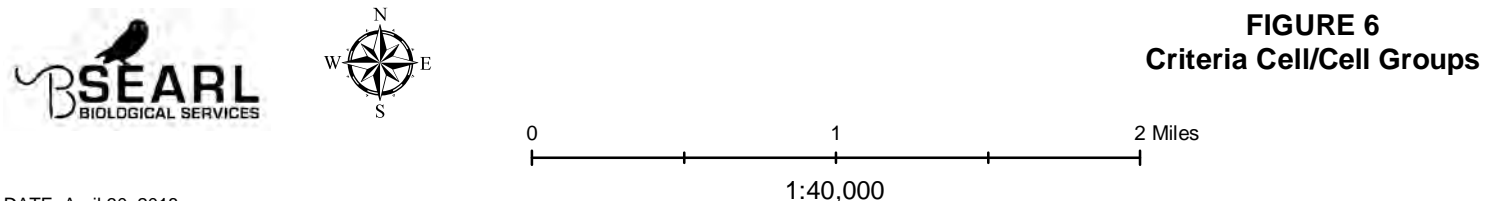
2.4 Criteria Cell/Cell Group Location

The Site was not located within a Criteria Cell/Criteria Cell Group. Criteria Cell 3279 was the nearest located approximately 1.60-miles northwest of the Property as depicted on *Figure 6 - Criteria Cell/Cell Groups* (Page 11).

3.0 MSHCP SECTION 6.1.2 PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

3.1 Background and Planning Species

Section 6.1.2 *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools* (MSHCP Section 6.1.2) of the MSHCP requires all subject properties under the jurisdiction of the MSHCP Area Plan that are proposing a land use change/applying for a discretionary permit to conduct a MSHCP Section 6.1.2 assessment. This includes a habitat assessment for Riparian/Riverine areas, Vernal Pools, three fairy shrimp species; 1) Riverside fairy shrimp (*Streptocephalus woottoni*) (RFS), 2) vernal pool fairy shrimp (*Branchinecta lynchi*) (VPFS), and 3) Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*) (SRPFS),



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and three bird species; 1) Least Bell's Vireo (*Vireo bellii pusillus*) (LBVI), 2) Southwestern Willow Flycatcher (*Empidonax traillii extimus*) (SWFL), and 3) Western Distinct Population Segment (DPS)⁶ Yellow-billed Cuckoo (*Coccyzus americanus*) (YBCU). If the assessment identifies suitable habitat for any of the six-species associated with riparian/riverine areas and vernal pools listed above, and the proposed project design does not incorporate avoidance of the identified habitat, focused surveys would be required, and avoidance and minimization measures will be implemented in accordance with the MSHCP's species-specific objectives for these species. The long-term conservation of MSHCP Section 6.1.2 resources is important for the protection of the planning species presented in *Table 4 - Section 6.1.2 Planning Species* (below).

Table 4 - MSHCP Section 6.1.2 Planning Species

COMMON NAME	SCIENTIFIC NAME
AMPHIBIANS	
Arroyo Toad	<i>Anaxyrus californicus</i>
Southern Mountain Yellow-legged Frog	<i>Rana muscosa</i>
California Red-legged Frog	<i>Rana draytonii</i>
BIRDS	
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Least Bell's Vireo	<i>Vireo bellii pusillus</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>
Western DPS Yellow-billed Cuckoo	<i>Coccyzus americanus</i>
INVERTEBRATES-CRUSTACEANS	
Riverside Fairy Shrimp	<i>Streptocephalus woottoni</i>
Vernal Pool Fairy Shrimp	<i>Branchinecta lynchi</i>
PLANTS	
Brand's Phacelia	<i>Phacelia stellaris</i>
California Orcutt Grass	<i>Orcuttia californica</i>
Southern California Black Walnut	<i>Juglans californica</i>
Coulter's Matilija Poppy	<i>Romneya coulteri</i>
Engelmann Oak	<i>Quercus engelmannii</i>
Fish's Milkwort	<i>Polygala cornuta</i> var. <i>fishiae</i>
Graceful Tarplant	<i>Holocarpha virgata</i> subsp. <i>Elongata</i>
Lemon Lily	<i>Lilium parryi</i>
Mojave Tarplant	<i>Deinandra mohavensis</i>
Mud Nama	<i>Nama stenocarpa</i>
Ocellated Humboldt Lily	<i>Lilium humboldtii</i> subsp. <i>ocellatum</i>
Orcutt's Brodiaea	<i>Brodiaea orcuttii</i>
Parish's Meadowfoam	<i>Limnanthes alba</i> subsp. <i>parishii</i>
Prostrate Navarretia	<i>Navarretia prostrata</i>
San Diego Button-Celery	<i>Eryngium aristulatum</i> var. <i>parishii</i>
San Jacinto Valley Crownscale	<i>Atriplex coronata</i> var. <i>notatior</i>
San Miguel Savory	<i>Clinopodium chandleri</i>

⁶ Distinct Population Segment: In addition to the listing and delisting of species and subspecies, the ESA [Endangered Species Act] allows the listing/delisting of Distinct Population Segments of vertebrate species (i.e., animals with backbones, mammals, birds, fish, reptiles, and amphibians). A Distinct Population Segment is a portion of a species' or subspecies' population or range. The Distinct Population Segment is described geographically instead of biologically, such as "all members of XYZ that occur north of 40 north latitude" (U. S. Fish and Wildlife Service - Pacific Region, 2017)

Santa Ana River Woollystar	<i>Eriastrum densifolium</i> subsp. <i>sanctorum</i>
Slender-horned Spineflower	<i>Dodecahema leptoceras</i>
Smooth Tarplant	<i>Centromadia pungens</i> subsp. <i>laevis</i>
Spreading Navarretia	<i>Navarretia fossalis</i>
Thread-leaved Brodiaea	<i>Brodiaea filifolia</i>
Vernal Barley	<i>Hordeum intercedens</i>

3.2 MSHCP Section 6.1.2 Resources

The MSHCP defines Riparian/Riverine, Vernal Pools, and Fairy Shrimp habitat as follows:

"Riparian/Riverine Areas are lands which contain Habitat dominated by tress [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."

"Vernal pools are 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."

"Fairy Shrimp. For Riverside, vernal pool and Santa Rosa fairy shrimp, mapping of stock ponds, ephemeral pools and other features shall also be undertaken as determined appropriate by a qualified biologist."

MSHCP Section 6.1.2 further states that:

"With the exception of 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, areas demonstrating characteristics as described above which are artificially created are not included in these definitions."

3.3 Targeted Species Occurrence - Database Queries

SBS conducted a query of both the California Natural Diversity Database (CNDDB) and the U. S. Fish and Wildlife Service (USFWS) Carlsbad Fish and Wildlife Office (CFWO) "Species Occurrence Data" GIS data to determine if any of the three-targeted fairy shrimp and/or three-targeted bird species discussed in Section 3.1 of this document have been reported to occur within five miles of the Property.

3.3.1 Query Results

LBVI and RFS have been documented to occur within five miles of the Property. A total of two records of LBVI from 2006 and 2014, and three records, all in the same location, of RFS were reported in 2004.

Figure 7 – MSHCP Section 6.1.2 Targeted Species CNDDDB and CFWO Five Mile Query Results (Page 15) depicts the query results.

3.4 Assessment Methods

Those areas potentially meeting the criteria of a MSHCP Section 6.1.2 resource are mapped in the field utilizing Collector installed on an iPhone 7 connected to a Dual GPS receiver to increase accuracy. Field determinations are based on MSHCP Section 6.1.2 criteria, existing conditions, historic aerial photography and recent aerial photography reviewed on Google Earth, and review of the Romoland USGS 7.5 Minute California Quadrangle.

3.4.1 Riparian/Riverine Areas

A potential Riparian/Riverine feature is walked beginning in the downstream portion and ending at the upstream end. A “polyline” and/or “polygon,” depending on the habitat type (i.e., Riparian vs. Riverine), GIS shapefile is created in the field utilizing Collector while walking the length of the potential feature. The extent of a Riparian area is typically the dripline⁷ of the riparian vegetation associated with the drainage feature. Data collected while walking the potential Riparian/Riverine feature includes characteristics and functions such as hydrology, soils/substrates, dominant plant species/vegetation community, functions and values, presence/absence regarding the species listed above in Table 4, habitat suitability for LBVI, SWFL, YBCU, and whether or not the feature potentially affects downstream resources for MSHCP Section 6.1.2 Planning Species.

