

APPENDIX D.
BIOLOGICAL ASSESSMENT

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Jurisdictional Delineation for the Casa Blanca Specific Plan

City of Yucaipa
San Bernardino County, California

Submitted to:

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Submitted by:



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1.0 INTRODUCTION

The Meridian Land Development Company (MLDC) is proposing to develop four land parcels within an approximately 240 acre area Project within the City of Yucaipa, San Bernardino County, California. ECORP Consulting, Inc. (ECORP) conducted a biological resource assessment and jurisdictional wetland delineation of the Project. This report provides the results of the jurisdictional wetland delineation for the proposed project site. A biological report is provided under separate cover [ECORP 2012].

The jurisdictional delineation conformed to the unified federal method, as defined by the Army *Corps of Engineers*, using methodology outlined in the *Corps of Engineers Wetlands Delineation Manual* [USACOE 1987] and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Region Supplement Version 2.0) [USACOE 2008]. This method consists of conducting field work using paired sample point analysis, made in conjunction with aerial photograph interpretation, and mapping of jurisdictional resources based on the location of Ordinary High Water Mark (OHWM) for Waters of the US and limits of floodplain for Waters of the State, also known as California Department of Fish and Game) Streambeds [USACOE 2008].

1.1 Project Location

The Project site is located in the northeastern portion of the City of Yucaipa within San Bernardino County, California (Figure 1). The Project area is bound by Fir Avenue to the north, Oak Glen Road to the south, Jefferson Street and Cherry Croft Drive to the west, and an undefined north-south line one mile east of Jefferson Street. The property can be found within the southern half of Section 29, plus the southwest half of the southwest half of Section 30, in Township 1 South, Range 1 West, San Bernardino Base Meridian, of the US Geological Survey Yucaipa California 7.5-minute topographic quadrangle (Figure 2). It is approximately four miles north of the Interstate 10 freeway. The Project is made up of four land parcels (Assessor's Parcel Numbers [APN] 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000 and 0321-082-15-0000. The approximate center of the project area is 34.052091, -117.010763 (UTM 11S 3767932, E 499007).

1.2 Project Description

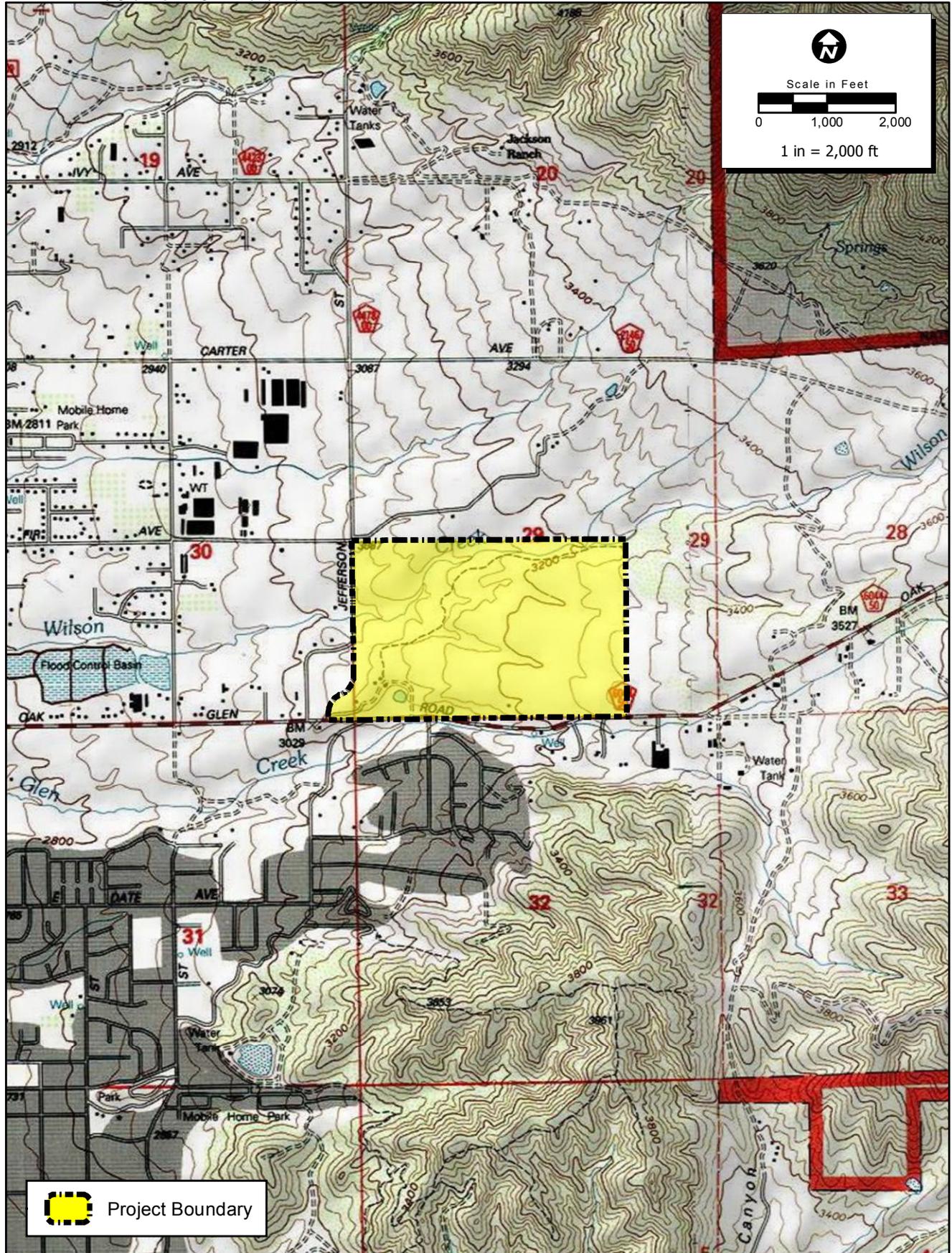
The (MLDC) is proposing to build residential developments for four land parcels. Although details of the project have not been determined, the biological information provided will help to determine the projects design and scope. Additionally, the data collected in this report will create a biological profile for the Project and characterize potential biological constraints of the properties, including habitats, plant and wildlife species, and drainage features.



Map Date: 9/20/2012
 Source: ESRI

Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Site_Vicinity\CBSP_Vicinity_v2.mxd (KOrtega, DWagnon, 9/20/2012)

Figure 1. Vicinity



Map Date: 9/20/2012
Source: ESRI Online

Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Site_Vicinity\CBS_P_Location_v2_Quad.mxd (DWagon, 9/20/2012)

Figure 2. Project Location
2012-067 Casa Blanca Specific Plan

2.0 EXISTING CONDITIONS

2.1 Regional Setting

The City of Yucaipa hosts a population of more than 50,000 full-time residents, has an average elevation of 2,600 feet (792 meters), and averages 13.5 inches of precipitation annually. Temperatures in the Yucaipa area usually range from the 50's (F) in the winter to the low 70's (F) in the summer. The climate in this part of San Bernardino County tends to be variable, temperatures can swing from 25 to 33 degrees daily, and the warmest month is in August and the coolest month is in January [IDcide, 2012].

Yucaipa is a city within San Bernardino County, California, and is approximately 15 miles east of San Bernardino and 12 miles north of Moreno Valley. Yucaipa is located south of the San Bernardino Mountains and west of the San Gorgonio Mountains, along Interstate 10. As a suburb of the greater Los Angeles area, it is an area used by both commuters and weekend vacationers. US Forest Service land is within two miles to the northeast. The property is located within the Yucaipa Creek Watershed, a watershed of approximately 67 square miles, which ultimately leads to the Santa Ana River Watershed.

Local topography consists of a hilly landscape. The project site ranges in elevation between approximately 3,000 feet (914 meters) above mean sea level (amsl) in the southwest section to 3,460 feet (1,055 meters) (amsl) in the northeast. Drainage tends to be in a southwesterly direction, towards Wilson Creek. The nearest peak is Allen Peak at 5,795 feet (1,766 meters), within two miles to the northeast of the property. The nearest areas of designated open space include the US Forest Service lands of the San Bernardino National Forest. Yucaipa is largely residential with existing 1 unit per acre zoning. The client is proposing a residential density transfer to clustered lots with ½ acre lot sizes.

2.2 Vegetation Communities

There are three vegetation communities on the property: Brassica (*nigra*) and other mustards, California Buckwheat Scrub, and Oak tree Woodland, in addition to agriculture, disturbed/developed, and orchard areas. The site comprises disturbed/developed habitat, with some native scrub and oak habitats in the wash areas and agriculture or orchards in the upper, flat areas (See Biological Report, Figures 3A-3D). These vegetation communities are defined below. A complete list of plant species observed on the project site is found in Appendix A.

Brassica (*nigra*) and other mustards Semi-Natural Herbaceous Stands

Brassica (*nigra*) and other mustards are mainly along the edges of the agricultural areas and within and around the orchards and disturbed/developed areas. This is characterized by a dominance of annual vegetation that emerges after the rains, produces seeds, and dies before the next rainy season. Dominant plant species observed within this community include slender wild oat (*Avena fatua*), short-podded mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), lamb's quarters (*Chenopodium album*), and Russian thistle (*Salsola tragus*).

Native species are generally present in low amounts and include deerweed (*Lotus scorparius*), telegraph weed (*Heterotheca grandiflora*), fiddleneck (*Amsinckia* sp.), and western bindweed (*Calystegia macrostegia*).

California Buckwheat Scrub

California buckwheat (*Eriogonum fasciculatum*) is a somewhat small, semi-woody shrub that can grow to two meters in height and is found in low to mid elevations throughout central and southern California. This species grows in a variety of topographic conditions, and is generally found in course, well drained soils. This alliance is often one of the first to form following disturbance such as fire, floods, grazing, or mechanical disturbance. California buckwheat is scattered throughout the site and is found among deerweed, scale broom (*Lepidospartum squamatum*), thick-leaved yerba santa (*Eriodictyon crassifolium*), white sage (*Salvia apiana*), and our Lord's candle (*Yucca whipplei*). The interspace between shrubs often has high amounts of non-native herbaceous species.

Oak Tree Woodland

Tucker's oak (*Quercus john-tuckeri*) on the site is a drought-resistant evergreen shrub that can grow to be three to five meters in height and can be found along the Transverse Mountain Range and the southern end of the Coast Range. Tucker's oak woodland can grow in a variety of habitats, including mountains, chaparral, desert-chaparral transition communities, pinyon-juniper woodland and Great Basin sage. On the site, the oak woodland is found along drainages and around otherwise disturbed and developed residential sites.

Agriculture, Disturbed/Developed, and Orchard

Agriculture, Disturbed/Developed, and Orchard, are not vegetation classifications, but rather a land cover type. Areas mapped as this are either largely devoid of vegetation due to human development, or are dominated by unnatural vegetation such as lawns and landscaping. Often areas surrounding development show high amounts of non-native ruderal species. On site, this cover type is generally represented by the agricultural areas, the orchards, or the small area of development around the Casa Blanca house.

2.3 Soils

The project site consists of four soil types (Figure 3). Soils on the site consist primarily of Greenfield Sandy Loam, two to nine percent slopes (GtC). The steeper portions throughout the site consist of Saugus Sandy Loam, thirty to fifty percent slopes (ShF), with the nearby riverine areas consisting mainly of Tujunga Gravelly Loamy Sand, zero to nine percent slopes (TvC). A small portion of the southern upland area consists of Soboba Gravelly Loamy Sand, zero to nine percent slopes (SoC). Soils types were mapped using the NRCS Web Soil Survey [NRCS].

Hydric soil types are those which may support wetlands. Typically hydric soils are those that are sufficiently wet in the upper part to develop anaerobic conditions during the growing season. Both GtC and SoC soil types on the property have hydric ratings when located within drainage ways, and TvC has a hydric rating within drainage ways or channels, meaning that are potentially

hydric. Of the three potentially hydric soil types, the TvC and SoC are located near the delineated drainages on the property.

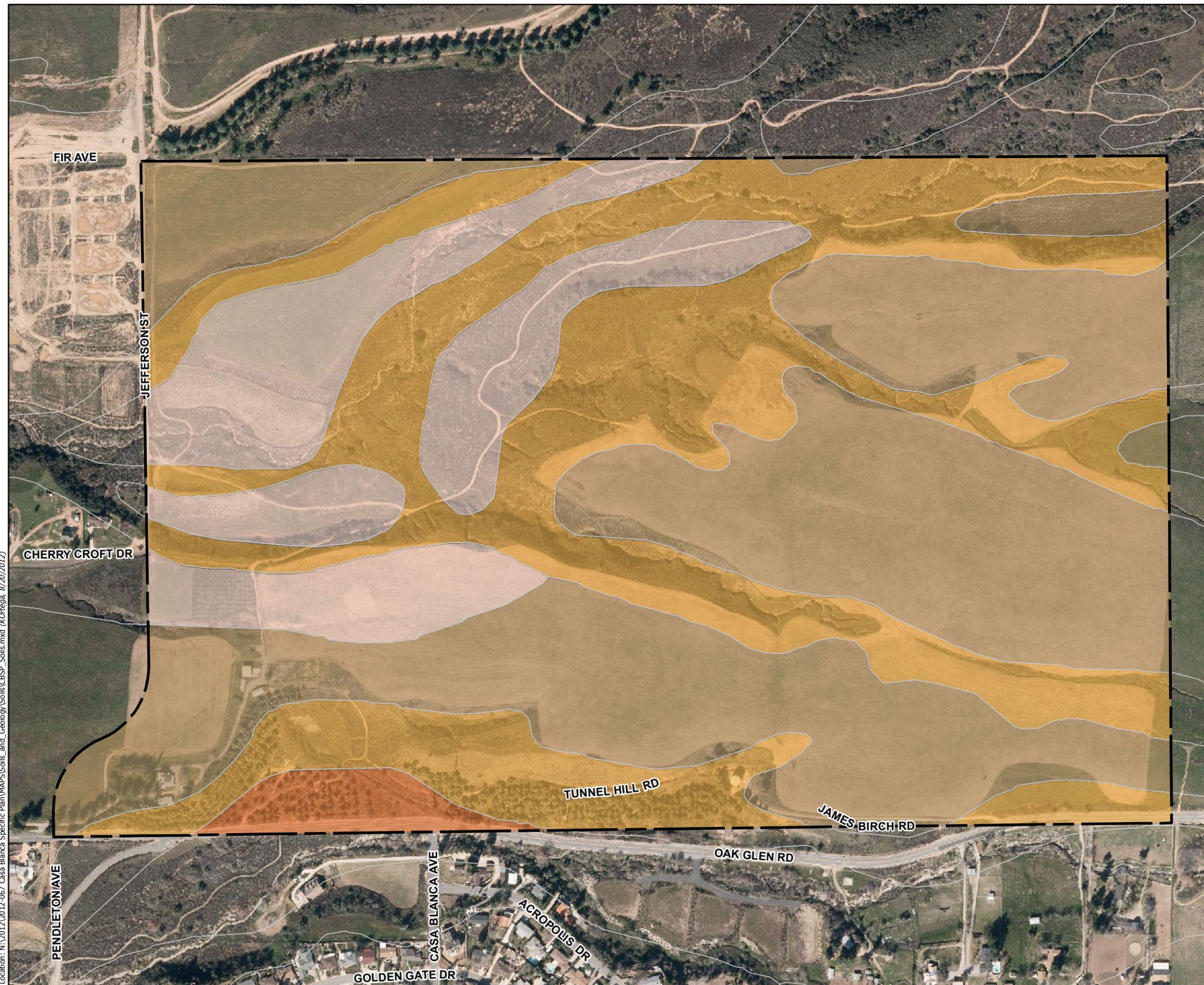
2.4 Watersheds

The drainage on the property flows southwesterly into Wilson Creek, then east into the Santa Ana River. The property is considered to be part of the Santa Ana River Watershed (HUC 18070203) and is within the Yucaipa Creek Subwatershed (Figure 4). The Yucaipa Creek Subwatershed is located in the northeastern portion of the Santa Ana Watershed and represents less than three percent of the total area within the watershed.

The Santa Ana River Watershed encompasses nearly 2,700 square miles spanning parts of San Bernardino, Riverside, Los Angeles, and Orange Counties following the path of the Santa Ana River. Headwaters of the Santa Ana River are located in the San Bernardino Mountains, within National Forest lands to the east of San Bernardino. Headwaters of various contributing streams along the river's length generally flow from the south side of the San Bernardino Mountains, the Cajon Pass, the San Timoteo Badlands, western side of the San Jacinto Mountains, portions of the Santa Ana Mountains, and portions of the eastern San Gabriel Mountains. The river flows approximately 100 miles, through a combination of natural areas and urban environments, to enter into the Pacific Ocean near Fountain Valley. Major tributaries include Lytle Creek, San Timoteo Creek, Plunge Creek, Cajon Wash, Mill Creek, San Jacinto River, Temescal Wash, Santiago Creek, and many others [USGS 2001].

The Santa Ana River is the main water body that brings the water from Wilson Creek on the property to the Pacific Ocean. The drainages on the project site area connected to the Pacific Ocean, via the Santa Ana River. This connectivity qualifies them as jurisdictional Waters of the U.S.

**Figure 3.
NCRS Soils Classifications**



Map Features

Project Boundary

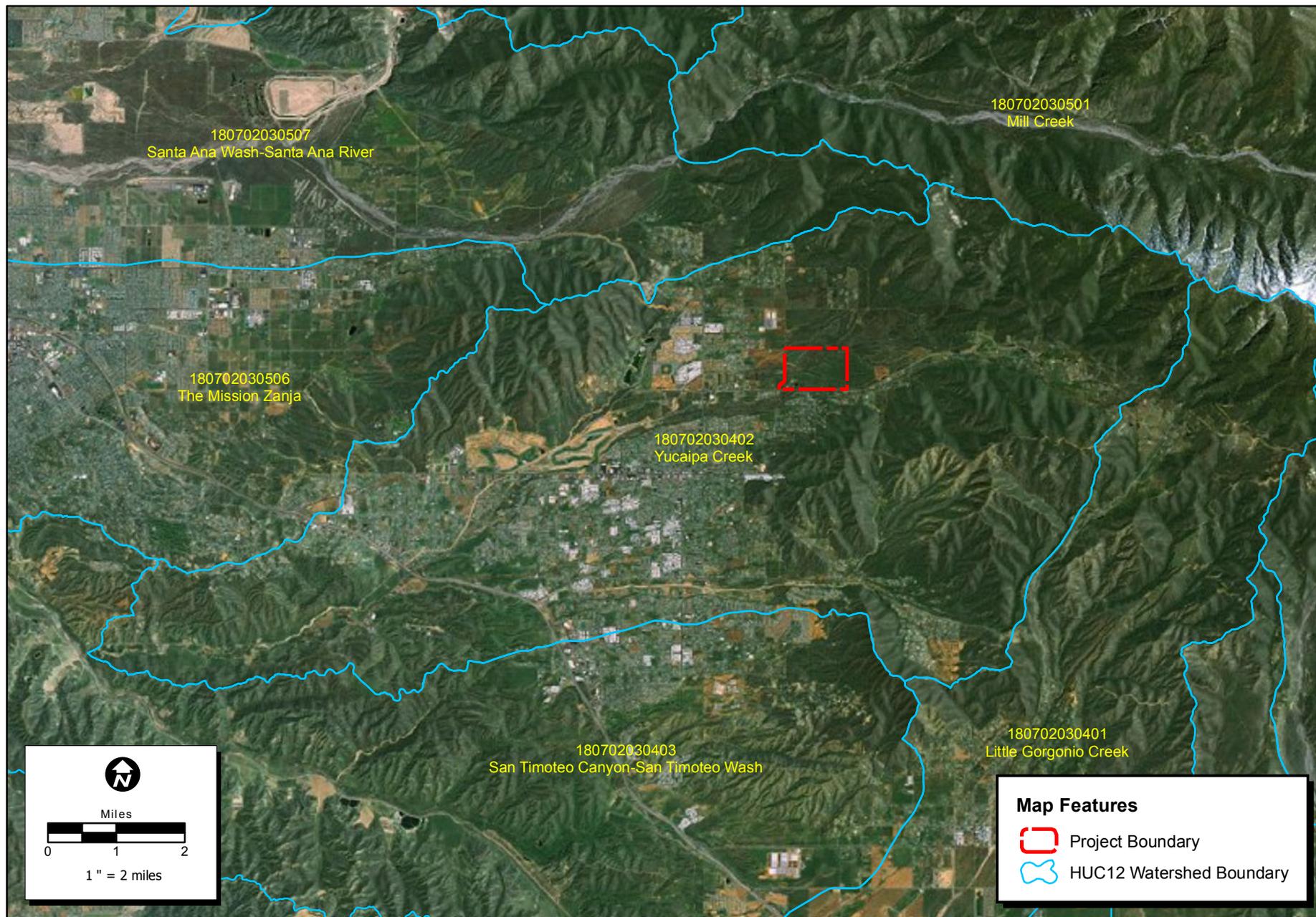
MUNAME

- GREENFIELD SANDY LOAM, 2 TO 9% SLOPES (109 acres)
- SAUGUS SANDY LOAM, 30 TO 50% SLOPES (87 acres)
- SOBOBA GRAVELLY LOAMY SAND, 0 TO 9% SLOPES (5 acres)
- TUJUNGA GRAVELLY LOAMY SAND, 0 TO 9% SLOPES (41 acres)

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Map Date: 8/20/2012

Figure 4. HUC Watershed

2012-067 Casa Blanca Specific Plan

3.0 METHODS

This wetland delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* [USACOE 1987] and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Region Supplement Version 2.0) [USACOE 2008]. The boundaries of potential waters of the U.S. were delineated through field assessment, made in conjunction with research of hydrological connectivity, soils data, aerial photograph interpretation, and sample point analyses. All wetland data were recorded on Arid West Region - Wetland Determination Data Forms (Appendix B). A color aerial photograph was used to assist with mapping and ground-truthing. *Munsell Soil Color Charts* [GretagMacbeth] was used to aid in identifying hydric soils in the field. *The Jepson Manual* [Baldwin, ed. 2012] was used for plant nomenclature and identification. Vegetation community designations follow *A Manual of California Vegetation* [Sawyer, 2009].

The field survey was conducted by walking the project limits to determine the location and extent of potential waters of the U.S. within the site and the extent of CDFG jurisdiction. Two pairs of sample points were taken to characterize ACOE jurisdictional features within the Casa Blanca site (Figure 5). At a representative location, two locations were sampled as to their vegetation, hydrology, and soils. At those locations, one point was located such that it was within the suspected wetland area, and the other point was situated outside the limits of the suspected wetland area. This sample point data was used to support a determination of wetland or non-wetland status. The total area of the wetlands and other waters within the site was recorded in the field using a post-processing capable global positioning system (GPS) unit with sub-meter accuracy (Trimble Geo XT).