3.4.2 Vernal Pools/Fairy Shrimp Habitat

The perimeter of a potential Vernal Pool/Fairy Shrimp Habitat feature is walked and mapped by creating a “polygon” GIS shapefile utilizing Collector. Data collected while walking each potential Vernal Pool/Fairy Shrimp feature includes plant species composition, presence/absence of standing water, evidence of potential ponding (i.e., cracked mud), functions and values, presence/absence regarding the species listed above in Table 4, and habitat suitability for Riverside fairy shrimp, Santa Rosa Plateau fairy shrimp, and/or vernal pool fairy shrimp.

3.5 Riparian/Riverine Assessment Results

One potential Riverine, two erosional, and one sediment transport feature were present on and directly adjacent to the Property. The four features did not support suitable habitat for LBVI, SWFL, or YBCU and all were in disturbed ruderal areas and of low biological value. *Figure 8 – Potential 6.1.2 Resources* (Page 16) depicts the location of the four features. Appendix E depicts a collection of photographs of each feature. *Table 5 – Potential MSHCP Section 6.1.2 Resources* (below) provides acreage, lengths, and potential impacts for the four potential Riparian/Riverine features. A description of each feature is presented below.

Table 5 - Potential MSHCP Section 6.1.2 Resources

FEATURE ID	FEATURE TYPE	LENGTH (Feet)
A	Riverine	1,213.66
A ₁	Erosional	67.01
A ₂	Erosional	116.33
B	Sediment Transport	374.56

⁷ The area defined by the outermost circumference of a tree canopy where water drips from and onto the ground.

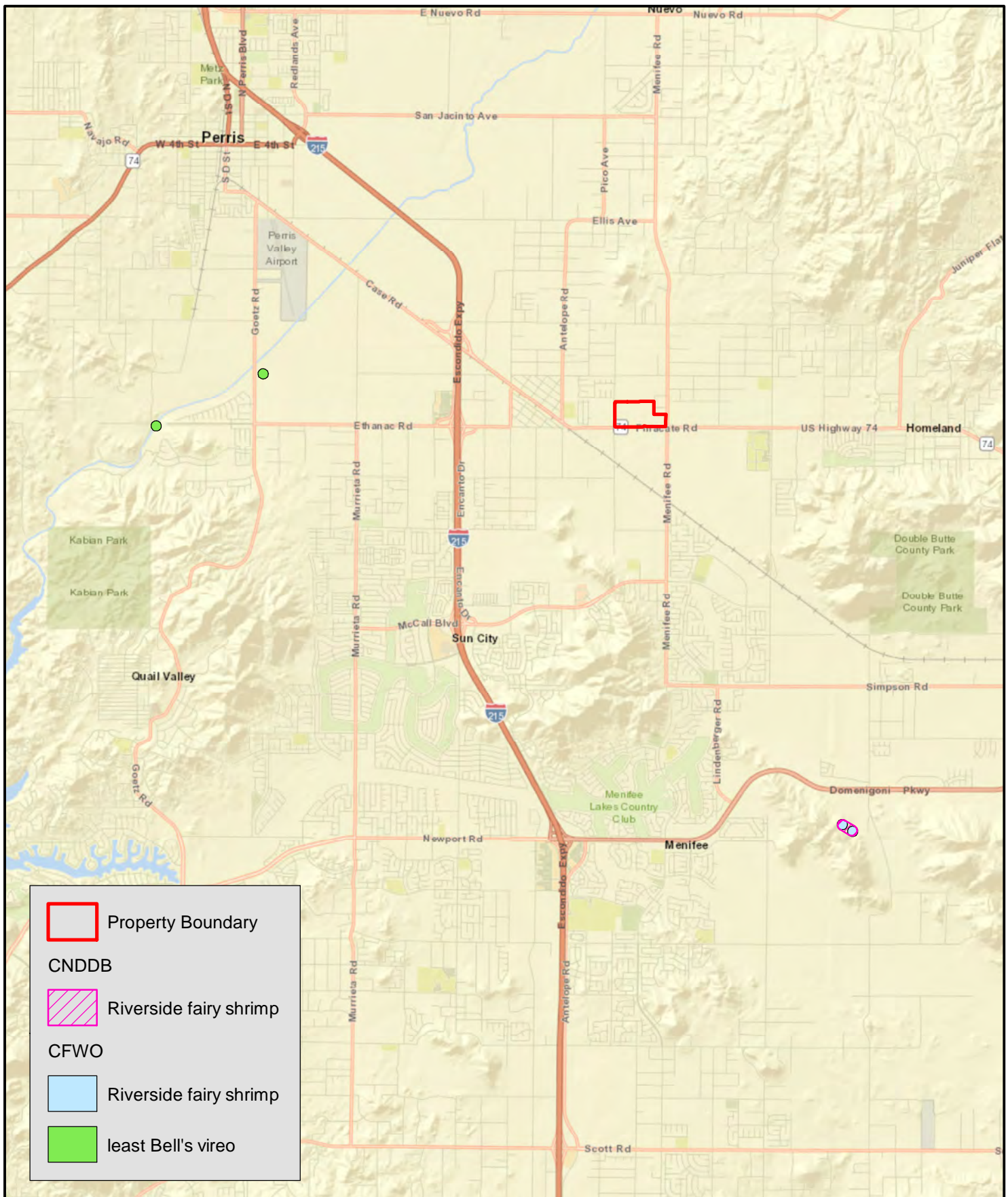
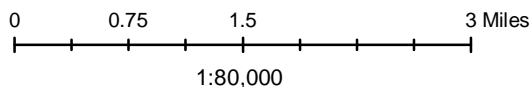


FIGURE 7
MSHCP Section 6.1.2 Targeted Species
CNDDDB and CFWO Five Mile Query Results



DATE: April 30, 2018
 COORDINATE SYSTEM: NAD 1983 State Plane Zone VI (feet)
 SOURCE: ESRI World Street Map, Riverside County TLMA
 GIS Shapefiles, CNDDDB Apr. 2018 Data), CFWO Species
 Occurrence Data (Dec. 2017 Data)



Optimus - Palomar Crossings

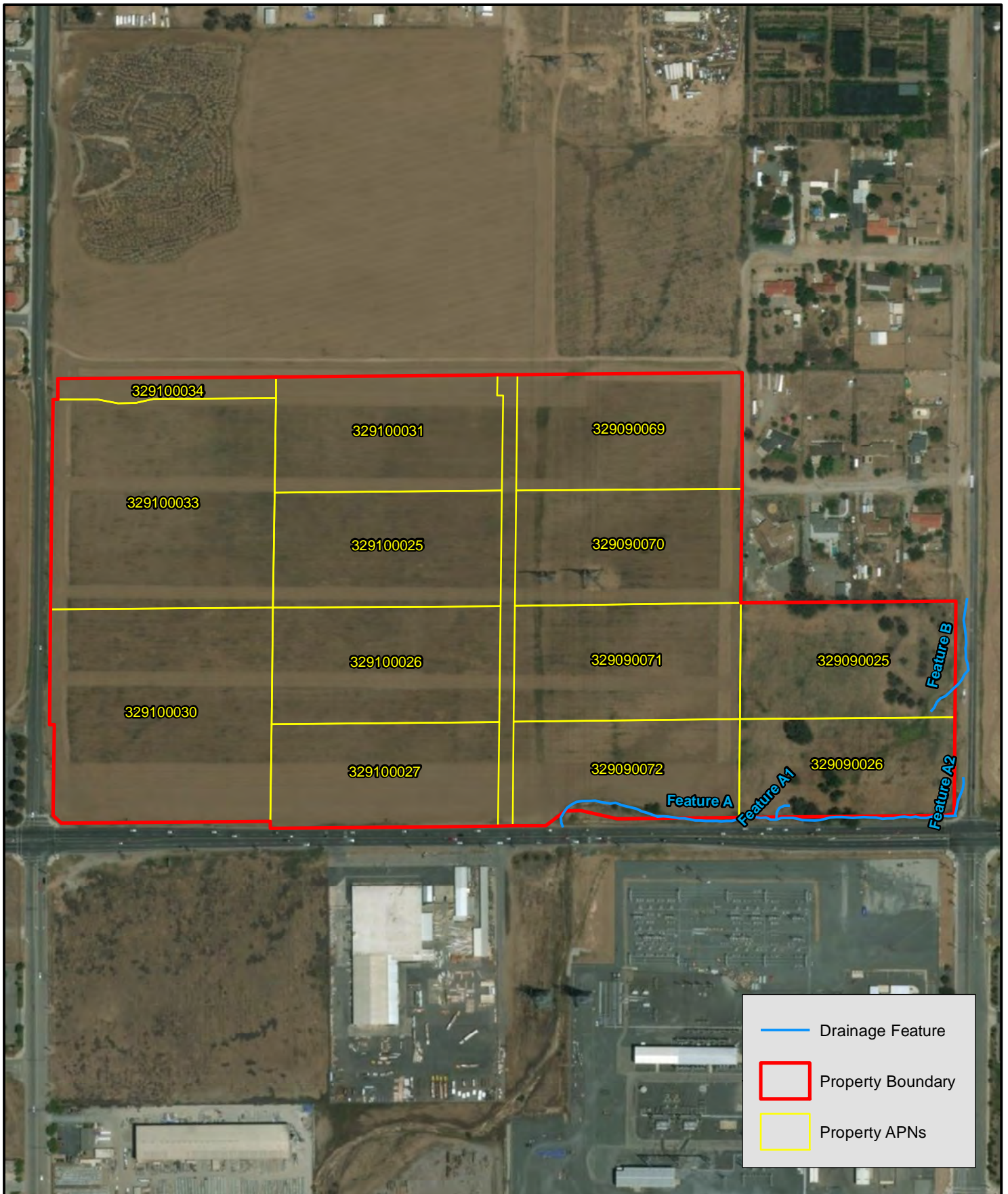
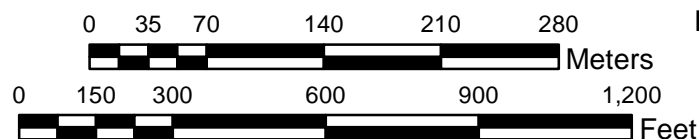