3.1 ARMY CORE OF ENGINEERS JURISDICTION

This report describes potential waters of the U.S. that may be regulated by the ACOE under Section 404 of the Clean Water Act. Wetlands are "*those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions*" [USACOE 1986 b]. Wetlands can be perennial or intermittent, and isolated or adjacent to other waters.

Other waters are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses [USACOE 1986 a]. The limit of ACOE jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c) (1) as the "ordinary high water mark" (OHWM). The OHWM is defined as the "*line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas*" [USACOE 1986 e]. The bank-to-bank extent of the channel that contains the water-flow during a normal rainfall year generally serves as a good first approximation of the lateral limit of ACOE jurisdiction. The upstream limits of other waters are defined as the point where the OHWM is no longer perceptible.

To be determined a wetland; the following three criteria should be met:

- A majority (greater than 50 percent) of dominant vegetation species are wetland associated species;
- hydrologic conditions exist that result in periods of flooding, ponding, or saturation for at least 5 percent of the growing season; and,
- Soils must exhibit hydric characteristics indicative of permanent or periodic inundation.

The aforementioned characteristics may not apply to isolated, non-navigable waters (such as vernal pools) pursuant to the January 9, 2001 Supreme Court decision in the case of *Solid Waste Agency of Northern Cook County versus U.S. Army Corps of Engineers* (SWANCC) [SWANCC]. The SWANCC decision eliminated jurisdiction over isolated, intrastate, non-navigable waters where the sole basis of jurisdiction is founded on the presence of migratory bird habitat.

A memorandum, dated June 5 2007, was issued by the ACOE to address a pair of court cases: *Rapanos versus United States* [Rapanos] and *Carabell versus United States* [Carabell]. This memorandum asserts ACOE and Environmental Protection Agency (EPA) jurisdiction over Traditional Navigable Waters (TNW) and all wetlands adjacent to TNWs, but also asserts jurisdiction over certain non-navigable waterways if the waterway is a Relatively Permanent Waterway (RPW). An RPW must either flow year-round or seasonally. The other standard introduced by the Rapanos guidance is the existence of a "significant nexus" in determining whether waters (and adjacent wetlands) are jurisdictional by drawing a connection between the waterway and a TNW or RPW. Determination of a "significant nexus" involves a functional analysis, and consideration of both hydrological and ecological factors for each tributary.

Vegetation

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present [GretagMacbeth]. The definition of wetlands includes the phrase "a prevalence of vegetation typically adapted for life in saturated soil conditions." Prevalent vegetation is characterized by the dominant plant species comprising the plant community [GretagMacbeth].

The "50/20 rule" was used to determine the dominant plant species at each data point location. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species that individually comprise 20 percent or more of the total dominance measure for the stratum [HQUSACE].

Dominant plant species observed at each data point were then classified according to their indicator status (probability of occurrence in wetlands) (Table 1), in accordance with the U.S. Fish and Wildlife Service's (USFWS) *National List of Vascular Plant Species That Occur in Wetlands: California (Region 0)* [USFWS]. If the majority (greater than 50 percent) of the dominant vegetation on a site are classified as obligate (OBL), facultative wetland (FACW), or

facultative (FAC) (excluding FAC-), then the site is considered to be dominated by hydrophytic vegetation.

Table 1 - Classification of Wetland-Associated Plant Species¹

<u>Plant Species Classification</u>	<u>Abbreviation²</u>	<u>Probability of Occurring in Wetland</u>
Obligate	OBL	>99%
Facultative Wetland	FACW	66-99%
Facultative	FAC	33-66%
Facultative Upland	FACU	1-33%
Upland	UPL	<1%
No indicator status	NI	Insufficient information to determine status
Plants That Are Not Listed (assumed upland species)	NL	Does not occur in wetlands in any region.
¹ Source: Reed 1988 ² A '+' or '-' symbol can be added to the classification to indicate greater or lesser probability, respectively, of occurrence in a wetland.		

The Dominance Test was supplemented by the Prevalence Index (PI), where applicable. The PI is applied where vegetation fails the Dominance Test but both soil and hydric indicators are positive. The Index is a weighted-average wetland indicator status of all species within a plot by indicator status category. The formula utilized in this calculation is as follows:

$$PI = \frac{AOBL + 2AFACW + 3AFAC + 4AFACU + 5AUPL}{AOBL + AFACW + AFAC + AFACU + AUPL}$$

Where:

PI = Prevalence Index

AOBL = Summed percent cover values of obligate (OBL) plant species

AFACW = Summed percent cover values of facultative wetland (FACW) plant species

AFAC = Summed percent cover values of facultative (FAC) plant species

AFACU = Summed percent cover values of facultative upland (FACU) plant species

AUPL = Summed percent cover values of upland (UPL) plant species

The PI needs to be less than or equal to 3.0 to be considered indicative of the presence of hydrophytic vegetation.

As a third step in evaluating the vegetation, an assessment of any observed Morphological Adaptations to upland plants was made. If upland plants show adaptations to wet conditions (for example, adventitious roots), they may be reclassified as a FAC species and the PI may be recalculated.

Soils

A hydric soil is defined as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part

[USDA]. Indicators that a hydric soil is present could include soil color (gleyed soils and soils with bright mottles and/or low matrix chroma), aquic or preaquic moisture regime, reducing soil conditions, sulfidic material (odor), soils listed on hydric soils list, iron and manganese concretions, organic soils (Histosols), histic epipedon, high organic content in surface layer in sandy soils, and organic streaking in sandy soils. Applicability of specific soil indicators for hydric soils on the project site were determined by using the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* [USACOE 2008].

Four soil pits were excavated, at two different locations, to a depth of 16 inches or refusal at each data point. This was done to document an indicator, or to confirm the absence of indicators. The soil was then examined for hydric soil indicators and the matrix color and mottle color (if present) of the soil was determined using the *Munsell Soil Color Charts* [GretagMacbeth].

Hydrology

Wetlands, by definition, are seasonally or perennially inundated or saturated at or near (within 12 inches of) the soil surface. Primary indicators of wetland hydrology include, but are not limited to: visual observation of saturated soils, visual observation of inundation, surface soil cracks, inundation visible on aerial imagery, water-stained leaves, oxidized rhizospheres along living roots, aquatic invertebrates, water marks (secondary indicator in riverine environments), drift lines (secondary indicator in riverine environments), and sediment deposits (secondary indicator in riverine environments). The occurrence of one primary indicator is sufficient to conclude that wetland hydrology is present. If no primary indicators are observed, two or more secondary indicators are required to conclude wetland hydrology is present. Secondary indicators include, but are not limited to: drainage patterns, crayfish burrows, FAC-neutral test, and shallow aquitard. The occurrence of at least one primary indicator or two secondary indicators is required to confirm the presence of wetland hydrology.

Other waters of the U.S. include non-tidal, ephemeral, perennial, and intermittent watercourses and tributaries to such watercourses [USACOE 1986 a]. These areas typically support hydrologic indicators but no vegetation or soil wetland indicators. The limit of ACOE jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c) (1) as the "ordinary high water mark" (OHWM). The OHWM is defined as the "*line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas*" [USACOE 1986e]. The bank-to-bank extent of the channel that contains the water-flow during a normal rainfall year generally serves as a good first approximation of the lateral limit of ACOE jurisdiction. The upstream limits of other waters are defined as the point where the OHWM is no longer perceptible.

The aforementioned characteristics may not apply to isolated, non-navigable waters (such as vernal pools) pursuant to the January 9, 2001 Supreme Court decision in the case of *Solid Waste Agency of Northern Cook County versus U.S. Army Corps of Engineers* (SWANCC) [SWANCC 2001]. The SWANCC decision eliminated jurisdiction over isolated, intrastate, non-navigable waters where the sole basis of jurisdiction is founded on the presence of migratory bird habitat.

A memorandum, dated June 5 2007, was issued by the ACOE to address a pair of court cases: *Rapanos v. United States* [Rapanos 2006] and *Carabell v. United States* [Carabell 2006]. This memorandum asserts ACOE and Environmental Protection Agency (EPA) jurisdiction over Traditional Navigable Waters (TNW) and all wetlands adjacent to TNWs, but also asserts jurisdiction over certain non-navigable waterways if the waterway is a Relatively Permanent Waterway (RPW). A RPW must either flow year-round or seasonally. The other standard introduced by the Rapanos guidance is the existence of a “significant nexus” in determining whether waters (and adjacent wetlands) are jurisdictional by drawing a connection between the waterway and a TNW or RPW. Determination of a “significant nexus” involves a functional analysis, and consideration of both hydrological and ecological factors for each tributary.

3.2 CDFG Jurisdiction

The CDFG regulates projects that propose to (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit, (2) use material from the streambeds designated by the department, or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake designated by the department. If an existing fish or wildlife resource may be substantially adversely affected by that construction, the department shall notify the governmental agency or public utility of the existence of the fish or wildlife resource together with a description thereof and shall propose reasonable modifications in the proposed construction that will allow for the protection and continuance of the fish or wildlife resource, including procedures to review the operation of those protective measures.

CDFG jurisdiction includes the definable bed, bank, or channel, areas that support periodic or intermittent flows, perennial flows, subsurface flows, support fish or other aquatic life and areas that support riparian or hydrophytic vegetation in association with a streambed. Projects that affect the CDFG jurisdictional areas must apply for a Streambed Alteration Agreement.

4.0 RESULTS

ECORP biologists Brad Haley and Scott Taylor conducted a jurisdictional delineation on July 24, 2012 and August 15, 2012, to map the limits of streambeds and other jurisdictional resources. Weather conditions and other survey information are provided in Table 2.

Table 2. Weather Conditions during the Jurisdictional Delineation

Date	Time		Temperature (°F)		Cloud Cover (%)		Wind Speed (m.p.h)	
	start	end	min	max	min	max	min	max
7/24/12	0700	1515	71	88	0	0	0	3
8/15/12	0700	1300	66	82	10	20	0	5

A total of 0.636 acres of potential waters of the U.S., within Wilson Creek and an unnamed drainage (Drainage 1), was mapped for this site (Table 3, Figure 5).

Table 3. Potential Waters of the U.S.

Waters by Drainage	Square feet	Acres	Linear Feet
Wilson Creek	27,369	0.628	5201
Drainage 1	332	0.008	330
Total	27,701	0.636	5531

The two waters of the U.S. that were delineated on the property are considered to be ephemeral streams. A discussion of the ephemeral streams present within the property is presented below. The Arid Wetland Determination Data Forms are included in Appendix B.

4.1 Potential Waters of the U.S.

Wetlands

There were no areas identified within the property suspected to contain the necessary criteria to meet the federal definition of wetlands. A pair of sample points were taken along the western boundary of the Project within Wilson Creek. This was the most westward part of Wilson Creek and so the channel hydrology was the highest at this point. In addition, the location was directly behind a break where the waters crossed under a culvert. Sometimes subterranean waters can build behind a structure and form a wet area. There were no surface indicators of wetlands present and the sample point did not reveal any subterranean features.

A sample point was also taken within one of the former agricultural ponds located near the developed area on site. This pond was formerly fed by a spigot that released water and filled the pond. The spigot has been turned off and the pond has been dewatered. The sample point indicated that wetlands existed in the past at this location but based on the conditions on the ground and the dying vegetation within the pond, the area is considered to be under process of converting to upland.

4.2 Other Waters of the U.S.

The other waters of the U.S. that occur within the project area consist of ephemeral stream areas with an Ordinary High Water Mark (OHWM) that had evidence of regular hydrology.

Ephemeral Stream

An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round, meaning that groundwater is not a significant source of water. Flow indicators and the extent of jurisdiction within an ephemeral stream reflect the degree of runoff during an average year. The stream mapping on the property was based on the location of OHWM, as indicated by presence of bed and bank, scouring and vegetative differences. The OHWM boundaries of the ephemeral streams are formed by the regular scouring of storm flows.

The two ephemeral streams on the property are natural-bottomed channels that contain normal features. Wilson Creek, the larger of the two features, is a USGS Blue-line Stream channel. The unnamed drainage (Drainage 1) is a small tributary to Wilson Creek that exhibited weak indications of OHWM. The unnamed drainage appeared to also be a USGS Blue-line Stream, though the location of the stream on existing USGS mapping did not seem to correspond exactly with the location of the stream in the field.

Wilson Creek originates in the southern face of the San Bernardino Mountains, where it flows through steep rugged canyons into the valley floor and on to Yucaipa. Upstream of the project site Wilson Creek flows through a rural residential and agricultural area. On the project site, Wilson Creek is a narrow, cobbled stream channel that meanders through chaparral and oak woodland habitats. The channel bottom comprises scoured sands, gravels and cobbles with little to no vegetation. Along the banks there are occasional sycamores and mulefat thickets. The stream exhibited no signs of water retention or ponding areas.

The unnamed drainage, Drainage 1, is a small tributary to Wilson Creek on the property. The creek originates on the parcel to the north, where it flows southwest into Wilson Creek. Signs of OHWM were extremely weak, with few scoured channel bottom areas and minimal defined bed and bank. The channel was surrounded by a mixture of chaparral and oak woodland vegetation.

4.3 CDFG Jurisdiction

The CDFG jurisdiction, also known as waters of the state, overlaps completely with the Waters of the U.S. within the property.

A total of approximately 1.202 acres of CDFG jurisdiction has been mapped for the property, which includes the entire 0.636 acre of Waters of the U.S. CDFG habitats include a larger portion of the streambed along Wilson Creek and the unnamed drainage course. It also includes habitat considered to be hydrophytic vegetation that occurs along Wilson Creek, consisting of several individual sycamores and mulefat thickets. Table 4 provides a summary of the CDFG Habitat Areas.

Table 4. CDFG Habitat Areas

Feature	Streambed		Sycamore		Mulefat Thicket	
	Sq. Ft.	Acres	Sq. Ft.	Acres	Sq. Ft.	Acres
Wilson Creek	41,200	0.946	9,030	0.207	1,783	0.041
Drainage 1	330	0.008	0	0	0	0
Totals	41530	0.954	9,030	0.207	1,783	0.041

-117.018° -117.017° -117.015° -117.014° -117.012° -117.011° -117.01° -117.008° -117.007° -117.006° -117.004°

34.057°
34.056°
34.054°
34.053°
34.051°
0.05
34.049°



Figure 5.
Jurisdictional Delineation

Map Features

- Project Boundary
- APN Boundary ²
- Sample Point
- Culvert

Potential Waters of the U.S.¹

Ephemeral Stream (0.636 ac.)

Potential Waters of the State

Streambed (0.953 ac.)

Jurisdictional Vegetation (0.248 ac.)

- Sycamore (0.207 ac.)
- Mulefat Thicket (0.041 ac.)

¹ Subject to U.S. Army Corps of Engineers' verification. Feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.

² San Bernardino County GIS Parcel Database (2012)

Potential Waters of the U.S.			
Waters by Drainage	Sq. Ft.	Acres	Linear Ft.
Wilson Creek	27,369	0.628	5201
Drainage 1	332	0.008	330
Total	27,701	0.636	5531

Feature	CDFG Habitat					
	Streambed		Sycamore		Mulefat Thicket	
	Sq. Ft.	Acres	Sq. Ft.	Acres	Sq. Ft.	Acres
Wilson Creek	41,200	0.946	9,030	0.207	1,783	0.041
Drainage 1	330	0.008	0	0.000	0	0.000
Total	41,530	0.954	9,030	0.207	1,783	0.041

N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Wetland_Mapping\Wetland_Delineation\1\Tables\JD_Master_Table_20120605.d\ex\RESULTS



Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Wetland_Mapping\Wetland_Delineation\1\CB_JD\1.mxd (ECK/JS: 9/25/2012)

5.0 CONCLUSIONS AND RECOMMENDATIONS

A total of 0.638 acres of potential waters of the U.S. were recorded on the property. This acreage represents a calculated estimation of the jurisdictional area within the project boundaries, and is subject to modification following the ACOE verification process. A total of 1.202 acres of CDFG Habitat Area were recorded on the property, and this finding needs to be verified by the CDFG.

The placement of fill materials within any of these jurisdictional features would require permitting pursuant to Section 404 and 401 of the federal Clean Water Act. The CDFG jurisdiction completely overlaps the ACOE jurisdiction. Areas considered jurisdictional waters of the U.S. are subject to permitting and authorization through the ACOE, which authorizes impacts under Section 404 of the federal Clean Water Act and the State Water Quality Control Board, where such impacts can have an effect on water quality. The California Department of Fish and Game authorizes impacts to waters of the state, including lakes and streambeds, under state codes (Section 1600).

If the areas on the property that are potentially jurisdictional are determined by the agencies to be jurisdictional, then subsequent permitting and authorization would be required prior to disturbance of those features.

6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or the applicant's representative and that I have no financial interest in the project.

DATE: _____

SIGNED: _____

Mr. Scott Taylor

7.0 REFERENCES

- [Carabell] Carabell v. U.S. Army Corps of Engineers. (04-1384) (2006).
- [CEPA] California Environmental Protection Agency. 2011. Salton Sea Transboundary Watershed. State of California, State Water Resources Control Board. Accessed online at http://www.swrcb.ca.gov/rwqcb7/water_issues/programs/salton_sea/watershed.shtml, on January 3, 2012.
- [ECORP] Environmental Consulting LLC. 2012. Biological Resource Assessment Report: APN: 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000 and 0321-082-15-000 Yucaipa Project in San Bernardino County September 2012
- GretagMacbeth. Munsell Soil Color Charts. Year 2000 Revised Washable Edition.
- Hickman, J.C., editor. 1993. The Jepson Manual. Berkeley: University of California Press. 1400 pp.
- [HQUSACE] Headquarters, U.S. Army Corps of Engineers. 1992. Clarification and Interpretation of the 1987 Manual. Memorandum from Major General Arthur E. Williams. Dated: 6 March 1992.
- [IDcide] Yucaipa Profile. 2012. IDcide. Accessed at <http://www.idcide.com/citydata/ca/yucaipa.htm>, on September 25, 2012
- [NRCS] Natural Resource Conservation Service's Web Soil Survey. Accessed online at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>, July 26, 2011.
- [Rapanos] Rapanos v. United States. (04-1034) (2006).
- Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A manual of California vegetation, 2nd ed. California Native Plant Society, Sacramento, CA.
- [SWANCC] Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers. (99-1178) 531 U.S. 159 (2001).
- [USACOE 1987] U.S. Army Corps of Engineers. January 1987. Corps of Engineers Wetlands Delineation Manual. Environmental Laboratory.
- [USACOE 2008] U.S. Army Corps of Engineers. September 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Environmental Laboratory.
- [USACOE 1986 a] U.S. Army Corps of Engineers. November 13, 1986. 33 CFR 328.3(a), 51 FR 41250.

CASA BLANCA SPECIFIC PLAN PROJECT

[USACOE 1986 b] U.S. Army Corps of Engineers. November 13, 1986. 33 CFR 328.3(b), 51 FR 41250.

[USACOE 1986 e] U.S. Army Corps of Engineers. November 13, 1986. 33 CFR 328.3(e), 51 FR 41250.

[USFWS] U.S. Fish and Wildlife Service. September 1988. National List of Plant Species that occur in Wetlands: 1988 National Summary.

[USDA] U.S. Department of Agriculture, Natural Resources Conservation Service. 2003. National Soil Survey Handbook, title 430-VI. Available online at:
<http://soils.usda.gov/technical/handbook/>.