FIGURE 8
Potential 6.1.2 Resources



3.5.1 Feature A

Feature A was a roadside ephemeral ditch located on and near the southeastern portion of the Site. The channel bottom consisted of unvegetated sandy substrates with the banks primarily consisting of non-native grasses/ruderal plants. A single mule fat (*Baccharis salicifolia*) was present in the downstream end. Feature A was not suitable for any of the six-targeted species. Feature A flowed south offsite through a cement culvert located beneath Hwy 74 then continued through an SCE substation then eventually exited onto Palomar Road. It appeared that surface flows on Palomar Road would continue south and enter what appeared to be a recently constructed storm drain. The storm drain was likely connected to a concrete channel located to the south that flows west and transitions to an earthen channel and may eventually be tributary to the San Jacinto River. Feature A is likely Riverine as defined by the MSHCP.

3.5.2 Feature A₁

Feature A₁ was an erosional feature that at the time of this field assessment in March and April 2018 was not connected to any discernable upstream resources. Sheetflow across the Property that likely originated from Feature B, and other onsite areas, appeared to collect at the upstream end of Feature A₁ where the erosional feature began. Substrates consisted of loam soils with only non-native grasses/ruderal plants present. Feature A₁ had little to no biological function or value and was not suitable for any of the six-targeted species. SBS's opinion was that Feature A₁ was not Riverine as defined by the MSHCP.

3.5.3 Feature A₂

Feature A₂ was an erosional feature that was likely the result of surface runoff from Meniffee Road. Runoff appeared to collect and flow creating an incised channel where the concrete foundation of a nearby utility box was undercut. Feature A₂ flowed into Feature A at the corner of Hwy 74 and Meniffee Road. Substrates consisted of sandy loam with only non-native grasses/ruderal plants present. Feature A₂ had little to no biological function or value and was not suitable for any of the six-targeted species. SBS's opinion was that Feature A₂ was not Riverine as defined by the MSHCP.

3.5.4 Feature B

Feature B in offsite areas was an area where surface runoff from Meniffee Road, and potentially other upstream areas, appeared to collect and flow in a southerly direction. A small incised channel with an ordinary high-water mark was evident in these areas. However, once Feature B entered the Property no incised channel was present and the feature was only evident due to the presence of additional sediment collecting as Feature B dissipated to sheetflow. Areas downstream of the sediment transport had no evidence of concentrated flow and consisted entirely of sheetflow. Substrates consisted of sandy loam with only non-native grasses/ruderal plants present. Feature B had little to no biological function or value and was not suitable for any of the six-targeted species. SBS's opinion was that Feature B was not Riverine as defined by the MSHCP.

3.6 Vernal Pool/Fairy Shrimp Assessment Results

No Vernal Pool and/or Fairy Shrimp habitat was detected on the Site. A detailed description of the assessment results is presented below.

3.6.1 Vernal Pools

No habitat meeting the criteria of a vernal pool was detected on the Property. The Property did not support depression areas, and no evidence of long-lasting ponds (i.e., cracked mud, crusty soil, etc.) was detected. Saline-alkali or clay soils, a common component of vernal pools, were also absent. Plants typically associated with vernal pools, or remnants thereof, such as alkaline popcorn flower (*Plagiobothrys*

leptocladus), western marsh cudweed (*Gnaphalium palustre*), Parish's glasswort (*Arthrocnemum subterminale*), and swamp pickle grass (*Crypsis schoenoides*) were also not detected on the Site.

3.6.2 Fairy Shrimp Habitat

No suitable habitat for fairy shrimp was detected on the Property. Similar to the vernal pool assessment, no areas were detected on the Site that contained evidence of supporting long-lasting pools, and depression areas were absent from the Property. Additionally, road ruts that contained evidence of ponding, and stock ponds were also not detected on the Property.

4.0 MSHCP SECTION 6.3.2 ADDITIONAL SURVEY NEEDS AND PROCEDURES – BURROWING OWL

4.1 MSHCP Background and Objectives

The MSHCP covers 146 species of plants and animals of which 40 species have specific survey requirements (Dudek & Associates, Inc., 2003). 34 of the 40 species, including BUOW, have an associated survey area map that designates areas where surveys may be required if suitable habitat is present (Dudek & Associates, Inc., 2003).

BUOW is covered under MSHCP Section 6.3.2 *Additional Survey Needs and Procedures* of the MSHCP. The purpose of this section is to provide coverage under the MSHCP for those species for which existing available information was not sufficient, and therefore, survey requirements are incorporated in the MSHCP to provide the level of information necessary for these species to receive coverage (Dudek & Associates, Inc., 2003). Section 6.3.2 states the following regarding locations where survey results are positive for species covered under this section:

"For locations with positive survey results, 90% of those portions of the property that provide for long-term conservation value for the identified species shall be avoided until it is demonstrated that conservation goals for the particular species are met. Avoidance shall not be considered to be Conservation contributing to Reserve Assembly unless the avoided populations are acquired and managed as Additional Reserve Lands."

The WRCMSHPC objectives for BUOW include the following:

Objective 1

Include within the MSHCP Conservation Area at least 27,470 acres of suitable primary habitat for the burrowing owl including grasslands.

Objective 2

Include within the MSHCP Conservation Area at least 5 Core Areas and interconnecting linkages. Core areas may include the following: (1) Lake Skinner/Diamond Valley Lake area (Existing Core C plus Proposed Extension of Existing Cores 5, 6, 7; 29,060 acres); (2) playa west of Hemet (Proposed Noncontiguous Habitat Block 7; 1,250 acres); (3) San Jacinto Wildlife Area/Mystic Lake area including Lake Perris area (Existing Core H; 17,470 acres); (4) Lake Mathews (Existing Core C plus Proposed Extension of Existing Cores 2; 23,710 acres); and (5) along the Santa Ana River (9,670 acres). The Core Areas should support a combined total breeding population of approximately 120 burrowing owls with no fewer than five pairs in any one Core area.

Objective 3

Include within the MSHCP Conservation Area at least 22,120 acres of suitable secondary habitat for the burrowing owl including playas and vernal pools, and agriculture outside of the Core Areas identified above. Areas where additional suitable habitat could be conserved include west of the Jurupa Mountains, near Temescal Wash (i.e., vicinity of Alberhill), near Temecula Creek, within the Lakeview Mountains, Banning, the Badlands, Gavilan Hills, and Quail Valley.

Objective 4

Include within the MSHCP Conservation Area the known nesting locations of the burrowing owl at Lake Perris, Mystic Lake/San Jacinto Wildlife area, Lake Skinner area, the area around Diamond Valley Lake, playa west of Hemet, Lakeview Mountains, Lake Mathews/Estelle Mountain Reserve and Sycamore Canyon Regional Park.

Objective 5

Surveys for burrowing owl will be conducted as part of the project review process for public and private projects within the burrowing owl survey area where suitable habitat is present (see Burrowing Owl Survey Area Map, Figure 6-4 of the MSHCP, Volume I). The locations of this species determined as a result of survey efforts shall be conserved in accordance with procedures described within Section 6.3.2, MSHCP, Volume I and the guidance provided below:

Burrowing owl surveys shall be conducted utilizing accepted protocols as follows. If burrowing owls are detected on the project site then the action(s) taken will be as follows:

If the site is within the Criteria Area, then at least 90 percent of the area with long-term conservation value will be included in the MSHCP Conservation Area. Otherwise:

- 1. If the site contains, or is part of an area supporting less than 35 acres of suitable habitat or the survey reveals that the site and the surrounding area supports fewer than 3 pairs of burrowing owls, then the on-site burrowing owls will be passively or actively relocated following accepted protocols.*
- 2. If the site (including adjacent areas) supports three or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat and is non-contiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and burrowing owl pairs will be conserved onsite.*

The survey and conservation requirements stated in this objective will be eliminated when it is demonstrated that Objectives 1 – 4 have been met.

Objective 6

Pre-construction presence/absence surveys for burrowing owl within the survey area where suitable habitat is present will be conducted for all Covered Activities through the life of the permit. Surveys will be conducted within 30 days prior to disturbance. Take of active nests will be avoided. Passive relocation (use of one way doors and collapse of burrows) will occur when owls are present outside the nesting season.

Objective 7

Translocation sites for the burrowing owl will be created in the MSHCP Conservation Area for the establishment of new colonies. Translocation sites will be identified, taking into consideration unoccupied habitat areas, presence of burrowing mammals to provide suitable burrow sites, existing colonies and effects to other Covered Species. Reserve Managers will consult with the Wildlife Agencies regarding site selection prior to translocation site development.

4.2 Life History

The BUOW is a priority 2 California Species of Special Concern (SSC) (Gervais, 2008), and is a planning species under the MSHCP. In California, the BUOW is a year-round resident throughout much of the state (Gervais, 2008); however, migrants from other regions of western North America may augment resident lowland populations in winter (Gervais, 2008). Habitat for the BUOW primarily consists of open grasslands, but it also occurs in some human-altered landscapes such as agricultural environments (Gervais, 2008). Nest and roost burrows of the BUOW are most commonly dug by the California ground squirrel in California, but it will also utilize burrows and dens constructed by the American badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox (*Urocyon cinereoargenteus* and *Vulpes* spp.) (Gervais, 2008).

The diet of the BUOW consists primarily of insects (i.e., centipedes, spiders, beetles, crickets, and grasshoppers) (Gervais, 2008), but it will also take small mammals, reptiles, birds, and carrion (i.e., dead flesh) (Polite, 1999). BUOW hunt from a perch, hover, hawk, dive, and hop after prey on the ground (Polite, 1999). Although insects dominate the BUOW diet numerically, recent research has suggested that in California, rodent populations, particularly those of the California vole (*Microtus californicus*), may greatly influence BUOW survival and reproductive success (Gervais, 2008).

The BUOW breeding season is typically March through August with peak breeding activity occurring in April and May (Polite, 1999). Male BUOW give courtship displays and notes in front of the burrow (Polite, 1999). Clutch size is relatively large with a range of two to ten eggs and a mean of five to six eggs per clutch (Polite, 1999). Young BUOW emerge from the burrow at about two weeks old and are able to fly by about four weeks old (Polite, 1999).

4.3 Survey Protocol

Habitat assessments and focused surveys for BUOW in the MSHCP Plan Area are conducted in accordance with the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (Environmental Programs Department, 2006) (BUOW Survey Instructions). These instructions detail the steps necessary and the methods to be employed in order to sufficiently assess a specific location for the presence or absence of BUOW. The BUOW Survey Instructions are detailed below.

4.3.1 Step I: Habitat Assessment

The BUOW Survey Instructions describe Step I as follows:

"The first step in the assessment process is to walk the property to identify the presence of burrowing owl habitat on the project site. If habitat is found on the site, then walk a 150-meter (approximately 500 feet) buffer zone around the project boundary. If permission to access the buffer area cannot be obtained, do not trespass on adjacent property but visually inspect the adjacent habitat areas with binoculars and/or spotting scopes."

If a habitat assessment reveals that BUOW habitat occurs on a site, then, in the least, a *Step II Part A: Focused Burrow Surveys* and *Pre-construction Survey* are required. If BUOW habitat is not present, then no further surveys are required.

4.3.2 Step II: Locating Burrows and Burrowing Owls

Step II surveys consist of two parts; *Part A: Focused Burrow Surveys* and *Part B: Focused Burrowing Owl Surveys*. All Step II surveys must be conducted during the BUOW breeding season (March 1 to August 31), generally between the hours of one hour before sunrise and two hours after sunrise, and/or two hours before sunset and one hour after sunset. Further, Step II surveys cannot be conducted within five days of measurable rain, during rain, high winds (>20mph), dense fog, or temperatures exceeding 90 °F.

4.3.2.1 Part A: Focused Burrow Surveys

Part A surveys are conducted in an effort to detect natural potential BUOW burrows (i.e., California ground squirrel burrows), suitable human-created structures (i.e., culverts), and/or occupied BUOW burrows. The BUOW Survey Instructions describe the methods for conducting a Part A survey and those are presented below.

"1. A systematic survey for burrows including burrowing owl sign should be conducted by walking through suitable habitat over the entire survey area (i.e. the project site and within 150 meters). Pedestrian survey transects need to be spaced to allow 100% visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (approximately 100 ft.) and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To efficiently survey projects larger than 100 acres, it is recommended that two or more qualified surveyors conduct concurrent surveys."

"2. The location of all suitable burrowing owl habitat, potential owl burrows, burrowing owl sign, and any owls observed should be recorded and mapped, including GPS coordinates. If the survey area contains natural or man-made structures that could potentially support burrowing owls, or owls are observed during the burrow surveys, the systematic surveys should continue as prescribed in Part B. If no potential burrows are detected, no further surveys are required. A written report including photographs of the project site, location of burrowing owl habitat surveyed, location of transects, and burrow survey methods should be prepared. If the report indicates further surveys are not required, then the report should state the reason(s) why further focused burrowing owl surveys are not necessary."

4.3.2.2 Part B: Focused Burrowing Owl Surveys

Part B surveys are conducted on four separate field survey dates, and the first survey may be conducted concurrent with the Part A survey. These four focused surveys are conducted to adequately determine the presence or absence of BUOW when those structures or features it inhabits, as described above, are present on a subject property. The BUOW Survey Instructions describe the methods for conducting Part B surveys and those are presented below.

"1. Upon arrival at the survey area and prior to initiating the walking surveys, surveyors using binoculars and/or spotting scopes should scan all suitable habitat, location of mapped burrows, owl sign, and owls, including perch locations to ascertain owl presence. This is particularly important if access has not been granted for adjacent areas with suitable habitat."

"2. A survey for owls and owl sign should then be conducted by walking through suitable habitat over the entire project site and within the adjacent 150 m (approx. 500 feet). These "pedestrian surveys" should follow transects (i.e. Survey transects that are spaced to allow 100% visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (approx 100 feet.) and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To efficiently survey projects larger than 100 acres, it is recommended that two or more qualified surveyors conduct concurrent surveys.) It is important to minimize disturbance near occupied burrows during all seasons."

"3. If access is not obtained, then the area adjacent to the project site shall also be surveyed using binoculars and/or spotting scopes to determine if owls are present in areas adjacent to project site. This 150-meter buffer zone is included to fully characterize the population. If the site is determined not to be occupied, no further surveys are required until 30 days prior to grading (see Pre-construction Surveys below)."

4.3.3 Reporting Requirements

Subsequent to the completion of the proper surveys, a final report shall be submitted to the appropriate Lead Agency (i.e., City or County). The final report shall contain and discuss the necessary information (i.e., survey methods, transect widths, duration, conditions, results, etc.), and the appropriate maps (i.e., transect location map, burrow location map, etc.).

4.3.4 30 Day Pre-Construction Survey

All subject properties containing suitable habitat and/or potential BUOW burrows must conduct a Pre-Construction Survey within 30 days prior to ground disturbance. This includes sites where BUOW were determined to be absent.

4.4 Soil Suitability

The soils that comprise the Site were suitable for BUOW and other fossorial animals.

4.5 Burrowing Owl Occurrence – CNDDDB Query

SBS conducted a query of the CNDDDB GIS shapefile to determine if any BUOW have been reported to occur within five miles of the Property.

4.5.1 Query Results

A total of 45 records of BUOW have been reported within five miles of the Property; however, 23 of those records were considered sensitive by CDFW and the detailed location data was suppressed with only the Winchester and Lakeview 7.5-minute USGS quadrangles provided. The remaining 22 records were from 1989 to 2016. The nearest documented occurrence was approximately 0.71 mile south of the Property in 2015. *Figure 9 - CNDDDB 5 Mile Query Results – Burrowing Owl* (Page 23) depicts the location of the 22 public records.