Appendix A

Botanical Compendium

Scientific Name	Common Name
GYMNOSPERMS	
CUPRESSACEAE	CYPRESS FAMILY
<i>Cupressus sempervirens*</i>	Italian cypress
PINACEAE	PINE FAMILY
<i>Pinus sp.</i>	Pine
ANGIOSPERMS (DICOTYLEDONS)	
ANACARDIACEAE	SUMAC OR CASHEW FAMILY
<i>Rhus trilobata</i>	Skunkbrush
<i>Toxicodendron diversilobum</i>	Poison oak
ASTERACEAE	SUNFLOWER FAMILY
<i>Ambrosia psilostachya</i>	Western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia douglasiana</i>	Mugwort
<i>Artemisia dracunculus</i>	Tarragon
<i>Baccharis salicifolia</i>	Mulefat
<i>Brickellia californica</i>	California brickellbush
<i>Centaurea melitensis*</i>	Tocalote
<i>Cirsium vulgare*</i>	Bull thistle
<i>Ericameria sp.</i>	goldenbush species
<i>Gnaphalium californicum</i>	California everlasting
<i>Gutierrezia californica</i>	California matchweed
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Lepidospartum squamatum</i>	scale-broom
<i>Lessingia filaginifolia</i>	cudweed aster
<i>Senecio flaccidus</i>	shrubby butterweed
<i>Stephanomeria exigua</i>	small wreathplant
<i>Stephanomeria virgata</i>	twiggy wreathplant
<i>Tetradymia stenolepis</i>	horsebrush
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia sp.</i>	fiddleneck
BRASSICACEAE	MUSTARD FAMILY
<i>Hirshfeldia incana*</i>	short-podded mustard
<i>Raphanus sativus*</i>	radish
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY
<i>Lonicera sp.</i>	honeysuckle

<i>Lonicera subspicata</i>	southern honeysuckle
<i>Sambucus mexicana</i>	Mexican elderberry
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Chenopodium album</i> *	lamb's quarters
<i>Salsola tragus</i> *	Russian thistle
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	western bindweed
CUCURBITACEAE	GOURD FAMILY
<i>Cucurbita palmata</i>	coyote melon
CUSCUTACEAE	DODDER FAMILY
<i>Cuscuta californica</i>	California dodder
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce albomarginata</i>	rattlesnake weed
<i>Eremocarpus setigerus</i>	dove weed
FABACEAE	LEGUME FAMILY
<i>Lotus scoparius</i>	deerweed
<i>Vicia sativa</i> *	spring vetch
<i>Vicia villosa</i> *	winter vetch
FAGACEAE	OAK FAMILY
<i>Quercus john-tuckeri</i>	Tucker's oak
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
HYDROPHYLLACEAE	WATERLEAF FAMILY
<i>Eriodictyon angustifolium</i>	narrow-leaved yerba santa
<i>Eriodictyon crassifolium</i>	thick-leaved yerba santa
<i>Eriodictyon trichocalyx</i>	hairy yerba santa
<i>Phacelia</i> sp.	phacelia
JUGLANDACEAE	WALNUT FAMILY
<i>Juglans regia</i> *	English walnut
LAMIACEAE	MINT FAMILY
<i>Marrubium vulgare</i> *	horehound
<i>Salvia apiana</i>	white sage
<i>Salvia columbariae</i>	chia
MELIACEAE	MAHOGANY FAMILY

<i>Melia azadarach*</i>	chinaberry tree
MYRTACEAE	MYRTLE FAMILY
<i>Eucalyptus sp.</i>	gum tree
OLEACEAE	OLIVE FAMILY
<i>Olea europaea*</i>	olive
PLATANACEAE	SYCAMORE FAMILY
<i>Platanus racemosa</i>	western sycamore
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i>	California buckwheat
RHAMNACEAE	BUCKTHORN FAMILY
<i>Rhamnus californica</i>	California coffeeberry
SALICACEAE	WILLOW FAMILY
<i>Salix exigua</i>	narrow-leaved willow
SCROPHULARIACEAE	FIGWORT FAMILY
<i>Castilleja sp.</i>	paintbrush species
<i>Keckiella cordifolia</i>	heart-leaved penstemon
SIMAROUBACEAE	QUASSIA FAMILY
<i>Ailanthus altissima*</i>	tree of heaven
SOLANACEAE	NIGHTSHADE FAMILY
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana glauca*</i>	tree tobacco
TAMARICACEAE	TAMARISK FAMILY
<i>Tamarix ramosissima*</i>	Mediterranean tamarisk
URTICACEAE	NETTLE FAMILY
<i>Urtica dioica ssp. holosericea</i>	giant creek nettle
VISCACEAE	MISTLETOE FAMILY
<i>Phoradendron villosum</i>	oak mistletoe
ANGIOSPERMS (MONOCOTYLEDONS)	
ARECACEAE	PALM FAMILY
<i>Washingtonia filifera</i>	California fan palm
<i>Washingtonia robusta</i>	Mexican fan palm

LILIACEAE	LILY FAMILY
<i>Bloomeria crocea</i>	common goldenstar
<i>Yucca whipplei</i>	Our Lord's candle
POACEAE	GRASS FAMILY
<i>Avena fatua</i> *	wild oat
<i>Bromus diandrus</i> *	ripgut grass
<i>Bromus madritensis ssp. rubens</i> *	foxtail chess

* Plants are not native to California

Arid West Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Casa Blanca City/County: San Bernardino Sampling Date: 7/24/2012
 Applicant/Owner: Meridian State: CA Sampling Point: SP1
 Investigator(s): S. Taylor, B. Haley Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): gully Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR): LRR-C Lat: 39.052743 Long: 117.016979 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? N Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____	Hydric Soil Present? Yes _____ No _____	Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks:			

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>300 Sq ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)
4. _____				
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>300 Sq ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Baccharis salicifolia</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Eriogonum fasciculatum</u>	<u>3</u>	<u>N</u>	<u>NE</u>	OBL species _____ x 1 = _____
3. <u>Artemisia dracuncululus</u>	<u>1</u>	<u>N</u>	<u>NE</u>	FACW species _____ x 2 = _____
4. <u>Lepidospartum squamatum</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	FAC species <u>50</u> x 3 = <u>150</u>
5. _____				FACU species <u>10</u> x 4 = <u>40</u>
<u>64</u> = Total Cover				UPL species _____ x 5 = _____
				Column Totals: <u>60</u> (A) <u>190</u> (B)
				Prevalence Index = B/A = <u>190/60</u>
Herb Stratum (Plot size: <u>300 Sq ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Datura wrightii</u>	<u>1</u>	<u>Y</u>	<u>-</u>	Dominance Test is >50% <u>25</u> - Not dom
2. <u>Amsinckia menziesii</u>	<u>1</u>	<u>Y</u>	<u>-</u>	Prevalence Index is ≤3.0 ¹ <u>3.16</u>
3. <u>Hirshfeldia incana</u>	<u>1</u>	<u>Y</u>	<u>-</u>	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				Problematic Hydrophytic Vegetation ¹ (Explain)
<u>3</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>300 Sq ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				Hydrophytic Vegetation Present? Yes _____ No _____
= Total Cover				
% Bare Ground in Herb Stratum <u>40</u>		% Cover of Biotic Crust <u>0</u>		
Remarks: <u>Dead Sycamore tree fallen into stream.</u>				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Casa Blanca City/County: San Bernardino Sampling Date: 7/24/2012

Applicant/Owner: Meridian State: CA Sampling Point: SPIA

Investigator(s): S. Taylor, B. Haley Section, Township, Range: _____

Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): Convex Slope (%): 8%

Subregion (LRR): LRR-C Lat: 34.052728 Long: 117.016956 Datum: NAD83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? N Are "Normal Circumstances" present? Yes No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____ Remarks: _____	Is the Sampled Area within a Wetland? Yes _____ No _____
--	--

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>300sq ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) ←
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____				
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u>300sq ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Eriogonum fasciculatum</u>	<u>30</u>	<u>Y-1</u>	<u>NI</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Baccharis salicifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	OBL species _____ x 1 = _____
3. <u>Tetradymia comosa</u>	<u>5</u>	<u>N</u>	<u>-</u>	FACW species _____ x 2 = _____
4. <u>Artemesia dracunculul</u>	<u>8</u>	<u>N</u>	<u>NE</u>	FAC species _____ x 3 = _____
5. <u>Lepidospartum squamatum</u>	<u>8</u>	<u>N</u>	<u>FACU</u>	FACU species _____ x 4 = _____
	<u>56</u>			UPL species _____ x 5 = _____
= Total Cover				Column Totals: <u>0</u> (A) <u>0</u> (B)
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index = B/A = <u>0</u>
1. <u>Hirschfeldia incana</u>	<u>5</u>	<u>N-2</u>	<u>-</u>	
2. <u>Bromus madritensis ssp. rubens</u>	<u>60</u>	<u>Y</u>	<u>-</u>	
3. <u>Amsinckia menziesii</u>	<u>10</u>	<u>N</u>	<u>-</u>	
4. <u>Bromus diandrus</u>	<u>5</u>	<u>N</u>	<u>-</u>	
	<u>80</u>			
= Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>N/A</u>				___ Dominance Test is >50%
2. _____				___ Prevalence Index is ≤3.0 ¹
				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				___ Problematic Hydrophytic Vegetation ¹ (Explain)
= Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum <u>5</u> % Cover of Biotic Crust <u>0</u>				Hydrophytic Vegetation Present? Yes _____ No _____

of the species that are present and are further det to be OBL, FACW, or FAC and are indicated by S Taylor as Y for domin. that is = (A)

Remarks: _____

7/24/2012
Casa Blanca
SP1a

SOIL

Sampling Point: SP1a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	% ¹	Color (moist)	%	Type ¹	Loc ²		
0-14	10R 2/6	100	None				Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:
 No indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): _____

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No indicators present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: CASA Blanca City/County: San Bndo Sampling Date: 8/15/12
 Applicant/Owner: MERIDIAN State: CA Sampling Point: SP2
 Investigator(s): S. Taylor, Brad Halley Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): detention basin Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): LR-C Lat: 34.049677°N Long: 117.015163°W Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks: <u>man made detention basin</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>2000 ft²</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix laevigata</u>	5	Y	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____				Total Number of Dominant Species Across All Strata: _____ (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____				
Sapling/Shrub Stratum (Plot size: <u>2000 ft²</u>) <u>50% total</u> = Total Cover				
1. <u>Nicotiana glauca</u>	5	Y	FAC	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Baccharis strictifolia</u>	5	Y	FAC	
3. _____				
4. <u>Tamarix parviflora</u>	1		FAC	
5. <u>tin or c</u>				
Herb Stratum (Plot size: <u>2000 ft²</u>) _____ = Total Cover <u>6.2</u>				
1. <u>Nicotiana (attenuata)</u>	3		FACU	Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Hirschfeldia incana</u>	10	Y	=	
3. <u>Promus madritensis</u>	3		=	
4. <u>Ariogonum</u>				
5. <u>Polygonum argyrocoleon</u>	<1		FAC	
6. <u>Cirsium</u>	15.5	Y		
7. <u>plant #1</u>	3			
8. _____				
Woody Vine Stratum (Plot size: _____) _____ = Total Cover <u>42 = 15.5</u>				
1. <u>N/A</u>				
2. _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks: <u>dead cat tails / bull rushes 90% cover</u> <u>dead cat tails</u>				

Ind.
 Mustard
 0/20
 Abs 55%
 20%

Polygonum Perslan

1 ribbon test

CASIt blanca

8/15/12

SP2

SOIL

Sampling Point:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10 YR 3/2	190	10R 4/8	10			clay loam (1 in ribbon test)	
3-18	7.5 YR 3/4	100					sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 1 cm Muck (A9) (LRR C) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> 2 cm Muck (A10) (LRR B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Depressions (F8) ? | ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | |

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input checked="" type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) ? | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? Yes _____ No Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Spl jets present

WETLAND DETERMINATION DATA FORM – Arid West Region

8/15/2012

Project/Site: Cada Blanca Specific Plan City/County: _____ Sampling Date: SP 2A
 Applicant/Owner: _____ State: _____ Sampling Point: SP 2A
 Investigator(s): Scott Taylor, Brad Haley Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: 34.099717°N Long: 117.015299°W Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <u>Burn around retention basins</u>	

VEGETATION – Use scientific names of plants.

Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>600ft²</u>)				Dominance Test worksheet:
1. <u>Salix laevigata</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____				Total Number of Dominant Species Across All Strata: _____ (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____				
_____ = Total Cover				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: _____)				Total % Cover of: _____ Multiply by: _____
1. <u>Erigeron fuscus</u>	<u>40</u>	<u>Y</u>	<u>—</u>	OBL species _____ x 1 = _____
2. <u>1.</u>				FACW species _____ x 2 = _____
3. _____				FAC species _____ x 3 = _____
4. _____				FACU species _____ x 4 = _____
5. _____				UPL species _____ x 5 = _____
_____ = Total Cover				Column Totals: _____ (A) _____ (B)
Herb Stratum (Plot size: <u>centaurea</u>)				Prevalence Index = B/A = _____
1. <u>Cent. melitensis</u>	<u>60</u>	<u>Y</u>	<u>—</u>	Hydrophytic Vegetation Indicators:
2. <u>Bromus med. rubens</u>	<u>50</u>	<u>N</u>	<u>—</u>	___ Dominance Test is >50%
3. <u>Hirschfeldia incana</u>	<u>20</u>	<u>N</u>	<u>—</u>	___ Prevalence Index is ≤3.0 ¹
4. <u>Marubium vulgare</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____				
7. _____				
8. _____				
_____ = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody/Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No _____
1. <u>None</u>				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____			

Remarks: _____

SOIL

Casa Blanca
 Sampling Point: SP2A 8/15/12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/4	100	N/A				Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Vernal Pools (F9)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (Inches): _____	Hydric Soil Present? Yes _____ No _____
--	---

Remarks: *No indicators present.*

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No _____
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: *No indicators present.*

Appendix C
Site Photographs



Photo 1- Project Site



Photo 2-Project Site



Photo 3 – Upper portion of Wilson Creek



Photo 4 – Middle portion of Wilson Creek



Photo 4 – Culvert at western-most portion of Wilson Creek



Photo 5- Drainage 1



Photo 10- Pond at sample point 2 wetland



Photo 11- Spigot that used to feed pond



Photo 6 – Sample Point 1 Wetland



Photo 7- Sample Point 1A Upland



Photo 8 – Sample Point 2 Wetland



Photo 9-Sample Point 2A Upland

Biological Resource Assessment
for the
Casa Blanca Specific Plan

City of Yucaipa
San Bernardino County, California

Submitted to:

Meridian Land Development Company
Jonathan Weldy
President

Submitted by:



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

215 North Fifth Street
Redlands, CA 92374

November 2012

Biological Resource Assessment

Casa Blanca Specific Plan

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Appendix B – Animal Species Documented Within the Project Area
Appendix C – Special-Status Plant Species List
Appendix D – Special-Status Animal Species List

1.0 INTRODUCTION

ECORP Consulting, Inc. (ECORP) conducted a biological resource assessment of the approximately 240 acres within the City of Yucaipa, San Bernardino County (Assessor Parcel Numbers 0321-101-02-0000, 0321-101-02-0000, 0321-101-12-0000, and 0321-082-15-0000). The Project area is located within a former agricultural property located at 36104 Oak Glen Road, which was formerly known as the Dunlap Ranch, the Atwood, and Casa Blanca Ranch, a complex of residential and agricultural buildings and features on the property, dating from 1882 to the 20th century. Casa Blanca Ranch was the largest in Yucaipa Valley, and was headquarters for ranching activities, which consisted mainly of raising cattle, goats, grain crops, and fruit trees [ECORP Cultural Resources 2012].

The purpose of the assessment was to collect information on the biological resources present within the site, and to determine any potential biological constraints to site construction according to such legislation as California Environmental Quality Act (CEQA), California Department of Fish and Game (CDFG), Federal Migratory Bird Treaty. The assessment included a general characterization, mapping of on-site habitats, and a general inventory of plant and wildlife species. Additionally, an assessment was made of the special-status plant and animal species that have the potential to occur on the Project site. This report describes the results of the biological resources assessment. A jurisdictional delineation report is provided under separate cover [ECORP 2012].

1.1 Project Location

The Project site is located in the northeastern portion of the City of Yucaipa, San Bernardino County, California (Figure 1). The project area is bound by Fir Avenue to the north, Oak Glen Road to the south, Jefferson Street and Cherry Croft Drive to the west, and an undefined north-south line one mile east of Jefferson Street. The property can be found within the southern half of Section 29, plus the southwest half of the southwest half of Section 30, in Township 1 South, Range 1 West, San Bernardino Base Meridian, of the US Geological Survey Yucaipa California 7.5-minute topographic quadrangle (Figure 2). It is approximately four miles north of the Interstate 10 freeway.

1.2 Project Description

The MLDC is proposing to build residential developments for four land parcels. Although details of the Project have not been determined, the biological information provided will help to determine the Projects design and scope. Additionally, the data collected in this report will create a biological profile for the Project and characterize potential biological constraints of the properties, including habitats, plant and wildlife species, and drainage features.

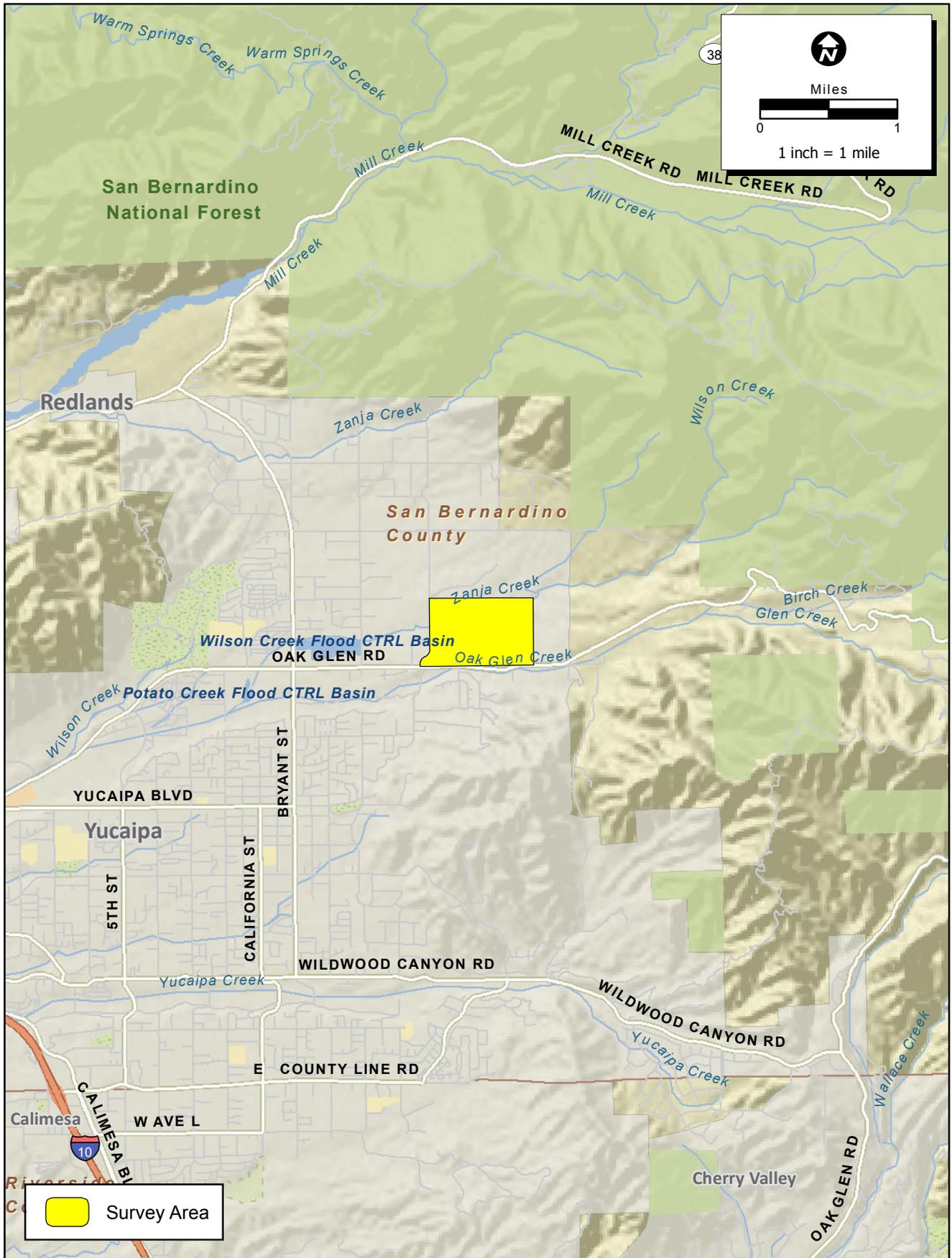
1.3 Regional Setting

The City of Yucaipa hosts a population of more than 50,000 full-time residents, and lays at an average elevation of about 2,600 feet with a climate typified by about 13.5 inches of precipitation annually. Temperatures in the Yucaipa area usually range from the 50's (F) in the

winter to the low 70's (F) in the summer. The climate in this part of San Bernardino County tends to be variable, temperatures can swing from 25 to 33 degrees daily, and the warmest month is in August and the coolest month is in January [IDcide].

Yucaipa is approximately 15 miles east of San Bernardino and 12 miles north of Moreno Valley. Yucaipa is located south of the San Bernardino Mountains and west of the San Gorgonio Mountains, along Interstate 10. As a suburb of the greater Los Angeles area, it is an area used by both commuters and by weekend vacationers. US Forest Service land is two miles to the northeast. The property is located within the Yucaipa Creek Watershed, a watershed of approximately 67 square miles, which ultimately leads to the Santa Ana River Watershed.

Local topography consists of a hilly landscape. The Project site ranges in elevation between approximately 3,000 feet (ft) (914 meters (m)) above mean sea level (amsl) in the southwest section to 3,460ft (1,055 m) amsl in the northeast. Drainage tends to be in a southwesterly direction, towards Wilson Creek. Vegetation within the site consists mostly of California buckwheat scrub, agriculture, orchard, and semi-natural herbaceous stands. The nearest peak is Allen Peak at 5,795 feet (ft) (1,766 m), two miles to the northeast of the property. The nearest areas of designated open space include the US Forest Service lands of the San Bernardino National Forest. Yucaipa is largely residential with existing 1 unit per acre zoning. The client is proposing a residential density transfer to clustered lots with ½ acre lot sizes.



Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Site_Vicinity\C BSP_Location.mxd (KOrtega, 8/14/2012)

Map Date: 8/14/2012
Source: ESRI

Figure 2. Project Location

2012-067 Casa Blanca Specific Plan

2.0 METHODS

2.1 Site Assessment

Prior to conducting the field portion of the assessment, the CDFG's California Natural Diversity Data Base (CNDDDB) (CNDDDB 2012) and California Native Plant Society Electronic Inventory (CNPSEI) (CNPS 2012) were queried to determine the special-status species that had been documented in the topographic quadrangle that encompass the Project site. Additional data regarding the potential occurrence of special-status species were gathered from ECORP's in-house database and various online websites (e.g., CalFlora 2012). Soil types were determined using the United States Department of Agriculture National Resource Conservation Service Web Soil Survey (USDA 2012).

The assessment was conducted by walking and driving systematically around the Project area, taking photos and gathering information on the biological resources present. Biological resource information that was collected included:

- ❖ Plant and animal species directly observed;
- ❖ Characterization of habitats present on-site;
- ❖ Animal signs (e.g., scat, tracks);
- ❖ Bird nests;
- ❖ Burrows and any other special habitat features; and
- ❖ Representative site photographs.

2.2 Special-Status Species

Using information from the CNDDDB, the literature review, and observations in the field, a list of special-status plant and animal species that have the potential to occur on the site was generated. Each of these species was assessed for their potential to occur on site based on the following criteria guidelines:

Present: Species was observed on site during a site visit or focused survey.

High: Habitat (including soils and elevational requirements) for the species occurs on site and a known occurrence occurs within 5 miles of the site.

Moderate: Habitat (including soils and elevation requirements) for the species occurs on site and a known occurrence occurs within the database search, but not within 5 miles of the site; or a known occurrence occurs within 5 miles of the site and marginal or limited amounts of habitat occurs on site.

Low: Limited habitat (including soils and elevation requirements) for the species occurs on site and a known occurrence occurs within the database search, but not within 5 miles of the site.

Absent: No suitable habitat (including soils and elevation requirements) occurs on site, the site is located outside the species known geographical range, or the species was determined to be absent during focused surveys.

3.0 EXISTING CONDITIONS

ECORP biologist Brad Haley conducted a biological assessment on July 24, 2012. A jurisdictional delineation was completed on July 24, 2012 and August 15, 2012. Weather conditions and other survey information are provided in Table 1.

Table 1. Weather Conditions during the Surveys

Type of Survey	Date	Time		Temperature (°F)		Cloud Cover (%)		Wind Speed (m.p.h)	
		start	end	min	max	min	max	min	max
Biological Reconnaissance	7/24/12	0700	1515	71	88	0	0	0	3
Jurisdictional Delineation	7/24/12	0700	1515	71	88	0	0	0	3
	8/15/12	0700	1300	66	82	10	20	0	5

3.1 Site Characteristics and Land Use

The surrounding land uses include open space and rural residential housing within the City of Yucaipa. The site consists of one residence, some orchards and agricultural fields, and open space. The Casa Blanca site consists of open mesas with agriculture and valleys with mainly California buckwheat scrub. Some of the area along the southwestern portion of the site contains orchards. The main valley generally drains waters from the San Bernardino Mountain foothills to the east and flow out of the site to the west.