4.6 Assessment Methods

The habitat assessment, focused burrow survey, and focused BUOW surveys were performed according to the Survey Instructions described above. Prior to initiating field surveys, SBS produced a GIS BUOW assessment area map by generating a 150-meter buffer using the Property boundary, then clipping the County's "Burrowing Owl Survey" GIS Feature Class to the 150-meter area.



4.6.1 Step I: Habitat Assessment

Initially, those areas visible from onsite and nearby roads were observed from a vehicle while driving and making frequent stops (i.e., windshield survey) to observe general habitat conditions. Subsequent to performing the “windshield survey,” a pedestrian survey of the Site was conducted. Transects were spaced at no more than 30 meters (100 feet) to allow for 100% visual coverage. The property ownership of the areas within the 150-meter survey buffer was uncertain; therefore, these areas were scanned using 10x42 binoculars and a 20-60x spotting scope rather than transected. Field observations such as plant communities, vegetation height and density, topography, and soil suitability were noted.

4.6.2 Step II Part A and Part B: Focused Burrow and Burrowing Owl Surveys

The methods to conduct the Part A and B focused assessments were similar to those of the habitat assessment. Potential BUOW burrows and burrow surrogates (i.e., California ground squirrel burrows, culverts, etc.) were mapped in the field utilizing Collector. Data collected for each burrow location included type of burrow or burrow surrogate, a range of the number of burrows (i.e., single burrow vs. burrow complex), presence or absence of BUOW sign (i.e., feathers, wash, pellets, etc.), and pertinent ecological notes. If BUOW were detected the location was recorded using Collector. Additional data recorded included the number of adults and juveniles, detection location (i.e., burrow site, perch, etc.), and any pertinent ecological and/or behavioral observations.

4.7 Assessment Results

No BUOW or BUOW sign were detected. The results of the BUOW assessment is detailed below. The survey area, suitable habitat, transects, and potential owl burrow locations are depicted on *Figure 10 – Burrowing Owl Survey Results* (Page 25). No focused assessments were conducted within five days of any single, measurable rain event (i.e., ≥ 0.10 inch).

4.7.1 Step I: Habitat Assessment

The Property supported 65.24-acres of suitable BUOW habitat. An additional 42.88 acres of suitable BUOW habitat was present within 150-meters of the Property. All suitable habitat consisted of dryland agricultural areas and open non-native grassland that was routinely maintained for weed abatement. Eucalyptus woodland and overgrown ruderal/non-native grass areas were not suitable for BUOW.

4.7.2 Step II Part A: Focused Burrow Survey

Potential owl burrows detected on the Property consisted entirely of California ground squirrel burrows/burrow complexes. No suitable burrow surrogates were detected on the Property. Burrows were primarily concentrated along fence-lines and utility tower/pole foundations where agricultural land uses and weed abatement equipment could not impact the burrows. Only three single burrows and one burrow complex was located in the open field area. No BUOW sign was observed at any of the potential owl burrow locations, including the entrances, or suitable perch locations nearby (i.e., fence posts, stakes, etc.).

4.7.3 Step II Part B: Focused Burrowing Owl Surveys

No BUOW were detected on or within 150-meters of the Property over the course of the four protocol-level focused BUOW surveys.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 MSHCP Criteria Requirements

The Property was not located within a Criteria Cell/Criteria Cell Group; therefore, it was not targeted for long-term conservation within the MSHCP Reserve Assembly.

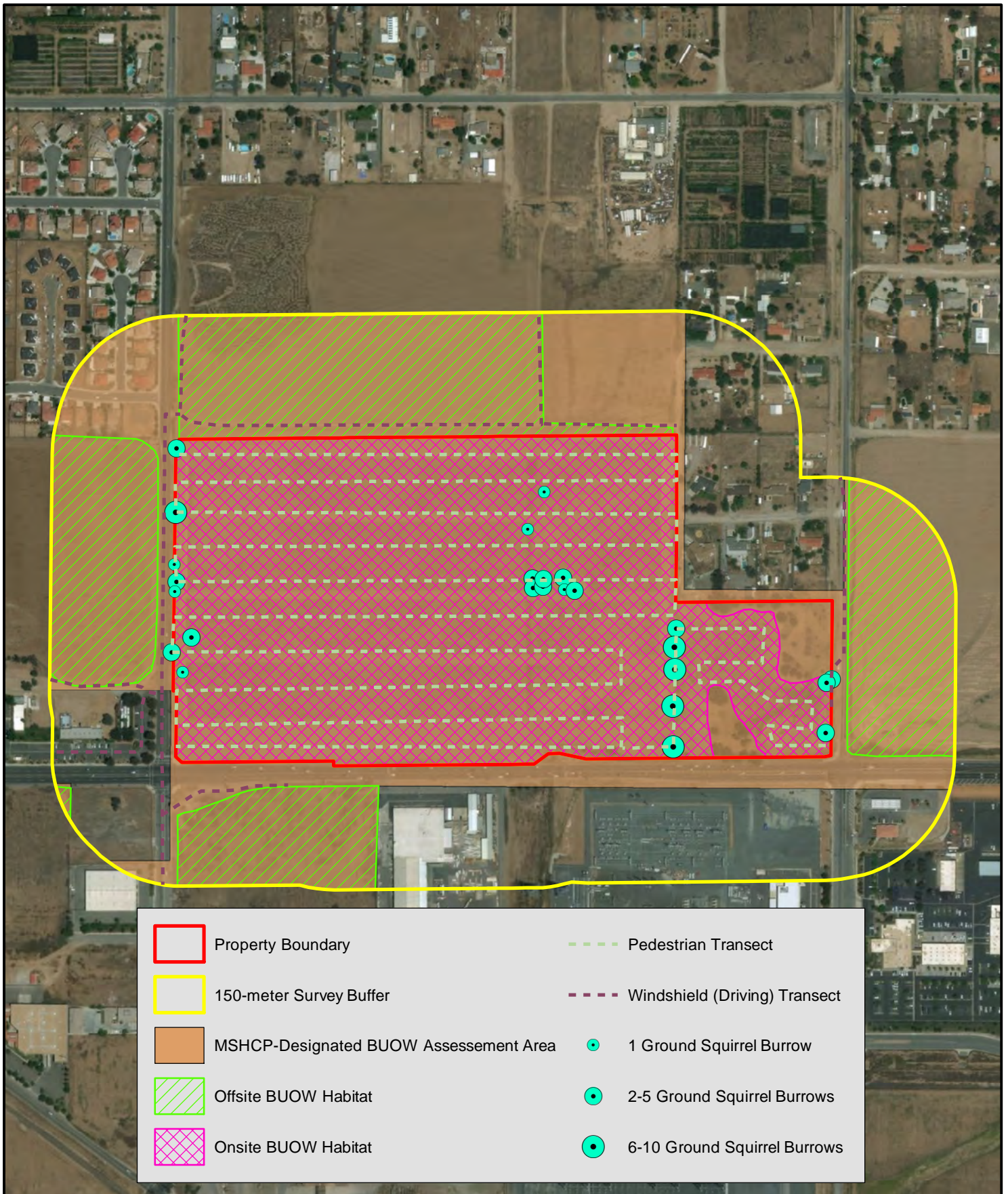
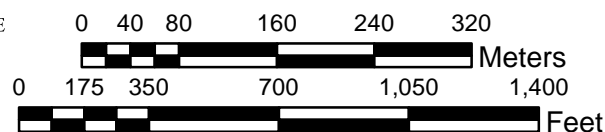


FIGURE 10
Burrowing Owl Survey Results



5.2 MSHCP Section 6.1.2 Resources

One Riverine, two erosional, and one sediment transport feature were present on, and near, the southeastern portion of the Property. Features A was a human-constructed roadside ditch with broken cement in portions to stabilize the banks. This feature has been present for decades and likely historically put in place to divert flows from agricultural fields and roadways. Feature A was Riverine as defined by the MSHCP given that it was constructed decades ago to divert natural stream flows from agricultural and road areas, and it appears to eventually contribute flows to potential downstream resources. Features A₁, A₂, and B did not meet the criteria of a Riverine feature due to their lack of biological values and contribution to downstream resources. The MSHCP specifically states that the purpose of identifying and protecting Section 6.1.2 Resources in perpetuity is to “...ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that Habitat values for species inside the MSHCP Conservation Area are maintained” (Dudek & Associates, Inc., 2003). Features A₁, A₂, and B lack biological functions and habitat values for MSHCP Section 6.1.2 targeted species, and do not contribute to maintaining habitat values for species inside the MSHCP conservation area; therefore, these features have no long-term conservation value.

5.3 MSHCP Section 6.1.3 Narrow Endemic Plant Species

The Property was not located within a MSHCP-designated assessment area for Narrow Endemic Plants.

5.4 MSHCP Section 6.1.4 Guidelines Pertaining to the Urban/Wildlands Interface

The Property was located 1.60-miles away from the nearest Criteria Cell/Criteria Cell Group. No edge effects⁸ will occur at this long-distance; therefore, MSHCP Section 6.1.4 is not applicable.

5.5 MSHCP Section 6.3.2 Additional Survey Needs and Procedures

BUOW were absent from the Site and within 150-meters of the Site. Although BUOW were absent, a 30-Day BUOW Pre-Construction Survey will be required prior to Project-related ground disturbance activities. The Property was not located within any other MSHCP Section 6.3.2-designated assessment areas (i.e., small mammal, amphibian, criteria area plants).

5.5.1 30-Day BUOW Pre-Construction Survey

A 30-day pre-construction survey is required by the MSHCP prior to any Project-related ground disturbance activities. If BUOW have colonized the Property prior to the initiation of Project-related construction, the project proponent should immediately inform the City of Menifee and the Wildlife Agencies (i.e., CDFW and USFWS), and would need to coordinate further with City of Menifee and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance.

5.6 Other Regulatory Considerations

5.6.1 Nesting Birds

Project-related grubbing, grading, and/or tree removal activities occurring during the bird nesting season (typically January 01 to August 31 for raptors; February 01 to August 31 all other birds) require a pre-construction nesting bird survey within three days of Project-related disturbance to avoid direct and indirect

⁸ Edge effects are defined by the MSHCP as “Adverse direct and indirect effects to species, Habitats and Vegetation Communities along the natural urban/wildlands interface. May include predation by mesopredators (including native and non-native predators), invasion by exotic species, noise, lighting, urban runoff and other anthropogenic impacts (trampling of vegetation, trash and toxic materials dumping, etc.).”

impacts to nesting birds, and thus ensure compliance with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Codes 3503 and 3503.5.

5.6.2 Jurisdictional Features

Features A, A₁, A₂, and B are potentially jurisdictional by the U. S. Army Corps of Engineers (ACOE), California Department of Fish and Wildlife (CDFW), and/or California Regional Water Quality Control Board (RWQCB). Agency personnel should be consulted prior to any Project-related impacts to these features.

5.6.3 City of Menifee Heritage Tree Ordinance

According to Section 9.86.020 of the City of Menifee Municipal Code, “The city considers trees to be a valuable community resource. Heritage trees such as those with certain characteristics (age, size, species, location, historical influence, aesthetic quality or ecological value) receive special attention and preservation efforts.”

The trees on the Property consisted entirely of non-native, naturalized Eucalyptus and Peruvian pepper tree. Any non-native trees, from a biological standpoint, should not meet the criteria of a “Heritage” tree. The trees do however, provide nesting habitat for numerous birds. It is recommended that tree removal occur outside of the nesting bird season if feasible given the likelihood birds will utilize these trees for nesting. If tree removal must occur during the bird breeding season, then a nesting bird survey performed as described above should be conducted within three days of the proposed removal.

6.0 MSHCP CONSISTENCY RECOMMENDATION

A development project at this location would be consistent with the goals of the MSHCP regarding both the conservation criteria and BUOW. The Site is not targeted for long-term conservation and no BUOW utilize the Site. More information is needed to determine if a development project will be consistent with the goals of MSHCP Section 6.1.2. It is recommended that once the City of Menifee determines which of the four features it considers Riverine as the permittee to the MSHCP and the Lead Agency, and Optimus submits a final site plan, that an addendum to this report be prepared addressing project-related avoidance/impacts. Based on the addendum, it can be determined if the final project is consistent with the goals of MSHCP Section 6.1.2 and whether or not, in close consultation with the City of Menifee, a Determination of Biologically Equivalent or Superior Preservation (DBESP) report will be required.

7.0 CERTIFICATION

I hereby certify that the statements furnished above, the associated figures, and the attached appendices present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signed: Tim Searl
Tim Searl, Owner/Biologist, Searl Biological Services

Date: June 28, 2018

8.0 REFERENCES

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APPENDIX A

Palomar Crossings Conceptual Site Plan

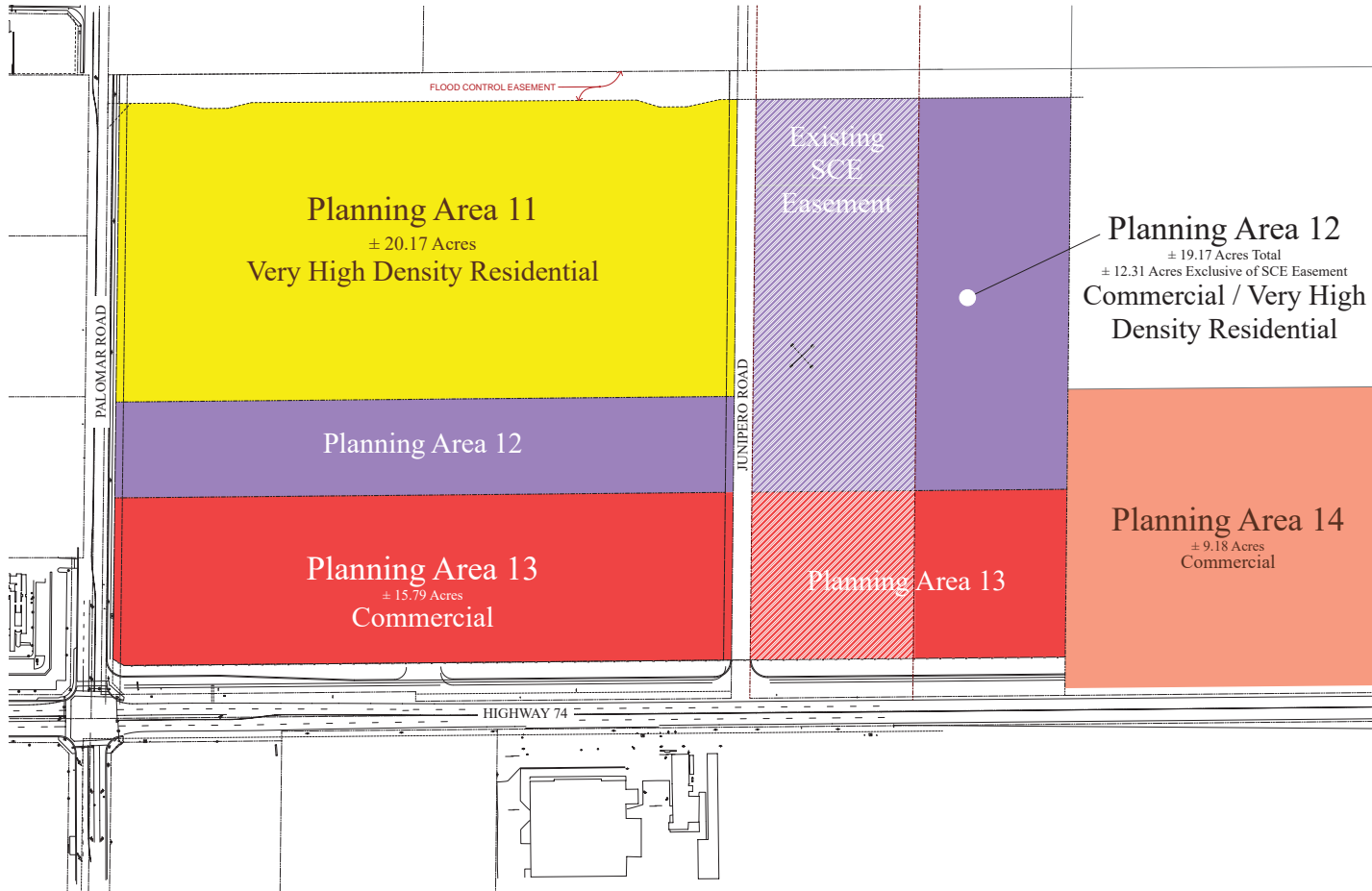
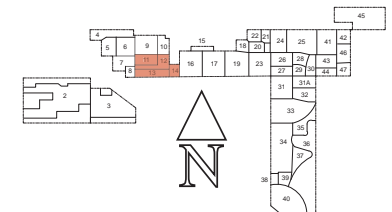


FIGURE III-1A

Proposed Land Use Plan

- Planning Area 11
- Planning Area 12
- Planning Area 13
- Planning Area 14



APPENDIX B

Site Photographs



PHOTOGRAPH 1: Northwesterly view of the Site, including the SCE Easement.