There is a single stream on site that appears on existing USGS topographic maps as a U.S. Army Corps of Engineers blue-line stream. This stream and the entire site were investigated during a formal jurisdictional delineation.

3.2 Plant Communities

There are three vegetation communities on the property: Brassica (*nigra*) and other mustards, California Buckwheat Scrub, and Oak tree Woodland, in addition to agriculture, disturbed/developed, and orchard areas. The site comprises disturbed/developed habitat, with some native scrub and oak habitats in the wash areas and agriculture or orchards in the upper, flat areas (See Biological Report, Figures 3A-3D). These vegetation communities are defined below.

3.2.1 Brassica (nigra)

Brassica (*nigra*) is mainly along the edges of the agricultural areas and within and around the orchards and disturbed/developed areas. This is characterized by a dominance of annual vegetation that emerges after the rains, produces seeds, and dies before the next rainy season. Dominant plant species observed within this community include slender wild oat (*Avena fatua*), short-podded mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), lamb's quarters (*Chenopodium album*), and Russian thistle (*Salsola tragus*).

Native species are generally present in low amounts and include deerweed (*Acmispon glaber*), telegraph weed (*Heterotheca grandiflora*), fiddleneck (*Amsinckia* sp.), and western bindweed (*Calystegia macrostegia*).

3.2.2 California Buckwheat Scrub

California buckwheat (*Eriogonum fasciculatum*) is a somewhat small, semi-woody shrub that can grow to two meters in height and is found in low to mid elevations throughout central and southern California. This species grows in a variety of topographic conditions, and is generally found in course, well drained soils. This alliance is often one of the first to form following disturbance such as fire, floods, grazing, or mechanical disturbance. California buckwheat is scattered throughout the site among and is found among deerweed, scale broom (*Lepidospartum squamatum*), thick-leaved yerba santa (*Eriodictyon crassifolium*), white sage (*Salvia apiana*), and our Lord's candle (*Yucca whipplei*). The space between shrubs often has high amounts of non-native herbaceous species.

3.2.3 Oak Tree Woodland

Tucker's oak (*Quercus john-tuckeri*) is a drought-resistant evergreen shrub that can grow to be three to five meters in height and can be found along the Transverse Mountain Range and the southern end of the Coast Range. Tucker's oak woodland can grow in a variety of habitats, including mountains, chaparral, desert-chaparral transition communities, pinyon-juniper woodland and Great Basin sage. On the site, the oak woodland is found along drainages and around otherwise disturbed and developed residential sites.

3.2.4 Agriculture, Disturbed/Developed, and Orchard

Agriculture, Disturbed/Developed, and Orchard, are not vegetation classifications, rather a land cover type. Areas mapped as this are either largely devoid of vegetation due to human development, or are dominated by unnatural vegetation such as lawns and landscaping. Often areas surrounding development show high amounts of non-native ruderal species. On site, this cover type is generally represented by the agricultural areas, the orchards, or the small area of development around the Casa Blanca house.

A complete list of plant species observed on the project site is found in Appendix A.

3.3 Plants

Plant species observed within the Project site include slender wild oat (*Avena fatua*), short-podded mustard (*Hirschfeldia incana*), totalote (*Centaurea melitensis*), lamb's quarters (*Chenopodium album*), and Russian thistle (*Salsola tragus*), to name a few.

No plant species of special concern were observed during the site visit.



Figure 3A. *Brassica (nigra)*
(looking east).



Figure 3B. California buckwheat scrub habitat (looking south).



Figure 3C. Oak tree woodlands (looking south).



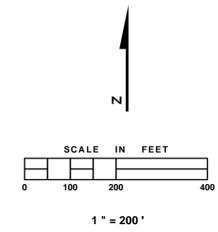
Figure 3D. Agricultural fields (looking east).



Job Name: Vegetation Communities
 Project Number: 2012-067
 Map Scale: 1" = 200'
 Production Date: 9/7/2012
 Plot Date: 9/7/2012
 Map Name: CB_Vegetation_v2.mxd

NOTES

Gross Project Acreage: 242 ac.
 Aerial Photo Source: Inland Aerial
 Project Boundary: Inland Aerial (referenced into place CA State Plane Zone 5 by ECORP Consulting using topographic features).

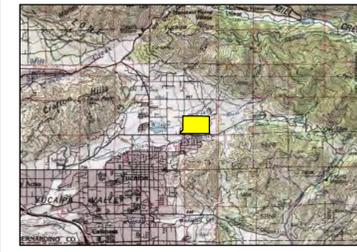


MAP FEATURES



- Vegetation Classification**
- MF, Mulefat Thicket
 - AG, Agriculture
 - BRA, Brassica (nigra) and Upland Mustards Semi-Natural Herbaceous Stands
 - CBS, California buckwheat scrub
 - JV, Jurisdictional Vegetation
 - OAK, Oak Woodland
 - OR, Orchard
 - DIST, Disturbed/Developed

VICINITY MAP



CASA BLANCA SPECIFIC PLAN

Vegetation Communities

Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Vegetation\Vegetation\1\CB_Vegetation_v2.mxd
 Production Date: 9/7/2012 Plot Date: 9/7/2012 Project Number: 2012-067
 Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet Scale: 1" = 200' GIS Specialist: ECK

ECORP Consulting, Inc.
 ENVIRONMENTAL CONSULTANTS

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3.4 Wildlife

Wildlife observed in the Project site included birds such as mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), American kestrel (*Falco sparverius*), California towhee, mammals such as California ground squirrel (*Spermophilus beecheyi*), brush rabbit (*Sylvilagus bachmani*), coyote (*Canis latrans*), and reptiles such as side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*).

Two special-status species were observed during the site visit: white-tailed kite (*Elanus leucurus*) and prairie falcon (*Falco mexicanus*). These species are described in more detail below.

Migratory birds may occur during nesting season, particularly small raptors, humming birds and others, may occur during the spring and summer nesting season in the trees occurring along the Project area and are discussed in the ensuing section. A full list of wildlife species observed during the site visit is included in Appendix B.

3.5 Soils

The Project site consists of four soil types (Figure 3). The soils consist primarily of Greenfield Sandy Loam, two to nine percent slopes (GtC). The steeper portions throughout the site consist of Saugus Sandy Loam, thirty to fifty percent slopes (ShF), with the nearby riverine areas consisting mainly of Tujunga Gravelly Loamy Sand, zero to nine percent slopes (TvC). A small portion of the southern upland area consists of Soboba Gravelly Loamy Sand, zero to nine percent slopes (SoC). Soils types were mapped using the NRCS Web Soil Survey [NRCS].

Hydric soil types are those which may support wetlands. Typically hydric soils are those that are sufficiently wet in the upper part to develop anaerobic conditions during the growing season. Both GtC and SoC soil types on the property have hydric ratings when located within drainage ways, and TvC has a hydric rating within drainage ways or channels, meaning that are potentially hydric. Of the three potentially hydric soil types, the TvC and SoC are located near the delineated drainages on the property.

3.6 Sensitive Biological Resources

3.6.1 Special-Status Plant Species

According to the CNDDDB and CNPSEI, no special-status plant species have been documented on the Project site (CNDDDB 2012). However, several special-status plant species have been documented within the vicinity of the site (Appendix C) and have low potential to occur. The remaining plants are not federally or states protected and/or are not likely to occur. Appendix C lists the CNPSEI and CNDDDB search results for special status plants within the USGS topographic quadrangle containing the project site and eight surrounding quadrangles.

No special-status plant species were observed during the field surveys. However, the timing of the biological survey was outside of the blooming period for most rare plant species that could

occur on the property. As a result, rare plant surveys are recommended for spring 2013 to ascertain the presence of several species.

3.7 Special-Status Wildlife Species

During the assessment, no federal listed wildlife species were documented on site. Two sensitive species, the white-tailed kite and prairie falcon, were observed on the project site. The potentially-occurring wildlife species that are not federally or state protected and are not likely to occur, generally, with the exception of the burrowing owl. These are described below.

White-Tailed Kite

Status: California Species of Special Concern; Fully Protected

The white-tailed kite is a raptorial species of open habitat areas, including agricultural areas, across the western United States. The species was in sharp decline during the latter part of the 20th Century but its populations have rebounded in recent decades. Although it does not receive protection as a formally listed species, its nests are protected from impact by provisions of the federal Migratory Bird Treaty Act and CDFG Code. The species was observed within ornamental trees on the property, and is expected to be nesting on the site during the breeding season, which runs from February through August.

Prairie Falcon

Status: California Species of Special Concern

Falcons are high-level, raptorial predators that nest in inaccessible locations such as remote cliff faces. Prairie falcons will range for many miles to hunt prey such as mammal species and bird species. The species has been stable throughout most of its range, but is considered sensitive due to its restrictive nesting requirements. An individual was observed hunting over the Project site. Like the white-tailed kite, this species' nesting areas are protected from impact by provisions of the federal Migratory Bird Treaty Act and CDFG Code. No nesting habitat occurs on the property.

Burrowing Owl

Status: California Species of Special Concern

Burrowing owls are found throughout much of California and have been in sharp decline through much of their California range, especially near urban centers. The species favors open habitats such as grasslands and agricultural fields, but also uses open scrub and desert areas. Due to the species decline, and their ground-nesting habits, it has been protected by special provisions of the CDFG since 1995. Project sites that support burrowing owls often need to relocate owls prior to impacting the Project area. A burrowing owl habitat assessment and protocol survey is recommended for spring 2013.

Other Species

Bat species could occur within the old buildings and structures present on the property. Although no sensitive bat species are expected, there is still a potential for roosting areas on the property to serve as maternal colonies. Maternal colonies of bat species should be avoided to the maximum extent possible and impacts to them should be minimized.

Appendix D lists the CNDDDB search results for special status animals within the USGS topographic quadrangle containing the Project site and eight surrounding quadrangles.

Additional Species Observations

During the site assessment, no breeding birds were observed, however there are several locations where large trees exist within and adjacent to the project area which may contain nesting habitat for protected breeding birds such as raptors, hummingbirds and other migratory birds. Breeding bird species could pose a constraint to development of the area, if development occurs during the breeding season. Generally the breeding season is from February through August of each year.

There are several protected and State and Federally listed wildlife species occurring within a 5-mile radius of the site. Many of these are montane species that would not have potential to occur on the property due to elevation differences or lack of habitat. Most of the species discussed are assumed absent, with the exception of some for which the property represents a degree of suitable habitat. The species are discussed in a summary table at the end of this report (Appendix D).

4.0 CONCLUSIONS AND RECOMMENDATIONS

No federally listed species were detected within the Project site during the site assessment conducted by ECORP biologists Brad Haley and Scott Taylor. The only sensitive species observed were the white-tailed kite and prairie falcon. Both of these species are of relatively low sensitivity status and would not pose a significant constraint to the project. Several other special-status plant and wildlife species have been documented in the vicinity of the site. Rare plant surveys are being proposed for the spring of 2013, and there is a potential for several rare plants to be found on the property. These could pose a constraint to development.

A preliminary burrowing owl habitat assessment was conducted and habitat was found to be present throughout much of the property. No sign of burrowing owls was observed, but common associate species of the burrowing owl were observed, such as the California ground squirrel (*Spermophilus beecheyi*). A full burrowing owl habitat assessment and survey is recommended for spring and summer of 2013.

Several large trees within the site may support seasonal nesting by State and Federal protected raptors and migratory bird species. Therefore, pre-construction surveys for nesting birds are recommended no less than 30-days prior to the start of any construction related activities that may occur during the nesting season (February 1 to August 31).

Due to the potential presence of maternal roost sites within the abandoned structures on the property, a bat habitat assessment is recommended prior to demolition of any structures. If bat species are found, it is recommended that they be relocated prior to demolition.

5.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or the applicant's representative and that I have no financial interest in the project.

DATE: _____

SIGNED: _____

Mr. Scott Taylor

6.0 LITERATURE CITED

CalFlora: Information on California plants for education, research and conservation. [web application]. 2012. Berkeley, California: The CalFlora Database [a non-profit organization]. Available from: <http://www.calflora.org>

[CNDDDB] California Natural Diversity Database. Biogeographic Data Branch. Department of Fish and Game. Rare Find 3.1.0. August 9, 2012.

[CNPS] California Native Plant Society. 2010. Inventory of Rare and Endangered Plants (online edition, v7-10c 8-24-10). Rare Plant Scientific Advisory Committee. California Native Plant Society. Sacramento, CA. Accessed on August 9, 2012, from <http://www.cnps.org/inventory>

[ECORP] Environmental Consulting LLC. 2012. CULTURAL RESOURCES INVENTORY AND EVALUATION FOR THE CASA BLANCA SPECIFIC PLAN YUCAIPA, SAN BERNARDINO COUNTY, CALIFORNIA Report: APN: 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000 and 0321-082-15-000 Yucaipa Project in San Bernardino County September 2012

[ECORP] Environmental Consulting LLC. 2012. Jurisdictional Delineation Report: APN: 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000 and 0321-082-15-000 Yucaipa Project in San Bernardino County September 2012

[IDcide] Yucaipa Profile. 2012. IDcide. Accessed at: <http://www.idcide.com/citydata/ca/yucaipa.htm>

[USDA] U.S. Department of Agriculture. 2012. Natural Resource Conservation Service Web Soil Survey. Accessed at: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Appendix A
Botanical Compendium

Scientific Name	Common Name
GYMNOSPERMS	
CUPRESSACEAE	CYPRESS FAMILY
<i>Cupressus sempervirens*</i>	Italian cypress
PINACEAE	PINE FAMILY
<i>Pinus sp.</i>	Pine
ANGIOSPERMS (DICOTYLEDONS)	
ANACARDIACEAE	SUMAC OR CASHEW FAMILY
<i>Rhus trilobata</i>	Skunkbrush
<i>Toxicodendron diversilobum</i>	Poison oak
ASTERACEAE	SUNFLOWER FAMILY
<i>Ambrosia psilostachya</i>	Western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia douglasiana</i>	Mugwort
<i>Artemisia dracunculus</i>	Tarragon
<i>Baccharis salicifolia</i>	Mulefat
<i>Brickellia californica</i>	California brickellbush
<i>Centaurea melitensis*</i>	Tocalote
<i>Cirsium vulgare*</i>	Bull thistle
<i>Ericameria sp.</i>	goldenbush species
<i>Gnaphalium californicum</i>	California everlasting
<i>Gutierrezia californica</i>	California matchweed
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Lepidospartum squamatum</i>	scale-broom
<i>Lessingia filaginifolia</i>	cutweed aster
<i>Senecio flaccidus</i>	shrubby butterweed
<i>Stephanomeria exigua</i>	small wreathplant
<i>Stephanomeria virgata</i>	twiggy wreathplant
<i>Tetradymia stenolepis</i>	horsebrush
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia sp.</i>	fiddleneck
BRASSICACEAE	MUSTARD FAMILY
<i>Hirshfeldia incana*</i>	short-podded mustard
<i>Raphanus sativus*</i>	radish
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY
<i>Lonicera sp.</i>	honeysuckle
<i>Lonicera subspicata</i>	southern honeysuckle
<i>Sambucus mexicana</i>	Mexican elderberry

CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Chenopodium album*</i>	lamb's quarters
<i>Salsola tragus*</i>	Russian thistle
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	western bindweed
CUCURBITACEAE	GOURD FAMILY
<i>Cucurbita palmata</i>	coyote melon
CUSCUTACEAE	DODDER FAMILY
<i>Cuscuta californica</i>	California dodder
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce albomarginata</i>	rattlesnake weed
<i>Eremocarpus setigerus</i>	dove weed
FABACEAE	LEGUME FAMILY
<i>Lotus scoparius</i>	deerweed
<i>Vicia sativa*</i>	spring vetch
<i>Vicia villosa*</i>	winter vetch
FAGACEAE	OAK FAMILY
<i>Quercus john-tuckeri</i>	Tucker's oak
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium*</i>	red-stemmed filaree
HYDROPHYLLACEAE	WATERLEAF FAMILY
<i>Eriodictyon angustifolium</i>	narrow-leaved yerba santa
<i>Phacelia</i> sp.	phacelia
JUGLANDACEAE	WALNUT FAMILY
<i>Juglans regia*</i>	English walnut
LAMIACEAE	MINT FAMILY
<i>Marrubium vulgare*</i>	horehound
<i>Salvia apiana</i>	white sage
<i>Salvia columbariae</i>	chia
MELIACEAE	MAHOGANY FAMILY
<i>Melia azadarach*</i>	chinaberry tree
MYRTACEAE	MYRTLE FAMILY

<i>Eucalyptus sp.</i>	gum tree
OLEACEAE	OLIVE FAMILY
<i>Olea europaea*</i>	olive
PLATANACEAE	SYCAMORE FAMILY
<i>Platanus racemosa</i>	western sycamore
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i>	California buckwheat
RHAMNACEAE	BUCKTHORN FAMILY
<i>Rhamnus californica</i>	California coffeeberry
SALICACEAE	WILLOW FAMILY
<i>Salix exigua</i>	narrow-leaved willow
SCROPHULARIACEAE	FIGWORT FAMILY
<i>Castilleja sp.</i>	paintbrush species
<i>Keckiella cordifolia</i>	heart-leaved penstemon
SIMAROUBACEAE	QUASSIA FAMILY
<i>Ailanthus altissima*</i>	tree of heaven
SOLANACEAE	NIGHTSHADE FAMILY
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana glauca*</i>	tree tobacco
TAMARICACEAE	TAMARISK FAMILY
<i>Tamarix ramosissima*</i>	Mediterranean tamarisk
URTICACEAE	NETTLE FAMILY
<i>Urtica dioica ssp. holosericea</i>	giant creek nettle
VISCACEAE	MISTLETOE FAMILY
<i>Phoradendron villosum</i>	oak mistletoe
ANGIOSPERMS (MONOCOTYLEDONS)	
ARECACEAE	PALM FAMILY
<i>Washingtonia filifera</i>	California fan palm
<i>Washingtonia robusta</i>	Mexican fan palm
LILIACEAE	LILY FAMILY
<i>Bloomeria crocea</i>	common goldenstar

<i>Yucca whipplei</i>	Our Lord's candle
POACEAE	GRASS FAMILY
<i>Avena fatua</i> *	wild oat
<i>Bromus diandrus</i> *	ripgut grass
<i>Bromus madritensis ssp. rubens</i> *	foxtail chess

* Plants are not native to California

Appendix B
Wildlife Compendium

Scientific Name	Common Name
BIRDS	
<i>Baeolophus inornatus</i>	oak titmouse
<i>Bubo virginianus</i>	great horned owl
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Callipepla californica</i>	California quail
<i>Calypte anna</i>	Anna's hummingbird
<i>Carduelis psaltria</i>	lesser goldfinch
<i>Chamaea fasciata</i>	wrentit
<i>Colaptes auratus</i>	Northern flicker
<i>Corvus corax</i>	common raven
<i>Falco mexicanus</i>	Prairie falcon
<i>Falco sparverius</i>	American kestrel
<i>Melospiza crissalis</i>	California towhee
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Phainopepla nitens</i>	phainopepla
<i>Picoides nuttallii</i>	Nuttall's woodpecker
<i>Pipilo maculatus</i>	spotted towhee
<i>Psaltriparus minimus</i>	bushtit
<i>Tyrannus verticalis</i>	Western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Tyto alba</i>	barn owl
<i>Western meadowlark</i>	Western meadowlark
<i>white-tailed kite</i>	white-tailed kite
<i>Zenaida macroura</i>	Mourning dove
INSECTS	
<i>Artogeia rapae</i>	cabbage white
<i>Colias eurytheme</i>	alfalfa sulfur
<i>Pepsis formosa</i>	tarantula hawk
<i>Pieris rapae</i>	common white
MAMMALS	
<i>Canis latrans</i>	coyote
<i>Neotoma lepida</i>	wood rat
<i>Otospermophilus beecheyi</i>	California ground squirrel
<i>Sylvilagus bachmani</i>	brush rabbit
REPTILES	
<i>Sceloporus occidentalis</i>	Western fence lizard
<i>Uta stansburiana</i>	side-blotched lizard

Appendix C

Special-Status Plant Species List

Scientific Name Common Name	Status		Flowering Period Elevation (meters)	Potential for Occurrence; Habitat
<i>Abronia villosa</i> var. <i>aurita</i> Chaparral sand-verbena	Fed: Ca: CNPS: BLM:	none none 1B.1 none	January- September 80- 1600	Assumed Absent ; Chaparral, Coastal Scrub Sandy Areas. Nearest known occurrence more than 10 miles away.
<i>Acanthoscyphus parishii</i> var. <i>parishii</i> Parish's oxytheca	Fed: Ca: CNPS: BLM:	none none 4.2 none	June-September 1220-2600	Assumed Absent ; Sandy or gravelly soils within Chaparral or Lower Montane Coniferous Forest. Outside of known range.
<i>Allium marvinii</i> Yucaipa onion	Fed: Ca: CNPS: BLM:	none none 1B.1 none	April-May 760-1065	Assumed Absent ; Chaparral. In Openings on Clay Soils. No habitat on the site but known occurrence within 5 miles of the site.
<i>Allium parishii</i> Parish's onion	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-May 900-1465	Assumed Absent ; Rocky within Joshua tree woodland, Mojavean desert scrub, or Pinyon and juniper woodland. No known habitat on the site.
<i>Androsace elongata</i> ssp. <i>acuta</i> California androsace	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-June 150-1200	Low ; Chaparral, Cismontane woodland, Coastal Scrub, Meadows and seeps, Pinyon and juniper woodland, and Valley and foothill grassland. Marginal habitat on the site and nearest known location is more than 5 miles away.
<i>Arabis parishii</i> Parish's rock cress	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-May 1770-2900	Assumed Absent ; Generally Found On Pebble Plains On Clay Soil W/Quartzite Cobbles; Sometimes On Limestone. Outside of known range.
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i> Rock sandwort	Fed: Ca: CNPS: BLM:	none none 2.3 none	July-August 1800-2600	Assumed Absent ; Subalpine Coniferous Forest, Upper Montane Coniferous Forest. Mesic, Sandy Sites. Outside of known range.
<i>Arenaria paludicola</i> Marsh sandwort	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-August 10-170	Assumed Absent ; Growing Up Through Dense Mats Of Typha, Juncus, Scirpus, Etc. In Freshwater Marsh. Outside of known range.
<i>Arenaria ursina</i> Big Bear Valley sandwort	Fed: Ca: CNPS: BLM:	THR none 1B.2 none	May-August 1750-2900	Assumed Absent ; Pebble Plain, Pinyon And Juniper Woodland. Mesic, Rocky Sites. Outside of known range.
<i>Astragalus lentiginosus</i> var. <i>borreganus</i> Borrego milk-vetch	Fed: Ca: CNPS: BLM:	none none 4.3 none	February-May 30-320	Assumed Absent ; Sandy within Mojavean desert scrub or Sonoran desert scrub. Outside of known range.
<i>Astragalus lentiginosus</i> var. <i>coachellae</i> Coachella Valley milk- vetch	Fed: Ca: CNPS: BLM:	END none 1B.2 none	February-May 60-360	Assumed Absent ; Sonoran Desert Scrub. Sandy Flats, Washes, Outwash Fans, Sometimes On Dunes. Outside of known range.

<i>Astragalus lentiginosus</i> var. <i>sierrae</i> Big Bear Valley milk-vetch	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-August 1800-2600	Assumed Absent ; Stony Meadows And Open Pinewoods; Sandy And Gravelly Soils In A Variety Of Habitats. Outside of known range.
<i>Astragalus leucolobus</i> Big Bear Valley woollypod	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-July (425)1670-2515	Assumed Absent ; Dry Pine Woods, Pebble Plains, Gravelly Knolls Among Sagebrush, Or Stony Lake Shores In The Pine Belt. Outside of known range.
<i>Astragalus pachypus</i> var. <i>jaegeri</i> Jaeger's milk-vetch	Fed: Ca: CNPS: BLM:	none none 1B.1 none	December-June 365-915	Low ; Coastal Scrub, Chaparral, Valley And Foothill Grassland, Cismontane Woodland. Dry Ridges And Valleys. Marginal habitat on the site and nearest known occurrence more than 5 miles away.
<i>Atriplex coronata</i> var. <i>notatior</i> San Jacinto Valley crownscale	Fed: Ca: CNPS: BLM:	END none 1B.1 none	April-August 400-500	Assumed Absent ; Playas, Chenopod Scrub, Valley And Foothill Grassland, Vernal Pools. Dry, Alkaline Flats In The San Jacinto River Valley. Outside of known range.
<i>Berberis nevini</i> Nevin's barberry	Fed: Ca: CNPS: BLM:	END END 1B.1 none	March-June 290-1575	Assumed Absent ; Multiple Habitats. On Steep, N-Facing Slopes Or In Low Grade Sandy Washes. No habitat on the site and nearest known occurrence more than 10 miles away.
<i>Botrychium crenulatum</i> Scalloped moonwort	Fed: Ca: CNPS: BLM:	none none 2.2 none	June-September 1500-2670	Assumed Absent ; Bogs And Fens, Meadows, Lower Montane Coniferous Forest, Freshwater Marsh. Moist Meadows, Near Creeks. Outside of known range.
<i>Calochortus palmeri</i> var. <i>palmeri</i> Palmer's mariposa lily	Fed: Ca: CNPS: BLM:	none none 1B.2 none	March-July 600-2245	Assumed Absent ; Meadows And Seeps, Chaparral, Lower Montane Coniferous Forest. Vernal Moist Places In Yellow-Pine Forest, Chaparral. No known habitat on the site and nearest known occurrence more than 10 miles away.
<i>Calochortus plummerae</i> Plummer's mariposa lily	Fed: Ca: CNPS: BLM:	none none 1B.2 none	March-July 90-1610	High ; Occurs On Rocky And Sandy Sites, Usually Of Granitic Or Alluvial Material. Can Be Very Common After Fire. Habitat on the site and known occurrence within 1 mile of the site.
<i>Calyptidium pygmaeum</i> Pygmy pussypaws	Fed: Ca: CNPS: BLM:	none none 1B.2 none	June-August 1980-3110	Assumed Absent ; Sandy or gravelly soils within Subalpine coniferous forest or Upper montane coniferous forest. Outside of known range.
<i>Carex occidentalis</i> Western sedge	Fed: Ca: CNPS: BLM:	none none 2.3 none	June-August 1645-3135	Assumed Absent ; Lower montane coniferous forest, Meadows and seeps. Outside of known range.
<i>Castilleja cinerea</i> Ash-gray indian paintbrush	Fed: Ca: CNPS: BLM:	THR none 1B.2 none	June-August 1800-2835	Assumed Absent ; Endemic To The San Bernardino Mountains, In Clay Openings; Often In Meadow Edges. Outside of known range.

<i>Castilleja lasiorhyncha</i> San Bernardino Mountain's owl-clover	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-August 1135-2390	Assumed Absent ; Meadows, Pebble Plain, Upper Montane Coniferous Forest, Chaparral. Stream And Meadow Margins. Outside of known range.
<i>Castilleja montigena</i> Heckard's paintbrush	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 1950-2800	Assumed Absent ; Lower montane coniferous forest, Pinyon and juniper woodland, or Upper montane coniferous forest. Outside of known range.
<i>Caulanthus simulans</i> Payson's jewel-flower	Fed: Ca: CNPS: BLM:	none none 4.2 none	February-June 90-2200	Low ; Sandy, granitic soil within Chaparral or Coastal scrub. Marginal habitat on the site and nearest known occurrence more than 10 miles from the site.
<i>Centromadia pungens</i> ssp. <i>laevis</i> Smooth tarplant	Fed: Ca: CNPS: BLM:	none none 1B.1 none	April-September 0-480	Assumed Absent ; Valley And Foothill Grassland, Chenopod Scrub, Meadows, Playas, Riparian Woodland. Alkali Meadow, Alkali Scrub. Outside of known range.
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> Salt marsh bird's beak	Fed: Ca: CNPS: BLM:	END END 1B.2 none	May-October 0-30	Assumed Absent ; Coastal dunes and Marshes and swamps (coastal salt). Outside of known range.
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	Fed: Ca: CNPS: BLM:	none none 3.2 none	April-June 40-1705	High ; Coastal Scrub, Chaparral. Dry, Sandy Soils. Habitat on the site and nearest known occurrence within 1 mile of the site.
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> White-bracted spineflower	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-June 300-1200	Assumed Absent ; Mojavean Desert Scrub, Pinyon-Juniper Woodland. No habitat on the site and nearest known occurrence within 5 miles of the site.
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> Peruvian dodder	Fed: Ca: CNPS: BLM:	none none 2.2 none	July-October 15-280	Assumed Absent ; Marshes and swamps (freshwater). San Bernardino county record presumed extirpated. Outside of known range.
<i>Deinandra paniculata</i> Paniculate tarplant	Fed: Ca: CNPS: BLM:	none none 4.2 none	April-November 25-940	Assumed Absent ; Usually vernal mesic areas within Coastal scrub, Valley and Foothill grassland, or Vernal pools. No habitat on the site and nearest known occurrence more than 5 miles away.
<i>Dodecahema leptoceras</i> Slender-horned spineflower	Fed: Ca: CNPS: BLM:	END END 1B.1 none	April-June 200-760	Assumed Absent ; Chaparral, Coastal Scrub Alluvial Fan Sage Scrub. Flood Deposited Terraces And Washes. Outside of known range and no habitat on the site, but known occurrence within 5 miles of the site.
<i>Drymocallis cuneifolia</i> var. <i>cuneifolia</i> Wedgeleaf woodbeauty	Fed: Ca: CNPS: BLM:	none none 1B.1 none	June-August 1800-2215	Assumed Absent ; Sometimes carbonate within Riparian scrub or Upper montane coniferous forest. Outside of known range.
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> Santa Ana River woollystar	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-September 150-610	Assumed Absent ; Coastal Scrub, Chaparral. In Sandy Soils On River Floodplains Or Terraced Fluvial Deposits. Outside of known range.

<i>Eriogonum kennedyi</i> var. <i>alpigenum</i> Southern alpine buckwheat	Fed: Ca: CNPS: BLM:	none none 1B.3 none	July-September 2600-3500	Assumed Absent ; Alpine Boulder And Rock Fields, Subalpine Coniferous Forest. Dry Granitic Gravel. Outside of known range.
<i>Eriogonum kennedyi</i> var. <i>austromontanum</i> Southern mountain buckwheat	Fed: Ca: CNPS: BLM:	THR none 1B.2 none	July-September 1755-2375	Assumed Absent ; Usually Found In Pebble Plain Habitats. Outside of known range.
<i>Eriogonum</i> <i>microthecum</i> var. <i>lacus-ursi</i> Bear Lake buckwheat	Fed: Ca: CNPS: BLM:	none none 1B.1 none	July-August 2000-2100	Assumed Absent ; Great Basin Scrub, Lower Montane Coniferous Forest/Clay Outcrops. Outside of known range.
<i>Eriophyllum lanatum</i> var. <i>obovatum</i> Southern Sierra woolly sunflower	Fed: Ca: CNPS: BLM:	none none 1B.1 none	June-July 1114-2500	Assumed Absent ; Sandy loam within Lower montane coniferous forest or Upper montane coniferous forest. Outside of known range.
<i>Galium angustifolium</i> ssp. <i>gabrielense</i> San Antonio Canyon bedstraw	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-August 1200-2650	Assumed Absent ; Granitic, sandy, or rocky soil within Chaparral or Lower montane coniferous forest. Outside of known range.
<i>Galium johnstonii</i> Johnston's bedstraw	Fed: Ca: CNPS: BLM:	none none 4.3 none	June-July 1220-2300	Assumed Absent ; Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, or Riparian woodland. Outside of known range.
<i>Gilia leptantha</i> ssp. <i>leptantha</i> San Bernardino gilia	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-August 1500-2350	Assumed Absent ; Lower Montane Coniferous Forest. Sandy Or Gravelly Sites. Outside of known range, no habitat on the site, but known occurrence within 5 miles of the site.
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	Fed: Ca: CNPS: BLM:	none none 1A none	August-October 5-1675	Assumed Absent ; Marshes And Swamps Coastal Salt And Freshwater. Historical From Southern California. No habitat on the site but known occurrence within 5 miles of the site.
<i>Heuchera caespitosa</i> Urn-flowered alumroot	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 1155-2650	Assumed Absent ; Rocky areas within Cismontane woodland, Lower montane coniferous forest, Riparian forest (montane), or Upper montane coniferous forest. Outside of known range.
<i>Heuchera</i> <i>hirsutissima</i> Shaggy- haired alumroot	Fed: Ca: CNPS: BLM:	none none 1B.3 none	(May) June-July 1500-3500	Assumed Absent ; Subalpine Coniferous Forest, Upper Montane Coniferous Forest. Often Near Large Rocks. Outside of known range.
<i>Heuchera parishii</i> Parish's alumroot	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-August 1500-3800	Assumed Absent ; Lower Montane Conif. Forest, Subalpine Coniferous Forest, Upper Montane Coniferous Forest, Rocky Places. Outside of known range, not habitat on the site, but known occurrence within 5 miles of the site.
<i>Horkelia cuneata</i> ssp. <i>puberula</i> Mesa horkelia	Fed: Ca: CNPS: BLM:	none none 1B.1 none	February-July (September) 70-810	Assumed Absent ; Chaparral, Cismontane Woodland, Coastal Scrub. Sandy or Gravelly Sites. Outside of known range.

<i>Horkelia wilderae</i> Barton Flats horkelia	Fed: Ca: CNPS: BLM:	none none 1B.1 none	May-September 1675-2925	Assumed Absent ; Lower Montane Coniferous Forest, Upper Montane Coniferous Forest. Outside of known range.
<i>Hulsea vestita</i> ssp. <i>parryi</i> Parry's sunflower	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-August 1370-2895	Assumed Absent ; Granitic or carbonate, rocky, openings within Lower montane coniferous forest, pinyon and juniper woodland, and Upper montane coniferous forest. Outside of known range.
<i>Hulsea vestita</i> ssp. <i>pygmaea</i> Pygmy hulsea	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-October 2835-3900	Assumed Absent ; Alpine Boulder And Rock Field, Subalpine Coniferous Forest. Gravelly Sites; On Granite. Outside of known range.
<i>Imperata brevifolia</i> California satintail	Fed: Ca: CNPS: BLM:	none none 2.1 none	September-May 0-500	Assumed Absent ; Chaparral, Coastal scrub, Mojavean Desert Scrub, Meadows and Seepsoften Alkali, Riparian Scrub/Mesic. Outside of known range.
<i>Ivesia argyrocoma</i> Silver-haired ivesia	Fed: Ca: CNPS: BLM:	none none 1B.2 none	June-August 1480-2680	Assumed Absent ; Meadows, Pebble Plains, Upper Montane Coniferous Forest. In Pebble Plains And Meadows With Other Rare Plants. Outside of known range.
<i>Juglans californica</i> Southern California black walnut	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-August 50-900	Assumed Absent ; Alluvial soil within Chaparral, Cismontane woodland, or Coastal scrub. Outside of known range and none observed on the site.
<i>Juncus duranii</i> Duran's rush	Fed: Ca: CNPS: BLM:	none none 4.3 none	July-August 1768-2804	Assumed Absent ; Mesic areas within Lower montane coniferous forest, meadows and seeps, and Upper montane coniferous forest. Outside of known range.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	Fed: Ca: CNPS: BLM:	none none 1B.1 SEN	February-June 1-1400	Assumed Absent ; Coastal Salt Marshes, Playas, Valley And Foothill Grassland, Vernal Pools. No habitat on the site and nearest known occurrence more than 10 miles away.
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper-grass	Fed: Ca: CNPS: BLM:	none none 1B.2 none	January-July 1-945	Assumed Absent ; Chaparral, Coastal Scrub. Dry Soils, Shrubland. No known habitat on the site and nearest known occurrence more than 5 miles away.
<i>Lesquerella kingii</i> ssp. <i>bernardina</i> San Bernardino Mountains bladderpod	Fed: Ca: CNPS: BLM:	END none 1B.1 none	May-June 2030-2485	Assumed Absent ; Pinyon And Juniper Woodland, Lower Montane Coniferous Forest. Dry Sandy To Rocky Carbonate Soils. Outside of known range.
<i>Lewisia brachycalyx</i> Short-sepaled lewisia	Fed: Ca: CNPS: BLM:	none none 2.2 none	February-June 1400-2300	Assumed Absent ; Lower Montane Coniferous Forest, Meadows. Dry To Moist Meadows In Rich Loam. Outside of known range.
<i>Lilium humboldtii</i> var. <i>ocellatum</i> Ocellated Humboldt lily	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-August 30-1800	Assumed Absent ; Openings within Chaparral, Cismontane woodland, Coastal Scrub, Lower montane coniferous forest, or Riparian woodland. No habitat on the site.

<i>Lilium parryi</i> Lemon lily	Fed: Ca: CNPS: BLM:	none none 1B.2 none	July-August 1300-2790	Assumed Absent ; Wet, Mountainous Terrain; Gen. In Forested Areas; On Shady Edges Of Streams, In Open Boggy Meadows & Seeps. Outside of known range.
<i>Malacothamnus parishii</i> Parish's bush mallow	Fed: Ca: CNPS: BLM:	none none 1A none	June-July 485	Assumed Absent ; Chaparral, Coastal Sage Scrub. In A Wash. One Site Known. Outside of known range.
<i>Mentzelia tricuspis</i> Spiny-hair blazing star	Fed: Ca: CNPS: BLM:	none none 2.1 none	March-May 150-1280	Assumed Absent ; Sandy or gravelly soils on slopes and in washes, within Mojavean desert scrub. No habitat on the site and nearest known historical occurrence more than 5 miles away.
<i>Mimulus exiguus</i> San Bernardino Mountains monkeyflower	Fed: Ca: CNPS: BLM:	none none 1B.2 none	June-July 1800-2315	Assumed Absent ; Meadows And Seeps, Pebble Plains, Upper Montane Coniferous Forest. Clay Soils. Outside of known range.
<i>Mimulus johnstonii</i> Johnston's monkeyflower	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 975-2920	Assumed Absent ; Lower montane coniferous forest (scree, disturbed areas, rocky or gravelly, or roadside). Outside of known range and no habitat on the site.
<i>Mimulus purpureus</i> Purple monkey-flower	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-June 1900-2300	Assumed Absent ; Meadows And Seeps, Pebble Plain, Upper Montane Coniferous Forest. Dry Clay Or Gravelly Soils Under Jeffrey Pines. Outside of known range.
<i>Monardella macrantha ssp. hallii</i> Hall's monardella	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-August 695-2195	Moderate ; Broadleaved Upland Forest, Chaparral, Lower Montane Coniferous Forest, Cismontane Woodland, Grassland. Dry Slopes. Marginal habitat on the site and multiple occurrences within 5 miles of the site.
<i>Muhlenbergia californica</i> California muhly	Fed: Ca: CNPS: BLM:	none none 2.3 none	400-2000	Assumed Absent ; Near streams or seeps within Coastal sage, Chaparral, Lower montane coniferous forest, or Meadows. No habitat on the site and nearest known occurrence more than 5 miles away.
<i>Muilla coronata</i> Crowned muilla	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-May 765-1960	Assumed Absent ; Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, or Pinyon and juniper woodland. No known habitat on the site.
<i>Nama stenocarpum</i> Mud nama	Fed: Ca: CNPS: BLM:	none none 2.2 none	January-July 5-500	Assumed Absent ; Marshes And Swamps. Lake Shores, River Banks, Intermittently Wet Areas. Outside of known range.
<i>Navarretia peninsularis</i> Baja navarretia	Fed: Ca: CNPS: BLM:	none none 1B.2 none	Jun-August 1500-2425	Assumed Absent ; Lower Montane Coniferous Forest, Chaparral. Wet Areas In Open Forest. Outside of known range.

<i>Oxytropis oreophila</i> var. <i>oreophila</i> Mountain oxytrope	Fed: Ca: CNPS: BLM:	none none 2.3 none	June-September 3400-3800	Assumed Absent ; Alpine Boulder And Rock Field, Subalpine Coniferous Forest. Gravelly Or Rocky Sites. Outside of known range.
<i>Packera bernardina</i> San Bernardino ragwort	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-July 1800-2300	Assumed Absent ; Meadows And Seeps, Pebble Plains, Upper Montane Coniferous Forest. Mesic, Sometimes Alkaline Meadows, And Dry Rocky Slopes. Outside of known range.
<i>Packera ionophylla</i> Tehachapi ragwort	Fed: Ca: CNPS: BLM:	none none 4.3 none	June-July 1500-2700	Assumed Absent ; Granitic or rocky areas within Lower montane coniferous forest or upper montane coniferous forest. Outside of known range.
<i>Parnassia cirrata</i> var. <i>cirrata</i> San Bernardino grass-of-Parnassus	Fed: Ca: CNPS: BLM:	none none 1B.3 none	August-September 1250-2440	Assumed Absent ; Mesic, streamsides, or sometime calcareous within Lower montane coniferous forest, Meadows and seeps, and Upper montane coniferous forest. Outside of known range.
<i>Perideridia parishii</i> ssp. <i>parishii</i> Parish's yampah	Fed: Ca: CNPS: BLM:	none none 2.2 none	June-August 1390-3000	Assumed Absent ; Lower Montane Coniferous Forest, Meadows, Upper Montane Coniferous Forest. Damp Meadows Or Along Streambeds. Outside of known range.
<i>Phacelia mohanvesis</i> Mojave phacelia	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-August 1400-2500	Assumed Absent ; Sandy or gravelly within Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, and Pinyon and juniper woodland. Outside of known range.
<i>Phlox dolichantha</i> Big Bear Valley phlox	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-July 2000-2970	Assumed Absent ; Pebble Plains, Upper Montane Coniferous Forest. Sloping Hillside. Outside of known range.
<i>Pickeringia montana</i> var. <i>tomentosa</i> Woolly chaparral-pea	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 0-1700	Assumed Absent ; Gabbroic, granitic, or clay soils within Chaparral. No habitat on the site and nearest known occurrence more than 5 miles away.
<i>Piperia leptopetala</i> Narrow-petaled rein orchid	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-July 380-2225	Assumed Absent ; Cismontane woodland, Lower montane coniferous forest, or Upper montane coniferous forest. No habitat on the site.
<i>Poa atropurpurea</i> San Bernardino blue grass	Fed: Ca: CNPS: BLM:	END none 1B.2 none	April-August 1350-2455	Assumed Absent ; Meadows And Seeps. Mesic Meadows Of Open Pine Forests And Grassy Slopes, Loamy Alluvial To Sandy Loam Soil. Outside of known range.
<i>Pyrrocoma uniflora</i> var. <i>gossypina</i> Bear Valley pyrrocoma	Fed: Ca: CNPS: BLM:	none none 1B.2 none	July-September 1600-2300	Assumed Absent ; Pebble Plain, Meadows And Seeps. Meadows, Meadow Edges, And Along Streams In Or Near Pebble Plain Habitat. Outside of known range.
<i>Ribes divaricatum</i> var. <i>parishii</i> Parish's gooseberry	Fed: Ca: CNPS: BLM:	none none 1B.1 none	February-April 60-305	Assumed Absent ; Riparian Woodland. Salix Swales In Riparian Habitats. Outside of known range.