PHOTOGRAPH 2: A portion of the Eucalyptus woodland depicted located in the eastern portion of the Property.



PHOTOGRAPH 3: A northerly view of the western portion of the Property.



PHOTOGRAPH 4: A southerly view of the SCE Easement.

APPENDIX C

Vascular Plants Observed

The plants listed below were detected on the Property during field surveys conducted in March and April 2018. Nomenclature follows *The Jepson Online Interchange*. Introduced species are indicated with an (I). Cultivar species are indicated with a (C).

COMMON NAME	SCIENTIFIC NAME
Borage Family	Boraginaceae
common fiddleneck	<i>Amsinckia intermedia</i>
Buckwheat Family	Polygonaceae
common knotweed (I)	<i>Polygonum aviculare</i> subsp. <i>depressum</i>
Geranium Family	Geraniaceae
long-beaked filaree (I)	<i>Erodium botrys</i>
Red-stemmed filaree (I)	<i>Erodium cicutarium</i>
Goosefoot Family	Chenopodiaceae
lamb's quarters (I)	<i>Chenopodium album</i>
tumbleweed (I)	<i>Salsola tragus</i>
Grass Family	Poaceae
common Mediterranean grass (I)	<i>Schismus barbatus</i>
domestic wheat (C)	<i>Triticum aestivum</i>
red brome (I)	<i>Bromus madritensis</i> subsp. <i>rubens</i>
ripgut grass (I)	<i>Bromus diandrus</i>
slender wild oat (I)	<i>Avena barbata</i>
wall barley (I)	<i>Hordeum murinum</i>
Mallow Family	Malvaceae
cheeseweed (I)	<i>Malva parviflora</i>
Mustard Family	Brassicaceae
London rocket (I)	<i>Sisymbrium irio</i>
radish (I)	<i>Raphanus sativus</i>
shortpod mustard (I)	<i>Hirschfeldia incana</i>
Myrtle Family	Myrtaceae
gum tree (I)	<i>Eucalyptus</i> sp.
Nightshade Family	Solanaceae
Jimson weed	<i>Datura wrightii</i>
Sunflower Family	Asteraceae
common dandelion (I)	<i>Taraxacum officinale</i>
common sow thistle (I)	<i>Sonchus oleraceus</i>
common sunflower	<i>Helianthus annuus</i>
mule fat	<i>Baccharis salicifolia</i> subsp. <i>salicifolia</i>
pineapple weed	<i>Matricaria discoidea</i>
prickly lettuce (I)	<i>Lactuca serriola</i>
royal goldfields	<i>Lasthenia coronaria</i>
stinknet (I)	<i>Oncosiphon piluliferum</i>
western ragweed	<i>Ambrosia psilostachya</i>

APPENDIX D

Wildlife Observed

Birds

The bird species listed below were detected either on or near the Site during field surveys conducted in March and April 2018. The list below is presented in alphabetic order. Nomenclature for the Family (i.e., Falconidae), Common Name, and Scientific Name follow the American Ornithologists' Union (AOU) *Checklist of North and Middle American Birds*. Introduced species are indicated with an (I).

COMMON NAME	SCIENTIFIC NAME
Blackbirds	Icteridae
Western Meadowlark	<i>Sturnella neglecta</i>
Caracaras and Falcons	Falconidae
American Kestrel	<i>Falco sparverius</i>
Crows and Jays	Corvidae
Common Raven	<i>Corvus corax</i>
Finches and Allies	Fringillidae
House Finch	<i>Haemorhous mexicanus</i>
Hawks, Kites, Eagles, and Allies	Accipitridae
Northern Harrier	<i>Circus hudsonius</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Hummingbirds	Trochilidae
Anna's Hummingbird	<i>Calypte anna</i>
Larks	Alaudidae
Horned Lark	<i>Eremophila alpestris</i>
Mockingbirds and Thrashers	Mimidae
Northern Mockingbird	<i>Mimus polyglottos</i>
New World Sparrows	Passerellidae
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Old World Sparrows	Passeridae
House Sparrow (I)	<i>Passer domesticus</i>
Pigeons and Doves	Columbidae
Mourning Dove	<i>Zenaida macroura</i>
Starlings	Sturnidae
European Starling (I)	<i>Sturnus vulgaris</i>
Tyrant Flycatchers	Tyrannidae
Cassin's Kingbird	<i>Tyrannus vociferans</i>
Say's Phoebe	<i>Sayornis saya</i>
Waxbills and Allies	Estrildidae
Scaly-breasted Munia (I)	<i>Lonchura punctulata</i>
Wood Warblers	Parulidae
Yellow-rumped Warbler	<i>Setophaga coronata</i>