<i>Rupertia rigida</i> Parish's rupertia	Fed: Ca: CNPS: BLM:	none none 4.3 none	June-August 700-2500	Assumed Absent ; Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Valley and foothill grassland. No habitat on the site.
<i>Sedum niveum</i> Davidson's stonecrop	Fed: Ca: CNPS: BLM:	none none 4.2 none	June-August 2075-3000	Assumed Absent ; Rocky areas within Lower montane coniferous forest, Subalpine coniferous forest, and Upper montane coniferous forest. Outside of known range.
<i>Senecio astephanus</i> San Gabriel ragwort	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-July 400-1500	Assumed Absent ; Rocky slopes within Coastal bluff scrub or Chaparral. No habitat on the site.
<i>Sidalcea hickmanii</i> <i>ssp. parishii</i> Parish's checkerbloom	Fed: Ca: CNPS: BLM:	CAN RAR 1B.2 none	June-August 1000-2135	Assumed Absent ; Chaparral, Lower Montane Coniferous Forest. Disturbed Areas On Dry, Rocky Slopes. No habitat on the site and nearest known occurrence within 5 miles of the site.
<i>Sidalcea pedata</i> Bird-foot checkerbloom	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-August 1600-2500	Assumed Absent ; Meadows And Seeps, Pebble Plains. Vernally Mesic Sites In Meadows Or Pebble Plains. Outside of known range.
<i>Sidotheca caryophylloides</i>	Fed: Ca: CNPS: BLM:	none none 4.3 none	July-September 1114-2600	Assumed Absent ; Sandy areas within Lower montane coniferous forest. Outside of known range and not habitat on the site.
<i>Streptanthus bernardinus</i> Laguna Mountains jewel-flower	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 670-2500	Assumed Absent ; Chaparral or Lower montane coniferous forest. No habitat on the site and nearest know occurrence more than 10 miles away.
<i>Streptanthus campestris</i> Southern jewel-flower	Fed: Ca: CNPS: BLM:	none none 1B.3 none	May-July 600-2790	Assumed Absent ; Chaparral, Lower Montane Coniferous Forest, Pinyon-Juniper Woodland. Open, Rocky Areas. No habitat on the site and nearest known occurrence less than 5 miles away.
<i>Symphotrichum defoliatum</i> San Bernardino aster	Fed: Ca: CNPS: BLM:	none none 1B.2 none	July-November 2-2040	Assumed Absent ; Meadows, Seeps, Marshes And Swamps, Coastal Scrub, Cismontane Woodland, Lower Montane Coniferous Forest. No habitat on the site and nearest known occurrence less than 5 miles of the site.
<i>Taraxacum californicum</i> California dandelion	Fed: Ca: CNPS: BLM:	END none 1B.2 none	May-August 1620-2800	Assumed Absent ; Meadows And Seeps. Mesic Meadows, Usually Free Of Taller Vegetation. Outside of known range.
<i>Thelypodium stenopetalum</i> Slender-petaled thelypodium	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-September 1900-2245	Assumed Absent ; Meadows And Seeps, Pebble Plains. Seasonally Moist Alkaline Clay Soils; Associated With Seeps And Springs In The Pebble Plains. Outside of known range.

<i>Thelypteris puberula</i> var. <i>sonorensis</i> Sonoran maiden fern	Fed: Ca: CNPS: BLM:	none none 2.2 none	January- September 50-550	Assumed Absent ; Meadows And Seeps. Along Streams, Seepage Areas. Outside of known range.
<i>Trichocoronis wrightii</i> var. <i>wrightii</i> Wright's trichocoronis	Fed: Ca: CNPS: BLM:	none none 2.1 none	May-September 5-435	Assumed Absent ; Marshes And Swamps, Riparian Forest, Meadows And Seeps, Vernal Pools. Mud Flats Of Vernal Lakes, Drying River Beds. Outside of known range.

Federal Designations

(Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS] Bureau of Land Management [BLM])

END: Federally listed, endangered

THR: Federally listed, threatened

SS: BLM sensitive species

State Designations:

(California Endangered Species Act, California Department of Fish and Game [CDFG], California Native Plant Society [CNPS])

END: State-listed, endangered

THR: State-listed, threatened

FP: State-fully protected

SSC: Species of Special Concern

CNPS Ranking

1A: Presumed extinct

1B: Rare, threatened, or endangered in California and elsewhere

2: Rare, threatened, or endangered in California, but more common elsewhere

3: Review list of plants requiring more study

4: Plants of limited distribution watch list

CNPS Threat Code

0.1: Seriously threatened in California

0.2: Fairly threatened in California

0.3: Not very threatened in California

Sources: California Natural Diversity Data Base (CDFG) and California Native Plant Society Electronic Inventory (CNPS), Beaumont, Big Bear Lake, El Casco, Forest Falls, Harrison Mountain, Keller Peak, Redlands, Sunnymead, and Yucaipa 7.5 minute USGS quads; Appendix A.

Appendix D

Special-Status Animal Species List

<i>Scientific Name</i> Common Name	Status		Potential for Occurrence; Habitat
INVERTEBRATES			
<i>Carolella busckana</i> Busck's gallmoth	Fed: Ca: BLM: FS:	none none none none	Assumed Absent ; Found in coastal sand dune habitat.
<i>Euchloe hyantis andrewsi</i> Andrew's marble butterfly	Fed: Ca: BLM: FS:	none none none none	Low ; Inhabits shrubland and chaparral habitats in host plants <i>Plantago erecta</i> and <i>Plantago hookeriana californica</i> .
<i>Halictus harmonius</i> Harmonious sweat bee	Fed: Ca: BLM: FS:	none SC none none	Moderate ; the property has small patches of native shrubs that may be suitable for this species, and is within the insect's elevation range (0-7,000 ft.)
FISH			
<i>Rhinichthys osculus ssp. 3</i> Santa Ana speckled dace	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Lives in permanent flowing streams in headwaters of the Santa Ana and San Gabriel Rivers.
<i>Catostomus santaanae</i> Santa Ana Sucker	Fed: Ca: BLM: FS:	THR CSC SS S	Assumed Absent ; Spawns in riffles, usually in coarse gravel bottomed areas of the Colorado River bordering California.
AMPHIBIANS			
<i>Rana aurora draytonii</i> California red-legged frog	Fed: Ca: BLM: FS:	THR CSC none none	Assumed Absent ; Found in lowlands and foothills in or near deep permanent water sources with dense or shrubby riparian vegetation.
<i>Rana muscosa</i> mountain yellow-legged frog	Fed: Ca: BLM: FS:	END CSC none S	Assumed Absent ; Found near permanent sources of water in the San Gabriel, San Jacinto and San Bernardino Mountains.
<i>Scaphiopus hammondi</i> Western spadefoot toad	Fed: Ca: BLM: FS:	none CSC SS none	Low ; Occurs in grassland, scrub, chaparral with nearby vernal pools or other seasonal waters for breeding.
REPTILES			
<i>Phrynosoma coronatum blainvillei</i> Coast (San Diego) horned lizard	Fed: Ca: BLM: FS:	none CSC none S	Moderate ; Occurs in open scrub and other open areas with ample ant prey base.
<i>Aspidoscelis hyperythra beldingi</i> Belding's orange-throated whiptail	Fed: Ca: BLM: FS:	none CSC none none	Low ; Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks.

<i>Aspidoscelis tigris stejnegeri</i> coastal western whiptail	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Found in deserts and semiarid areas with sparse vegetation and open areas with firm, sandy, or rocky soil. Also found in woodland and riparian areas.
<i>Anniella pulchra pulchra</i> silvery legless lizard	Fed: Ca: BLM: FS:	none CSC none S	Low ; Found in moist, sandy or loamy soils with sparse vegetation.
<i>Charina umbratica</i> southern rubber boa	Fed: Ca: BLM: FS:	none THR none S	Assumed Absent ; Occurs in a variety of montane forest habitats within the vicinity of streams or wet meadows in the San Jacinto and San Bernardino Mountains.
<i>Charina trivirgata</i> rosy boa	Fed: Ca: BLM: FS:	none none SS S	Low ; Occurs in desert and chaparral habitats with moderate to dense vegetation.
<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	Fed: Ca: BLM: FS:	none none none S	Moderate ; Found in open, rocky areas in moist microhabitats near intermittent streams.
<i>Lampropeltis zonata (parvirubra)</i> California mountain kingsnake (San Bernardino population)	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Found in a variety of montane habitats in the San Bernardino Mountains.
<i>Thamnophis hammondi</i> two-striped garter snake	Fed: Ca: BLM: FS:	none CSC SS S	Assumed Absent ; Occurs in or near permanent water sources in elevations up to 2,134 meters (7,000') amsl.
<i>Crotalus ruber ruber</i> northern red-diamond rattlesnake	Fed: Ca: BLM: FS:	none CSC none none	Low ; Occurs in chaparral, woodland, grassland, and desert areas in rocky areas with dense vegetation. Requires rodent burrows and/or cracks in rocks for cover.
BIRDS			
<i>Accipiter cooperii</i> Cooper's hawk	Fed: Ca: BLM: FS:	none CSC none none	High ; Nests in woodlands, typically in riparian areas and oaks.
<i>Buteo regalis</i> Ferruginous hawk	Fed: Ca: BLM: FS:	none CSC SS none	Low ; Found in prairie, grassland, forest and desert habitats; nests along streams or on steep slopes.
<i>Elanus leucurus</i> white-tailed kite (nesting)	Fed: Ca: BLM: FS:	none FP none none	Observed ; Nests in trees near marshes or other sources of water in grassland, cropland and woodland-hardwood habitats.
<i>Eremophila alpestris actia</i> California horned lark	Fed: Ca: BLM: FS:	none CSC none none	High ; Occurs in short-grass prairie, open fallow grain fields, and alkali flats in coastal regions from Sonoma to San Diego and east to valley foothills.

<i>Falco mexicanus</i> Prairie falcon	Fed: Ca: BLM: FS:	none CSC none none	Observed ; Hunts in open habitats within the western United States, including grasslands, open desert, open scrub, and agricultural areas. Nests on remote cliff faces.
<i>Progne subis</i> purple martin	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Inhabits woodland and low elevation coniferous forests; nests in old woodpecker cavities.
<i>Cypseloides niger</i> black swift	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Found on cliffs adjacent to or behind waterfalls in the San Bernardino and San Jacinto Mountains.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo (nesting)	Fed: Ca: BLM: FS:	FC END None S	Assumed Absent ; Prefers lower, flood-bottoms of larger river-systems with willows, cottonwoods, and dense understory of nettle, wild grape, or blackberry.
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Occurs on steep, dry hillsides in scrub and chaparral habitats.
<i>Amphispiza belli belli</i> Bell's sage sparrow	Fed: Ca: BLM: FS:	none CSC none none	High ; Occurs in chaparral habitat with dense stands of chamise.
<i>Carduelis lawrencei</i> Lawrence's goldfinch	Fed: Ca: BLM: FS:	none none none none	High ; Nests in open oak woodland and other arid woodland and chaparral habitats near water. Feeds in nearby herbaceous habitats.
<i>Agelaius tricolor</i> tri-colored blackbird (nesting colony)	Fed: Ca: BLM: FS:	none CSC SS none	Assumed Absent ; A highly colonial species. Occurs in wetlands with reeds for nesting.
<i>Lanius ludovicianus</i> loggerhead shrike (nesting)	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Inhabits large, open areas conducive to hunting. Nests in dense brush and shrubs.
<i>Dendroica petechia brewsteri</i> yellow warbler	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Prefers to nest in willows, cottonwoods, aspens and other trees in riparian areas.
<i>Icteria virens</i> yellow-breasted chat (nesting)	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Nests in riparian thickets of willows and other brushy tangles along water courses.
<i>Athene cunicularia</i> burrowing owl (burrow sites)	Fed: Ca: BLM: FS:	none CSC SS none	Moderate ; Associated with low-lying vegetation, open scrub, grassland, and agricultural habitats.

<i>Polioptila californica californica</i> coastal California gnatcatcher	Fed: Ca: BLM: FS:	THR CSC none none	Assumed Absent ; Occurs in coastal sage scrub below 2,500' from Ventura to Baja California.
<i>Plegadis chihi</i> white-faced ibis	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Found in shallow freshwater marshes with dense tule thickets for nesting.
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	Fed: Ca: BLM: FS:	END END none none	Assumed Absent ; Occurs as summer resident in extensive thickets of low dense willows on the edges of wet meadows, ponds, backwaters, and creeks.
<i>Vireo bellii pusillus</i> least Bell's vireo	Fed: Ca: BLM: FS:	END END none none	Assumed Absent ; Nests in low riparian habitat in the vicinity of water or dry river bottoms below 609 meters (2,000') amsl.
MAMMALS			
<i>Antrozous pallidus</i> pallid bat	Fed: Ca: BLM: FS:	none CSC SS S	Low ; Roosts in dry, open habitats. Occurs in desert, grasslands, shrublands, woodlands and forests.
<i>Lasiurus xanthinus</i> western yellow bat	Fed: Ca: BLM: FS:	none none none none	Assumed Absent ; Roosts in palm trees in foothill riparian, desert wash and palm oasis habitats with access to water for foraging.
<i>Eumops perotis californicus</i> western mastiff bat	Fed: Ca: BLM: FS:	none CSC SS none	Low ; Roosts in crevices of high cliffs and trees in open, arid and semi-arid habitats.
<i>Nyctinomops femorosaccus</i> pocketed free-tailed bat	Fed: Ca: BLM: FS:	none CSC none none	Low ; Found in pine-juniper woodlands, desert scrub and palm oasis habitats in southern California.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	Fed: Ca: BLM: FS:	none CSC none none	High ; Found in coastal sage scrub habitats in southern California.
<i>Glaucomys sabrinus californicus</i> San Bernardino flying squirrel	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Found only in the San Bernardino Mountains in Jeffery pine/white fir mixed forests.
<i>Neotamias speciosus speciosus</i> Lodgepole chipmunk	Fed: Ca: BLM: FS:	none none none none	Assumed Absent ; Summits of isolated Piute, San Bernardino and San Jacinto Mountains. Usually found in open canopy forests, especially lodgepole pine forest.
<i>Chaetodipus californicus femoralis</i> Dulzura pocket mouse	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Found in coastal scrub, chaparral and grassland habitats.

<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	Fed: Ca: BLM: FS:	none CSC none none	Low ; Found in sandy, herbaceous areas occurring in desert wash, desert scrub and desert succulent shrub habitats.
<i>Dipodomys merriami parvus</i> San Bernardino kangaroo rat	Fed: Ca: BLM: FS:	END CSC none none	Assumed Absent ; Occurs in alluvial scrub habitat with sandy soils for burrowing.
<i>Dipodomys stephensi</i> Stephen's kangaroo rat	Fed: Ca: BLM: FS:	END THR none none	Low ; Found in annual and perennial grasslands, preferring buckwheat, chamise, brome grass and filaree.
<i>Perognathus alticolus alticolus</i> San Bernardino white-eared pocket mouse	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Historically found in open pine forests, grassy flats and pinyon-juniper woodland habitats.
<i>Perognathus longimembris brevinasus</i> Los Angeles pocket mouse	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Associated with sandy washes, scrub, and grasslands.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	Fed: Ca: BLM: FS:	none CSC none none	Low ; Occurs in scrub with dense canopies and rocky cliffs and slopes.
<i>Onychomys torridus ramona</i> southern grasshopper mouse	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Inhabits desert areas, particularly scrub habitats with moderate shrub cover and friable soils for digging. Dependant on arthropod prey.
<i>Taxidea taxus</i> American badger	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Associated with open stages of dry scrub, forest, and herbaceous habitats. Requires sufficient food, friable soils, and open uncultivated ground.

Biological Resources Assessment for
Wilson Creek Estates
(Revised)

City of Yucaipa
San Bernardino County, California

Submitted to:

Meridian Land Development Company
Jonathan Weldy
President
19153 Town Center Drive
Apple Valley, California 92380

Submitted by:



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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Wilson Creek Estates (Revised)**

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1.0 INTRODUCTION

ECORP Consulting, Inc. (ECORP) conducted an updated biological resource assessment as a follow-up to the biological resource assessment, focused rare plant survey, and protocol breeding-season burrowing owl survey conducted in 2012 of approximately 240 acres within the Wilson Creek Estates property (property).

The property is located in the City of Yucaipa, San Bernardino County, California and includes Assessor Parcel Numbers 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000, and 0321-082-15-0000. The physical address of the property is 36104 Oak Glen Road, an historic ranch site which supports an old, white house (known as the “Casa Blanca”) and several outbuildings. The house is older than the surrounding outbuildings. Although the 4.5-acre parcel that includes the Casa Blanca was included in this report, the parcel is being processed separately.

The purpose of the assessment was to collect and update information on the biological resources present within the site and to determine any potential biological constraints on the property regulated by federal, state, or local authorities. The assessment included a general site characterization, vegetation community mapping, inventory of plant and wildlife species, analysis of the potential for special-status plants and animals to occur on the Project, and a review of recorded jurisdictional features within the property. Jurisdictional features include streams, lakes, and wetlands that may be regulated by the California Department of Fish and Wildlife (CDFW) or U.S. Army Corps of Engineers (USACE).

1.1 Project Location

The property is located along the upper portions of Wilson Creek in the northeastern portion of the City of Yucaipa, San Bernardino County, California four miles north of Interstate 10 (Figure 1). The property is bound by Fir Avenue to the north, Oak Glen Road to the south, Jefferson Street and Cherry Croft Drive to the west. The property can be found within the southern half of Section 29 and the southeast quarter of the southeast quarter of Section 30, in Township 1 South, Range 1 West, San Bernardino Base Meridian of the U.S. Geological Survey (USGS) Yucaipa 7.5-minute topographic quadrangle (Figure 2).

1.2 Project Description

The Meridian Land Development Company is proposing to build paved streets and infrastructure to support 182 developable rural residential lots. The project includes roads, sewer lines, utilities, and fire access. It is the intent of the project proponent to utilize a ‘minimalist grading’ concept for the property. The design of the community, including the circulation and drainage systems, conform to the existing contours of the land. The design and layout of the proposed one-acre lots offer the opportunity to maintain each lot in its natural state.

Primary objectives and features of the development plan involve a minimalist grading concept to preserve maximum extent of existing slopes and vegetation, and avoid mass-grading. Individual lots will each have their own access point from the circulatory access roads of the property. Understanding the Rural Residential design of this custom home neighborhood, it is

anticipated the project will be phased to accommodate absorption and streets will be built only as needed over the life of the build out.

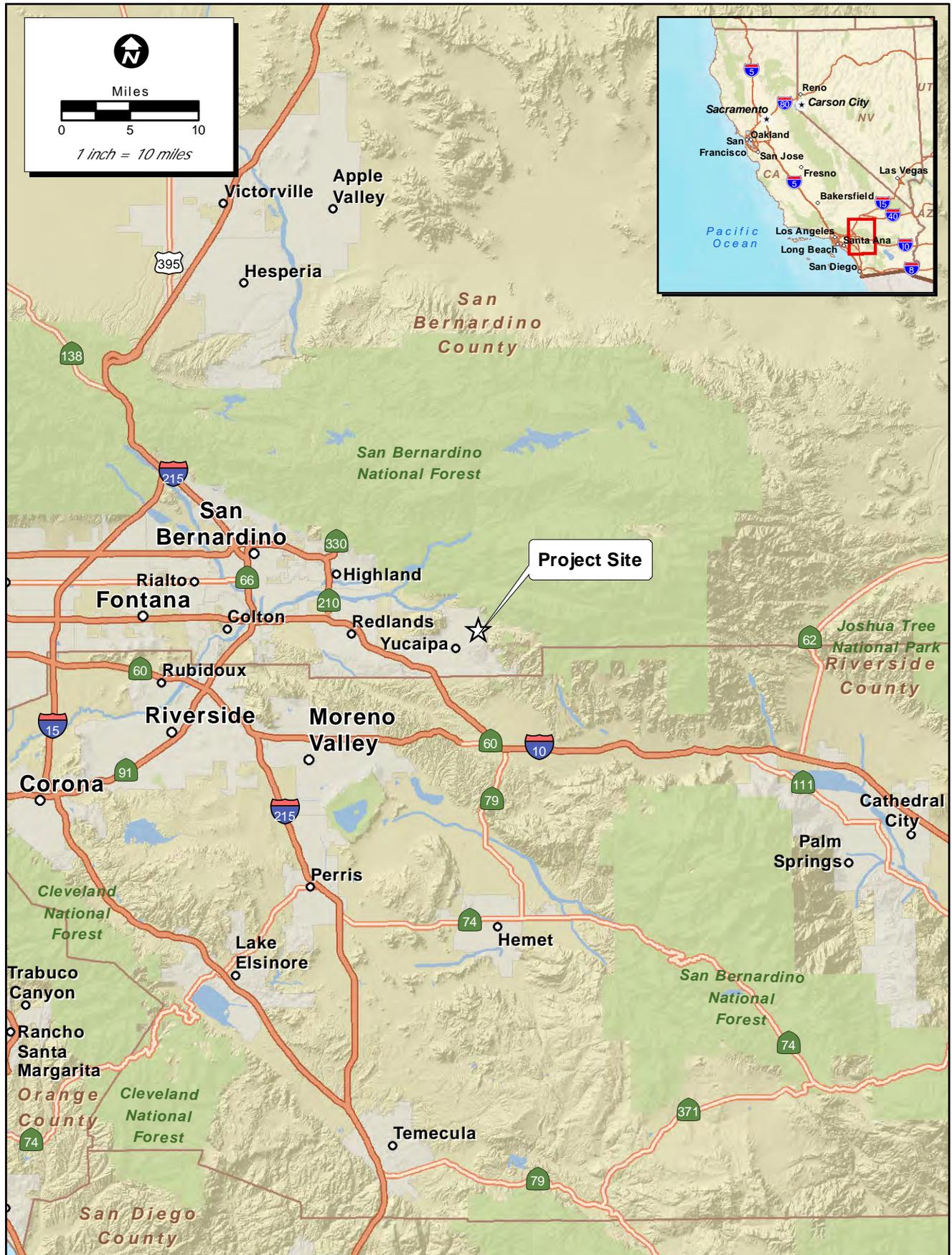
1.3 Regional Setting

The City of Yucaipa is located approximately 55 miles east of Los Angeles and 15 miles east of San Bernardino. The city is located along the southern foot of the San Bernardino Mountains and west of the San Gorgonio Pass along Interstate 10. As a suburb of the greater Los Angeles area, it is an area used by both commuters and by weekend vacationers. The property is located along Wilson Creek within the Yucaipa Creek Watershed, a watershed of approximately 67 square miles, which is a part of the much larger Santa Ana River Watershed. Prevailing temperatures in the Yucaipa area usually range from 40° Fahrenheit (F) in the winter to 97° F in the summer. The warmest month is August and the coolest month is January [The Weather Channel 2012].

Local topography consists of a single large canyon (Wilson Creek), and a few adjoining canyons, surrounded by ridges trending in a east to west direction. The property ranges in elevation between approximately 3,000 feet (ft) (914 meters [m]) above mean sea level (msl) in the southwest section to 3,460 ft (1,055 m) above msl in the northeast. The nearest peak is Allen Peak at 5,795 ft (1,766 m), two miles northeast of the property.

Surrounding land uses are undeveloped properties with residential areas and park uses (El Dorado Ranch Park). Most developed properties surrounding the site contain single family homes with adjoining lands of an acre or more. Agricultural uses occur both on the property and on adjoining ridges to the east. The area is used to grow grains and other dry row crops. The nearest areas of designated open space include the U.S. Forest Service lands of the San Bernardino National Forest, two and a half miles northeast of the property.

Vegetation within the site consists of a mixture of native shrubs and trees, agriculture, orchards, grasslands and developed areas. Native vegetation tends to dominate the Wilson Creek area and its associated finger canyons, while agriculture and associated plant communities dominate the ridgelines. Several outbuildings occur in the southwestern corner of the property. The property is currently subject to some degree of human visitation with associated habitat degradation.