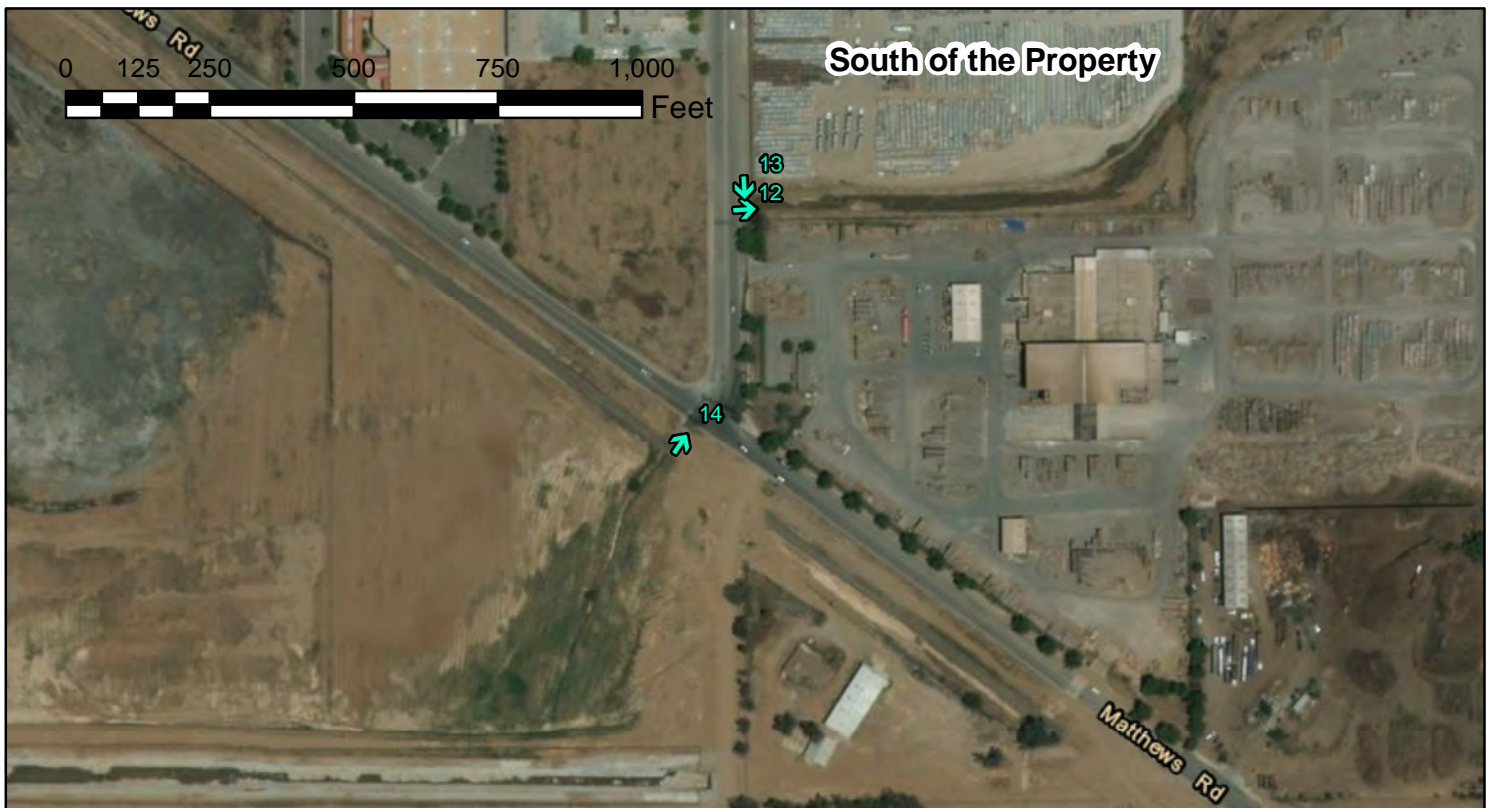
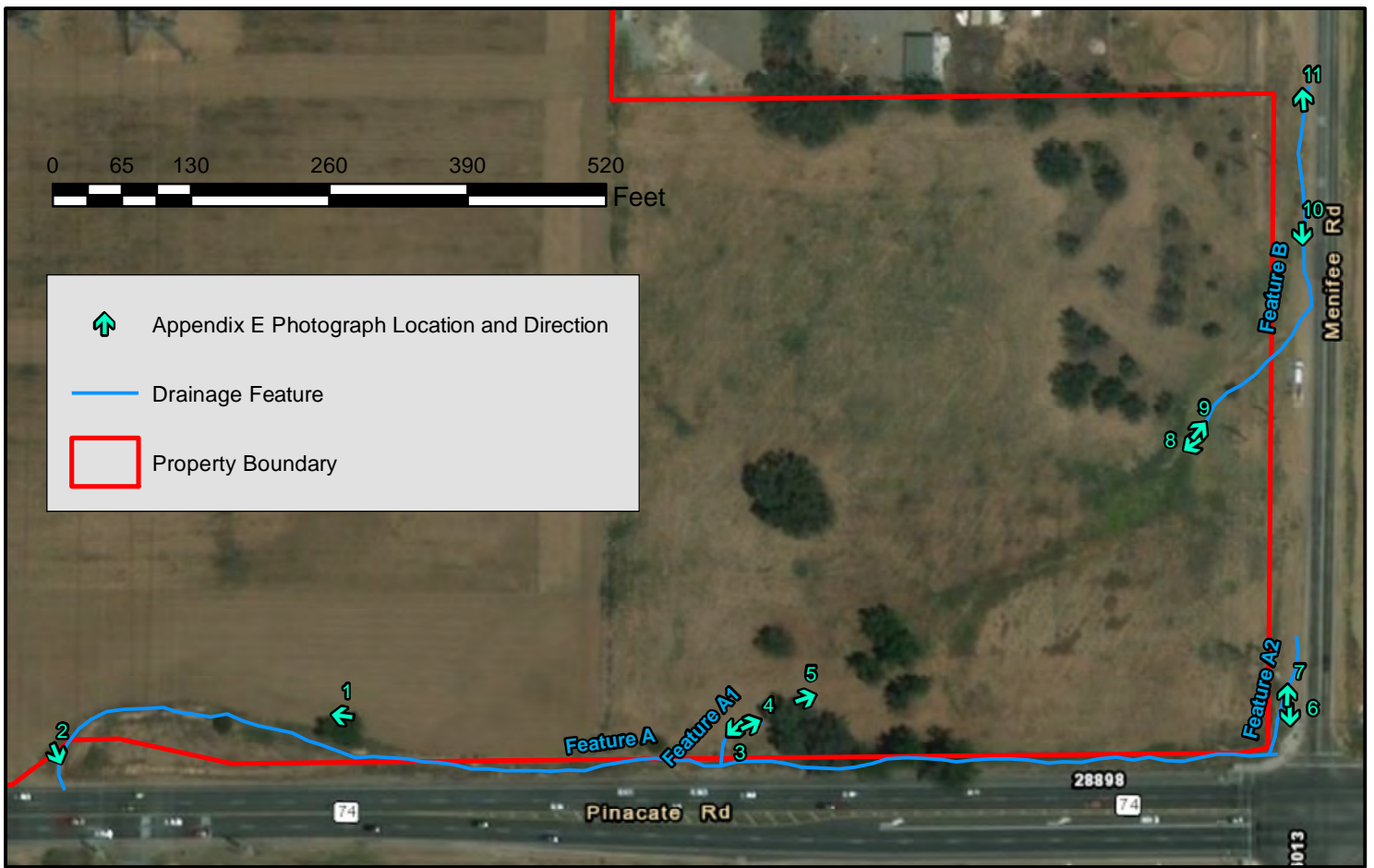
Mammals

The mammals listed below were observed on or near the Site through sign and/or physical sightings during field surveys conducted in March and April 2018. The list below is presented in alphabetic order. Nomenclature for the Family (i.e., Sciuridae), Common Name, and Scientific Name follow *Wilson & Reeder's Mammal Species of the World*.

COMMON NAME	SCIENTIFIC NAME
Ground Squirrels	Sciuridae
California ground squirrel	<i>Spermophilus beecheyi</i>
Pocket Gophers	Geomyidae
Botta's pocket gopher	<i>Thomomys bottae</i>
Rabbits and Hares	Leporidae
desert cottontail	<i>Sylvilagus audubonii</i>

APPENDIX E

Drainage/Erosional Feature Photographs



Appendix E
Photograph Key Map



PHOTOGRAPH 1: Feature A is depicted. A single mule fat was located in the western portion.



PHOTOGRAPH 2: Feature A exits south of the Property beneath Hwy 74.



PHOTOGRAPH 3: Feature A₁ was an erosional feature that was connected to Feature A.



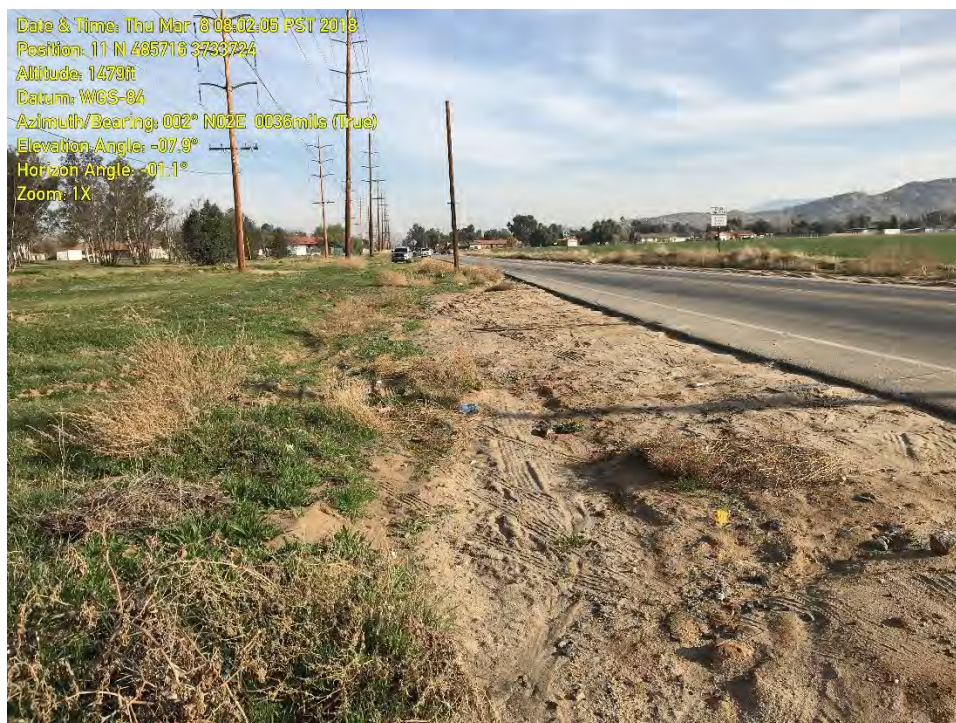
PHOTOGRAPH 4: An upstream view of Feature A₁. The feature was not connected to any upstream features.



PHOTOGRAPH 5: Another view further upstream of Feature A₁. No connection to upstream features.



PHOTOGRAPH 6: Feature A₂ undercutting a cement foundation then entering Feature A.



PHOTOGRAPH 7: The origin of Feature A2 is depicted. This feature was not connected to any upstream features.



PHOTOGRAPH 8: A view directly downstream of Feature B depicting no discernable incised channel or bed/bank. Feature B transitioned to sheetflow at its terminus.



PHOTOGRAPH 9: The terminus of Feature B. The Feature consisted entirely of sediment transport on the Site.



PHOTOGRAPH 10: Feature B along Meniffee Road consisting of sediment transport.



PHOTOGRAPH 11: Feature B has a clearly defined channel upstream along Meniffee Road beyond the boundary of the Property.

Offsite Feature A Photographs



PHOTOGRAPH 12: The terminus of Feature A approximately 0.38 mile southwest of the Site.



PHOTOGRAPH 13: Feature A's flows enter directly as surface flow on Palomar Road.



PHOTOGRAPH 14: Feature A's flow appears to eventually enter this storm drain located approximately 395.0 feet south of its terminus on Palomar Road.