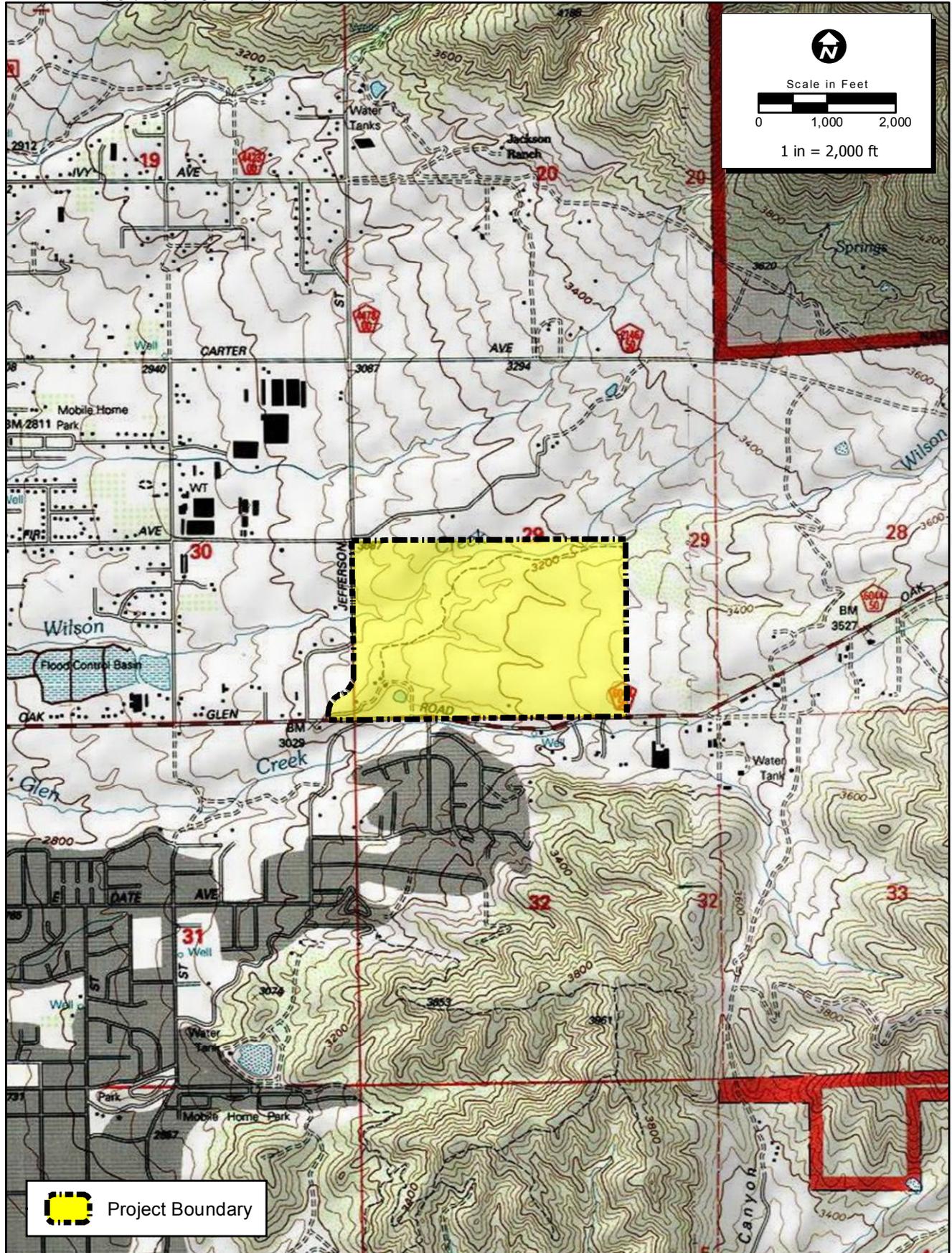


Map Date: 9/20/2012
 Source: ESRI

Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Site_Vicinity\CBSF_Vicinity_v2.mxd (KOrtega, DWagnon, 9/20/2012)

Figure 1. Vicinity

2012-067 Wilson Creek Estates



Map Date: 9/20/2012
Source: ESRI Online

Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Site_Vicinity\CBS_P_Location_v2_Quad.mxd (DWagon, 9/20/2012)

Figure 2. Project Location

2.0 METHODS

2.1 Literature Search

Prior to conducting the updated survey, a search was performed using CDFW's California Natural Diversity Database (CNDDDB) [CDFW 2015] and the California Native Plant Society's Electronic Inventory (CNPSEI) [CNPS 2015]. Within these databases, the following nine USGS 7.5-minute topographic quadrangles were searched because they either contained the property or adjacent areas: Beaumont, Big Bear Lake, El Casco, Forest Falls, Harrison Mountain, Keller Peak, Redlands, Sunnymead, and Yucaipa.

Based on the search results, separate Potential for Occurrence tables were created for plants and wildlife including federal, state, California Native Plant Society (CNPS), and Bureau of Land Management (BLM) listing status, and their potential to occur based on the habitat in the study area. These tables were reviewed by ECORP biologists prior to conducting surveys to determine which species could be observed within the property.

All sensitive species found within the database searches were assessed for their potential to occur on the site based on the following designations:

Present: Species was observed on the site during a site visit or focused survey.

High: Habitat (including soils and elevation requirements) for the species occurs on the site and a known occurrence occurs within five miles of the site.

Moderate: Habitat (including soils and elevation requirements) for the species occurs on the site and a known occurrence occurs within the database search, but not within five miles of the site; or a known occurrence occurs within five miles of the site and marginal or limited amounts of habitat occurs on the site.

Low: Limited habitat (including soils and elevation requirements) for the species occurs on the site and a known occurrence occurs within the database search, but not within five miles of the site.

Assumed

Absent: No suitable habitat (including soils and elevation requirements) occurs on the site, the site is located outside the species' known geographical range, or the species was determined to be absent during focused surveys.

2.2 Property Characterization

The updated biological resources assessment was conducted using the same methods as the previous biological field assessment, but did not include focused surveys. These methods are described briefly below.

Biologists systematically walked and drove around the property, taking photos, and gathering information on the biological resources present. Biological resource information that was collected included: vegetation community characterization, plant and animal species lists (bird calls, animal tracks, scat), characterization of habitats present on the site, bird nest locations,

locations of burrows and any other special habitat features, and representative site photographs.

Vegetation communities and jurisdictional features recorded previously were observed and updated, as necessary.

As a part of this analysis, ECORP determined the potential for the property to contain wildlife corridors. This was conducted primarily by examining aerial photography of the property and surrounding areas and was supported by the field visit. Wildlife corridors facilitate regional animal movement and are generally centered around waterways, riparian corridors, flood-control channels, and other natural pathways. Drainages generally serve as movement corridors because wildlife can move easily through these areas, and fresh water is periodically available. Corridors also offer wildlife unobstructed terrain to forage and allow for the dispersal of young individuals. Ridgelines may also serve as movement corridors. Under the City of Yucaipa General Plan, the property is designated as "RL" or Rural Living.

2.3 Vegetation Mapping

Vegetation community mapping for the property was performed using community descriptions from the second edition of the *Manual of California Vegetation* [Sawyer et al. 2009]. Biologists used dichotomous keys in the *Manual* to determine vegetation alliances present on the site. Vegetation alliances are defined by one or more diagnostic species, often with high vegetative cover. The alliances reflect regional climates, substrates, hydrology, and disturbance regimes. It is sometimes necessary to break down alliances further into vegetation associations in order to accurately characterize site conditions. Vegetation community mapping for the property was done on an alliance-level scale, and vegetation alliances were not broken down into vegetation associations on the property. Changes in vegetation communities were marked on property maps and updated using our in-house Geographic Information System (GIS) software.

2.4 Jurisdictional Delineation

ECORP reviewed the jurisdictional features of the property recorded in the previous biological assessment and jurisdictional delineation report following the unified federal method, as updated, for the USACE. The delineation also conformed to guidelines of the CDFW and Regional Water Quality Control Board (RWQCB). Changes in features that were observed were updating using a handheld Global Positioning Unit.

2.5 Soils

Soil types were mapped using the NRCS Web Soil Survey [NRCS 2012].

3.0 RESULTS

ECORP biologists Kevin Cornell and Scott Taylor conducted an updated biological assessment on April 29, 2015. For reference, the previous biological assessment was completed on July 24, 2012 by ECORP biologists Brad Haley and Scott Taylor. The original jurisdictional delineation was also completed on July 24 and August 15, 2012 by ECORP biologists Brad Haley and Scott Taylor. ECORP biologists Emily Graf and Krissy Walker conducted a rare plant survey on April 16 and 17, 2013. ECORP biologists Emily Graf, Brad Haley, Katherine Vienne, and Krissy Walker conducted the four protocol burrowing owl surveys between March 11 and July 10, 2013.

Weather conditions and other survey information for all surveys conducted to date, including past surveys, are provided in Table 1.

Table 1. Weather Conditions During Surveys

Type of Survey	Date	Surveyor	Time		Temperature (°F)		Cloud Cover (%)		Wind Speed (mph)	
			start	end	min	max	min	max	min	max
Biological Reconnaissance	7/24/12	BH, ST	0700	1515	71	88	0	0	0	3
Jurisdictional Delineation	7/24/12	BH, ST	0700	1515	71	88	0	0	0	3
	8/15/12	BH, ST	0700	1300	66	82	10	20	0	5
Rare Plant Survey	4/16/13	EG, KW	1115	1230	49	53	50	55	0	4
	4/17/13	EG, KW	0745	1215	47	68	0	0	0	5
Burrowing Owl Survey 1	3/11/13 AM	EG, BH	0650	1030*	44	62	0	0	1	5
	3/11/13 PM	EG, BH	1705	1840	73	81	0	0	1	3
	3/12/13 AM	BH, KW	0655	0940	51	72	0	0	1	5
	3/13/13 AM	BH, KV	0715	0930	52	62	0	0	1	8
Burrowing Owl Survey 2	4/15/13 AM	EG, KV, KW	0620	1000	47	62	90	100	0	3
	4/15/13 PM	EG, KV, KW	1720	1925	54	56	75	95	1	3
	4/16/13 AM	EG, KW	0605	1000	47	52	60	97	0	3
Burrowing Owl Survey 3	6/10/13 AM	BH, EG	0535	0915	50	70	0	0	0	3
	6/10/13 PM	BH, EG	1805	1957	76	82	0	0	0	8
	6/11/13 AM	BH, KV	0535	0900	55	76	0	10	1	3
Burrowing Owl Survey 4	7/9/13 AM	BH, KW	0530	1000	75	96	40	75	1	3
	7/9/13 PM	KV, KW	1830	2025	85	92	5	25	1	1
	7/10/13 AM	KV, KW	0535	0950	74	82	60	95	0	1
Biological Resources Update	4/29/15	KC, ST	0930	1130	70	82	0	0	0	5

EG=Emily Graf, BH=Brad Haley, ST=Scott Taylor, KV=Katherine Vienne,
KW=Krissy Walker, KC=Kevin Cornell

* = Survey went past 10:00am due to documentation of the concentrated section of burrows.

Updated botanical and wildlife compendia for the property can be found in Appendices A and B, respectively. Tables containing the Potential for Occurrence for sensitive plant and animal

species can be found in Appendices C and D, respectively. Recent representative site photographs are located in Appendix E.

3.1 Literature Search

3.1.1 Special-Status Plant Species

According to the CNDDDB and CNPSEI, as of 2015, no special-status plant species have been documented on the property in these public databases. However, several special-status plant species have been documented within the vicinity of the site and have the potential to occur (Appendix C) [CDFW 2015; CNPS 2015]. No federal or state listed plant species were documented on the site during the surveys. Ninety-seven special-status plant species were identified from the database searches. Plummer's mariposa lily (*Calochortus plummerae*) and Parry's spineflower (*Chorizanthe parryi* var. *parryi*) have a high potential to occur. Hall's monardella (*Monardella macrantha* ssp. *hallii*) has a moderate potential to occur. California androsace (*Androsace elongata* ssp. *acuta*), Jaeger's milk-vetch (*Astragalus pachypus* var. *jaegeri*), and Payson's jewel-flower (*Caulanthus simulans*) have a low potential to occur. None of these plants are state or federal listed species. The remaining plants were either not federal or state protected or not likely to occur.

3.1.2 Special-Status Wildlife Species

According to the CNDDDB, as of 2015, no special-status wildlife species have been documented on the property in these public databases. However, several special-status wildlife species have been documented within the vicinity of the site and have the potential to occur (Appendix D) [CDFW 2015]. There are several protected and federal and/or state listed wildlife species occurring within a five-mile radius of the site. Many of these are montane species that would not have a potential to occur on the property due to elevation differences or lack of habitat. The special-status wildlife species are discussed in a summary table at the end of this report (Appendix D). Most of the species reviewed are assumed absent, with the exception of some for which the property contains a small amount of suitable habitat.

3.2 Vegetation Communities

There are six vegetation communities on the property, including Annual Brome (*diandrus*) Grassland, California Buckwheat Scrub, Riparian, Oak (*Quercus* spp.) Woodland, Agriculture, and Orchard. There are also land use types - disturbed/developed - located on the property. All of the vegetation communities and land use types on the property are depicted on Figure 3.

Changes to the previous vegetation mapping were made for this update. Previously, the Annual Brome Grassland plant community was considered to be a Brassica-Mustard plant community. The community was changed due to an observed dominance of grassland in these areas at the time of the updated survey. Also, the distribution of California Buckwheat Scrub has increased slightly as some previous agricultural areas or grassland was observed to be revegetating with more native vegetation.

The vegetation communities are discussed below.

3.2.1 Annual Brome Grassland

Brome grasslands account for the largest acreage of grassland vegetation in cismontane California. It inhabits all topographic settings in foothills, waste places, rangelands, and openings in woodlands. Dominant plant species observed within this community in the Southern California Mountains and Valleys region include slender wild oat (*Avena fatua*), short-podded mustard (*Hirschfeldia incana*), doveweed (*Eremocarpus setigerus*), Farmer's foxtail (*Hordeum murinum*), tocalote (*Centaurea melitensis*), and Russian thistle (*Salsola tragus*). Native species are generally present in low amounts and include deerweed (*Acmispon glaber*), annual lupine (*Lupinus bicolor*), western ragweed (*Ambrosia psilostachia*), blue wildrye (*Elymus glaucus*), common fiddleneck (*Amsinckia menziesii*), and western bindweed (*Calystegia macrostegia*). On the site, the plant community is located primarily along the periphery of agricultural areas and former agricultural areas. One location within the western part of Wilson Creek canyon that was previously mapped as agriculture was changed to this plant community.

3.2.2 California Buckwheat Scrub

California buckwheat is a somewhat small, semi-woody shrub that can grow to two meters in height and is found in low to mid-elevations throughout central and southern California. This species grows in a variety of topographic conditions and is generally found in coarse, well-drained soils. This alliance is often one of the first to form following disturbance such as fire, floods, grazing, or mechanical disturbance. California buckwheat is scattered throughout the site and is found along with deerweed, scale broom (*Lepidospartum squamatum*), thick-leaved yerba santa (*Eriodictyon crassifolium*), white sage (*Salvia apiana*), and our Lord's candle (*Yucca whipplei*). Inter-shrub spaces often have high amounts of non-native herbaceous species. This plant community dominates most of the Wilson Creek area and adjoining finger canyons. It can also be found in remnant patches along the southern site boundary, interspersed among orchard areas.

3.2.3 Riparian

There are two riparian habitats located on the property, Mulefat Thickets and Sycamore Woodland. Both plant communities are considered riparian habitat types and are subject to regulatory authority of the CDFW, under its Lake and Streambed Alteration Program.

Mulefat Thickets

Mulefat is an evergreen shrub that is a member of the sunflower family. It occurs in both seasonally or intermittently flooded habitats, and is variable depending on the amount of inundation and scouring. Dense stands typically form along riparian corridors and lake margins. The mulefat thickets within the site consist mainly of mulefat, but also include Fremont's cottonwood (*Populus fremontii*), golden currant (*Ribes aureum*), and blue elderberry (*Sambucus nigra* ssp. *caerulea*) as well as Brome grasses (*Bromus* spp.) and gum trees (*Eucalyptus* sp.). They occur in patches along Wilson Creek, mostly consisting of one to five plants.

Sycamore Woodland

Western sycamores (*Platanus racemosa*) are a winter-deciduous tree species that is commonly associated with larger floodplains and streams throughout California. Often associated with oak woodlands, this plant community is typically found in foothills of southern California and individual sycamores are often widely dispersed among other tree and shrub species within its habitat areas. Sycamores serve an important purpose as wildlife habitat, providing nesting trees for raptors and abundant leaf litter in their understory. Scattered sycamores occur along Wilson Creek, mostly consisting of one or two trees.

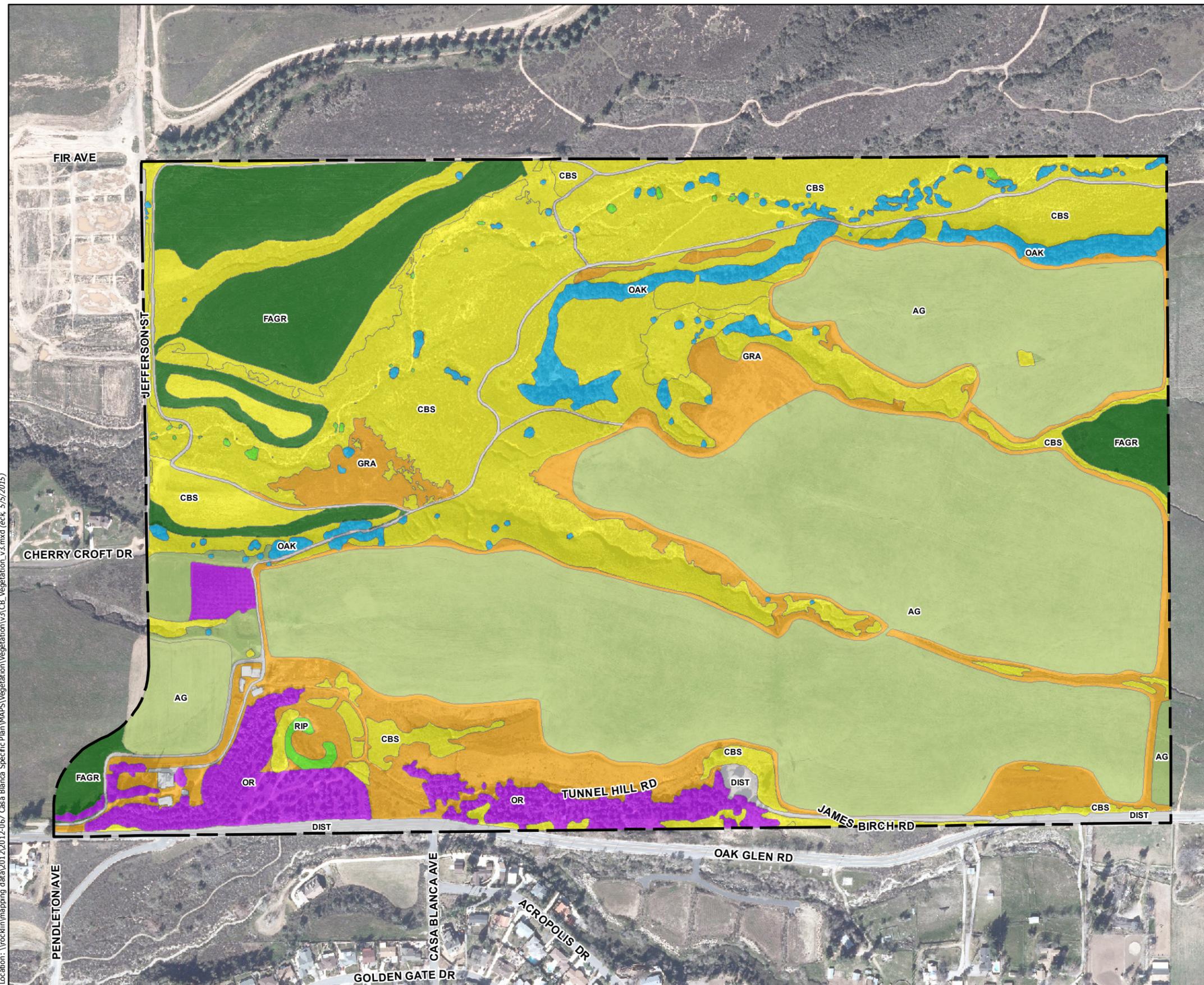
3.2.4 Oak Woodland

Oak woodlands are an evergreen plant community that is highly drought tolerant and fire resistant, occupying many of the southern California foothills. There are many species of oaks located in California. The site contains Tucker's oak (*Quercus john-tuckeri*), coast live oak and scrub oak (*Q. berberidifolia*). Tucker's oak dominates most of the oak woodland on the property and is a drought-resistant evergreen shrub that can grow from three to five meters in height and is found along the Transverse Mountain Range and the southern end of the Coast Ranges. Tucker's oak occurs in a variety of habitats including mountains, chaparral, desert-chaparral transition communities, pinyon-juniper woodland, and Great Basin sage. On the property, oak woodland is found along drainages and around otherwise disturbed and developed sites. Oak trees are protected by local Yucaipa ordinances.

3.2.5 Agriculture, Fallow Agriculture, Disturbed/Developed, and Orchard

Agriculture, Fallow Agriculture, Disturbed/Developed, and Orchard are found through most of the property's ridges outside of the Wilson Creek area. Areas mapped with these designations are either largely devoid of vegetation due to human development or are dominated by unnatural vegetation such as agricultural fields, lawns, and landscaping. In many cases, areas surrounding development show high amounts of non-native ruderal species. This cover type is generally represented by the agricultural areas, the orchards, and the small area of development around the Casa Blanca house. Orchards include mainly citrus and olive groves. The agricultural areas are primarily grains and other row crops.

**Figure 3.
Vegetation Communities**



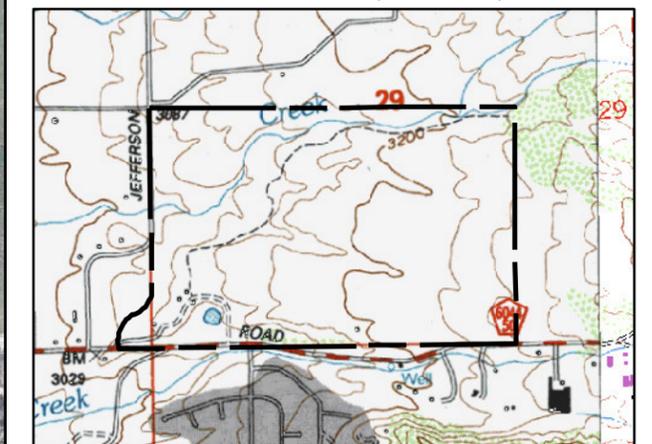
Map Features

Project Boundary

Vegetation Classification

- AG - Agriculture
- FAGR - Fallow Agriculture
- CBS - California Buckwheat Scrub
- GRA - Grassland
- RIP - Riparian
- OAK - Oak Woodland
- OR - Orchard
- DIST - Disturbed/Developed

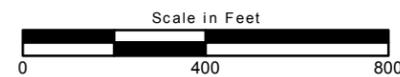
Base Data Source: USGS 7.5' Topo Quad, Yucaipa Ca.



1:24,000



Location: \\rockin\mapping_data\2012\067 Casa Blanca Specific Plan\WAPS\Vegetation\Vegetation\3\CB_Vegetation_v3.mxd (ecf, 5/5/2015)



3.3 Jurisdictional Delineation

Wilson Creek, which is joined by a smaller unnamed feature in the upper part of the canyon, is also mapped on existing USGS topographic maps as a blue-line stream. The unvegetated stream bottom of these two features will be considered to be jurisdictional to the USACE, CDFW, and RWQCB. The updated survey and mapping did not result in changes to these mapped features over what was recorded previously.

Vegetation within both Wilson Creek and its unnamed tributary consisted of scattered and sparse riparian vegetation along the banks and upper terraces. These vegetated riparian areas would be considered jurisdictional to the CDFW.

3.4 Soils

The property contains four soil types (Figure 4): Greenfield Sandy Loam (two to nine percent slopes), Saugus Sandy Loam (30 to 50 percent slopes), Tujunga Gravelly Loamy Sand (zero to nine percent slopes), and Soboba Gravelly Loamy Sand (zero to nine percent slopes). Mapping of the soils on the property remains the same as previously recorded.

Hydric soil types are those that may support wetlands or occur within stream systems. The Greenfield, Tujunga, and Soboba series soil types on the property all have hydric ratings when located within drainage ways, meaning they are potentially hydric. Of the three potentially hydric soil types, both the Tujunga and Soboba series are located near the delineated drainages on the property.

Figure 4.
NRCS Soils Classification

Map Features

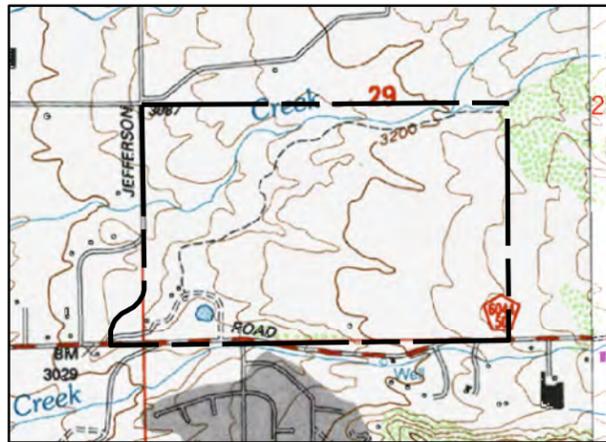
 Project Boundary

Series Number - Series Name

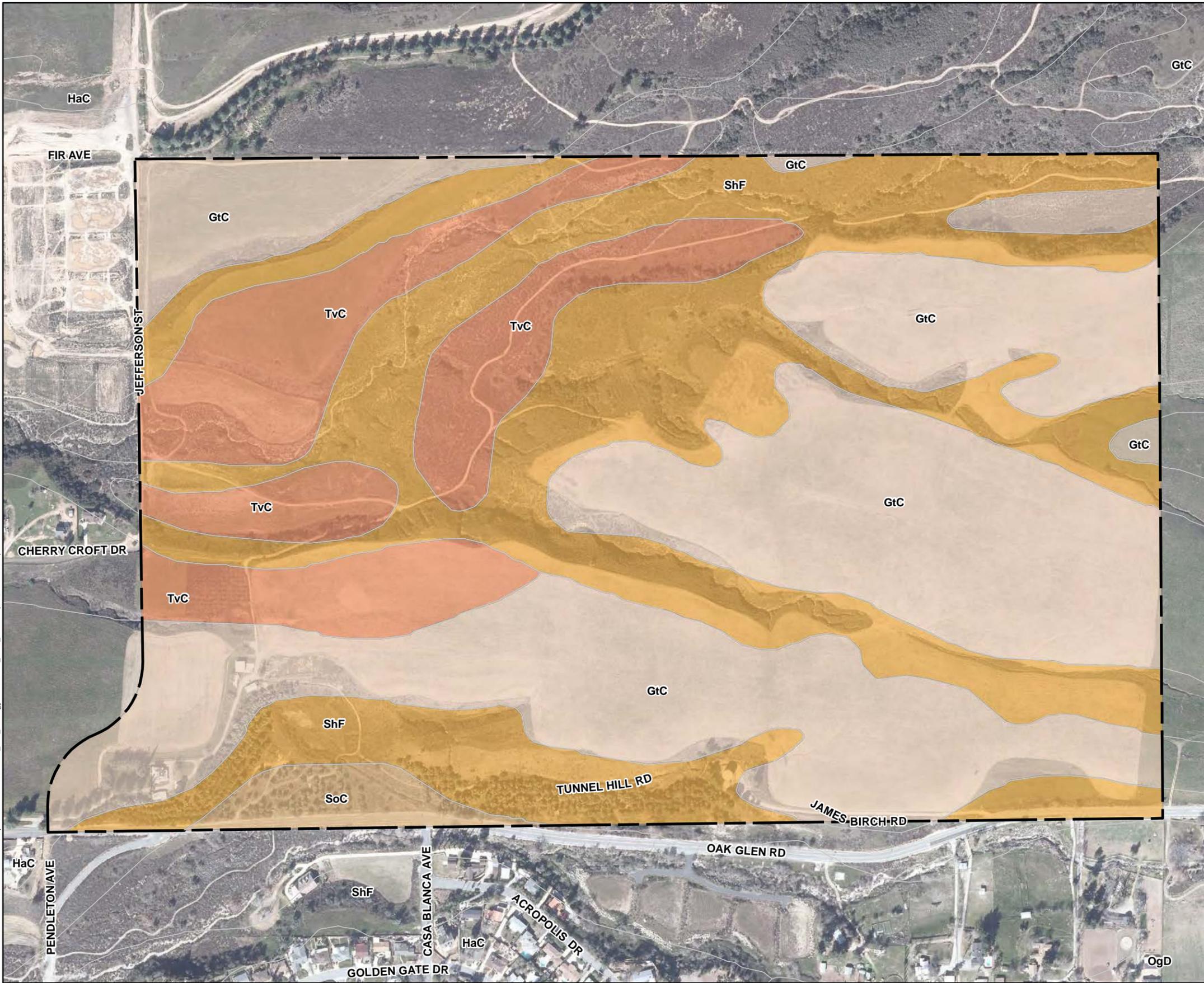
-  GtC - GREENFIELD SANDY LOAM, 2-9% SLOPES
-  ShF - SAUGUS SANDY LOAM, 30-50% SLOPES
-  SoC - SOBOBA GRAVELLY LOAMY SAND, 0-9% SLOPES
-  TvC - TUJUNGA GRAVELLY LOAMY SAND, 0-9% SLOPES

Natural Resources Conservation Service (NRCS)
Soil Survey Geographic (SSURGO) Database for
San Bernardino County, CA

Base Data Source: USGS 7.5' Topo Quad, Yucaipa Ca.



1:24,000



Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Soils_and_Geology\Soils\CBS\Soils_v2.mxd (ack. 7/24/2013)



3.5 Sensitive Plants

No special-status plant species were observed during the previous focused sensitive plant survey that was conducted, or during the updated biological assessment survey.

3.6 Sensitive Wildlife

No federal or state listed wildlife species were documented on the site during the surveys. Four sensitive species, Cooper's hawk (*Accipiter cooperii*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), and prairie falcon (*Falco mexicanus*), have been observed on the property previously. During this updated survey, both white-tailed kite and Cooper's hawk were observed hunting on the property. These species are described below.

Cooper's Hawk

Status: California Watch List

Cooper's hawks are found throughout most wooded portions of the state and occur most frequently in dense stands of live oak, riparian deciduous, or other forest habitats near water. The species has shown declines in breeding numbers in the last few decades. Although it does not receive protection as a formally listed species, its nests are protected from impact by provisions of the federal Migratory Bird Treaty Act (MBTA, USFWS 1918) and California Fish and Game (CFG) Code. They are expected to nest on the site during the breeding season, which occurs from March through August. Previously, one Cooper's hawk was observed flying over the property during the focused burrowing owl surveys and another one was observed flying around the northern portion of the property during the biological update.

Northern Harrier

Status: California Species of Special Concern

Northern harriers frequent meadows, grasslands, open rangelands, desert sinks, and freshwater emergent wetlands. They breed and forage in habitats that provide adequate vegetative cover, an abundance of suitable prey, and scattered hunting, plucking, and lookout perches such as shrubs or fence posts. The primary threat to the species is the loss and degradation of nesting and foraging habitat. Like the Cooper's hawk, this species' nesting areas are protected from impact by provisions of the federal MBTA and CFG Code. Previously, multiple northern harriers were observed flying and hunting over the property during the focused burrowing owl surveys. None were observed during the updated survey.

White-Tailed Kite

Status: California Species of Special Concern; Fully Protected

The white-tailed kite is a raptorial species of open habitat areas, including agricultural areas, across the western United States. The species declined sharply during the latter part of the 20th Century, but populations have rebounded in recent decades. Like the Cooper's hawk, this species' nesting areas are protected from impact by provisions of the federal MBTA and CFG Code. They are expected to nest on the site during the breeding season, which runs from February through August. During previous surveys, three individuals were observed flying over the property and another was observed within ornamental trees on the property. During the updated survey, a single individual was observed hunting in the central part of Wilson Creek on the property.

Prairie Falcon

Status: California Species of Special Concern

Falcons are high-level, raptorial predators that nest in inaccessible locations such as remote cliff faces or high building ledges. Prairie falcons will range for many miles to hunt prey such as mammals and birds. The species has been stable throughout most of its range, but is considered sensitive due to its restrictive nesting requirements. During previous surveys, an individual was observed hunting over the property. None were observed during the updated survey. Like the Cooper's hawk, this species' nesting areas are protected from impact by provisions of the federal MBTA and CFG Code. No nesting habitat (cliff faces) occurs on the property.

During previous focused burrowing owl surveys, no owls were observed but there was documented presence of potential burrows and available foraging habitat. The updated survey found that these habitat suitability conditions have not changed. The property supports no burrowing owls currently, but does contain potential habitat.

Migratory bird species are likely to nest within the trees and shrubs that occur throughout the site. All migratory bird species, including raptors, are protected from "take" pursuant to CFG Code Section 3503.5. Raptors and migratory birds are protected by the MBTA [MBTA 1918]. In the previous biological report it was noted that the oak woodland habitat and steep drainage walls on the site provide potential nesting habitat for several raptors including Cooper's hawk, white-tailed kite, great horned owl (*Bubo virginianus*), and red-tailed hawk (*Buteo jamaicensis*). Additional raptor nesting habitat occurs in other trees on the property, including landscape trees, and shrubs as well as structures. A pair of great-horned owls was previously observed nesting in a large drainage wall near the central portion of the property. During the updated biological assessment survey in 2015, these conclusions are confirmed.

During the updated biological assessment survey in 2015, several locations in existing structures were noted as potential habitat for bat species. Gaps in roof shingles, openings and other various cavities in the structures were observed. Bat species could occur within the old buildings and structures present on the property. Although no sensitive bat species are expected, there is still a potential for roosting areas on the property to serve as maternal colonies.

3.6 Wildlife Movement Corridors and Linkages

The Wilson Creek Estates property consists of a large block of undeveloped land that rests at the eastern edge of the majority of developed portions of Yucaipa. The majority of the site supports a continuous area of undeveloped land and supports free wildlife movement. Native habitats within Wilson Creek are also currently connected to large tracts of open land that currently surround the site on the north and east, as well as El Dorado Ranch Park to the east. Rural residential areas are located west and south of the property and are not as suitable for wildlife movement due to the development and human presence. The properties to the north and east of the project area have approved projects associated with them (Coy and Cherrycroft) that, once built, would eliminate the majority of these areas from contributing to the overall open space block associated with Wilson Creek Estates. El Dorado Ranch Park would continue

to provide wildlife habitat in the area after development of these projects. Wilson Creek Estates, as envisioned, would maintain an undeveloped, rural quality that would likely maintain wildlife use of the area.

Wilson Creek crosses the property and continues to the west through a narrow band surrounded by the more developed portions of Yucaipa. The creek alignment and undeveloped land associated with it narrows farther west of the property, from a width of about 700 feet just west of the property until it becomes no more than 100 feet wide where it stops just north of Yucaipa Boulevard. From that point the creek crosses under the road through a culvert and enters an area of rural residential lots. Due to the ever-narrowing width of this corridor through Yucaipa, and its termination in a developed area, it is not considered to be an effective wildlife corridor. Although wildlife originating from the Wilson Creek Estates property can continue to the west, there is no direct connection through to the other side of the developed portions of Yucaipa.

There is a "Wildlife Corridor" sign along Cherry Croft Drive near its intersection with Oak Glen Road. This sign was installed by the Yucaipa Animal Placement Society (YAPS) as a way to help the community co-exist with wildlife, and should not be treated as an official corridor for wildlife [YAPS 2011].

4.0 DISCUSSION AND RECOMMENDATIONS

In general, the recommendations provided in the previous biological assessment report remain the same. The measures are discussed below.

4.1 Oak Tree Ordinance

Oak trees that are protected by the City of Yucaipa occur on the site. An Oak Tree Removal Permit will be necessary prior to cutting, removing, encroaching into the protected zone, or relocating any oak tree meeting certain height and diameter requirements. Project-specific impacts can be determined based on an analysis of the project footprint once a final design has been approved. To determine which oak trees qualify for protection, a specific oak survey of the site would be needed to determine the distribution of oak trees that meet height and diameter requirements.

If oak tree impacts occur due to the project, then oak tree mitigation is recommended. In addition to permitting prior to cutting, removing, encroaching into the protected zone, mitigation could include relocating of any of these oak trees or replacement of lost oak trees with newly planted oak trees.

4.2 Burrowing Owl

A pre-construction burrowing owl survey is recommended within 14 days prior to ground-disturbing activities and conducted according to the guidelines in CDFW's staff report (CDFW 2012). If burrowing owls are observed during this timeframe, and could be affected by ground-disturbing activities, then the CDFW would need to be consulted and a mitigation plan would need to be developed. Mitigation would likely take the form of a passive relocation of the

burrowing owls on the property, along with habitat mitigation. Owl relocations can only take place from September to February, unless otherwise authorized by CDFW.

4.3 Migratory Birds, Raptors and Nesting Birds

Pre-construction nesting bird surveys are recommended if clearing is to occur during the bird breeding season (generally February 15 – August 31). If ground disturbance occurs outside the nesting season, no surveys would be required. The survey should be conducted by a qualified biologist and an appropriate buffer zone (typically 300 ft radius for songbirds, 500 ft radius for raptors) will need to be established around any active nests (containing eggs, chicks, or fledglings dependent on the nest). Construction activities would need to be avoided within the buffer zone until the nest is deemed to be no longer active by the biologist.

4.4 Bats

Due to the potential presence of maternal roost sites within the abandoned structures on the property, a bat habitat assessment is recommended prior to demolition of any structures. If bat species are found, it is recommended that they be relocated prior to demolition. Bat mitigation is generally dependent on the species and type of roost present, but it would involve coordination with CDFW and potentially a bat relocation or exclusion program prior to impact to bat roost areas.

5.0 CONCLUSIONS

Sensitive plant communities were observed within the property, including riparian habitats (mule fat thickets and sycamore woodlands). No sensitive plant species have been recorded within the property. The only sensitive wildlife species observed were northern harriers, Cooper's hawk, white-tailed kites, and prairie falcon. All of these species are of relatively low sensitivity status and would not pose a significant constraint for the property.

Several pre-construction surveys are recommended:

- A pre-construction burrowing owl survey is recommended no less than 14 days prior to the start of any ground-disturbing activities.
- Pre-construction surveys for nesting birds are recommended no less than 14 days prior to the start of any construction-related activities that may occur during the nesting season (February 15 to August 31).
- A pre-construction survey for bat species is recommended within 30 days prior to the start of demolition of structures to determine if maternity roosts are present and to determine bat distribution and the potential need for mitigation on the property.

6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the Project applicant or the applicant's representative and that I have no financial interest in the Project.

DATE: July 10, 2015

SIGNED: 
Mr. Scott Taylor

7.0 REFERENCES

- [Baldwin et. al. 2012] Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.
- [CDFG] California Department of Fish and Game
2000. Guidelines for assessing the effects of proposed projects on rare, threatened, and endangered plants and natural communities. (Revision of 1983 guidelines.) Sacramento, CA, 2 pp.
2012. Staff Report on Burrowing Owl Mitigation. (Revision of 1995 guidelines.) Sacramento, CA, 34 pp. March 7, 2012.
- [CDFW] California Department of Fish and Wildlife. 2015. California Natural Diversity Database. Biogeographic Data Branch. Rare Find 3.1.0. April 12, 2015.
- [CNPS] California Native Plant Society
2001. CNPS Botanical Survey Guidelines. Originally published December 9, 1983; Revised June 2, 2001.
2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed on April 12, 2015, at: <http://www.rareplants.cnps.org/>.
- [ECORP] Environmental Consulting Inc..
2012a. Cultural Resources Inventory and Evaluation for the Casa Blanca Specific Plan: APN: 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000 and 0321-082-15-000. Yucaipa, San Bernardino County, California. September 2012.
- 2012b. Biological Report: APN: 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000 and 0321-082-15-000. Yucaipa, San Bernardino County, California. September 2012.
- 2012c. Jurisdictional Delineation Report: APN: 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000 and 0321-082-15-000. Yucaipa, San Bernardino County, California. September 2012.
- [MBTA 1918] Migratory Bird Treaty Act (MTBA) of 1918. 16 U.S.C. §§703–712, July 3, 1918; as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986, and 1989.
- [NRCS] U.S. Department of Agriculture. 2012. Natural Resource Conservation Service Web Soil Survey. Accessed on September 5, 2012 at: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

[Sawyer, et. al. 2009] Sawyer, J.O., T. Keeler-Wolf, J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society. Sacramento, California.

[USFWS] United States Fish and Wildlife Service. 2002. General Rare Plant Survey Guidelines. Bakersfield, CA. 2 pp.

[The Weather Channel] Yucaipa, CA. 2012. Accessed on September 5, 2012 at: <http://www.weather.com/weather/wxclimatology/monthly/graph/92399>.

[YAPS 2011] Yucaipa Animal Placement Society. 2011. Mission and History. Accessed on July 23, 2013 at: <http://www.yaps.org/about/mission-and-history>.

Appendix A
Plant Compendium

VASCULAR PLANTS	
FERNS AND FERN ALLIES	
PTERIDACEAE	BRAKE FAMILY
<i>Pellaea mucronata</i>	Bird's-foot fern
GYMNOSPERMS	
CUPRESSACEAE	CYPRESS FAMILY
<i>Cupressus sempervirens*</i>	Italian Cypress
PINACEAE	PINE FAMILY
<i>Pinus sp.</i>	Pine
ANGIOSPERMS (DICOTYLEDONS)	
ANACARDIACEAE	SUMAC OR CASHEW FAMILY
<i>Rhus aromatica</i>	Skunkbrush
<i>Toxicodendron diversilobum</i>	Poison oak
APIACEAE	CARROT FAMILY
<i>Anthriscus caucalis</i>	bur-chervil
ASTERACEAE	SUNFLOWER FAMILY
<i>Agoseris retrorsa</i>	Spear-leaved agoseris
<i>Ambrosia acanthicarpa</i>	Annual bur-sage
<i>Ambrosia psilostachya</i>	Western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia douglasiana</i>	Mugwort
<i>Artemisia dracunculus</i>	Tarragon
<i>Baccharis salicifolia</i>	Mulefat
<i>Brickellia californica</i>	California brickellbush
<i>Centaurea melitensis*</i>	Tocalote
<i>Cirsium vulgare</i>	Bull thistle
<i>Corethrogyne filaginifolia</i>	cudweed aster
<i>Ericameria linearifolia</i>	interior goldenbush
<i>Gutierrezia californica</i>	California matchweed
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Lactuca serriola*</i>	prickly lettuce
<i>Lepidospartum squamatum</i>	scale-broom
<i>Matricaria discoidea *</i>	Pineapple weed
<i>Pseudognaphalium californicum</i>	California everlasting
<i>Senecio flaccidus</i>	shrubby butterweed
<i>Stephanomeria exigua</i>	small wreathplant
<i>Stephanomeria virgata</i>	twiggy wreathplant
<i>Tetradymia stenolepis</i>	horsebrush
<i>Uropappus lindleyi</i>	silver puffs
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia menziesii</i>	common fiddleneck
<i>Cryptantha sp.</i>	cryptantha
<i>Cryptantha intermedia</i>	common forget-me-not
BRASSICACEAE	MUSTARD FAMILY
<i>Boechea arcuata</i>	arching rockcress
<i>Brassica nigra*</i>	black mustard
<i>Descurainia pinnata</i>	western tansy-mustard
<i>Hirschfeldia incana*</i>	short-podded mustard
<i>Raphanus sativus*</i>	radish
<i>Sisymbrium irio*</i>	London rocket
CACTACEAE	CACTUS FAMILY
<i>Cylindropuntia acanthocarpa</i>	buckhorn cholla
<i>Opuntia phaeacantha</i>	brown-spined prickly pear
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY
<i>Lonicera sp.</i>	honeysuckle

<i>Lonicera subspicata</i>	southern honeysuckle
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Mexican elderberry
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Chenopodium album</i> *	lamb's quarters
<i>Salsola tragus</i> *	Russian thistle
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	wild morning glory
<i>Convolvulus arvensis</i> *	bindweed
CUCURBITACEAE	GOURD FAMILY
<i>Cucurbita palmata</i>	coyote melon
<i>Marah macrocarpus</i>	wild cucumber
CUSCUTACEAE	DODDER FAMILY
<i>Cuscuta californica</i>	California dodder
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce albomarginata</i>	rattlesnake weed
<i>Croton californicus</i>	California croton
<i>Croton setiger</i>	dove weed
FABACEAE	LEGUME FAMILY
<i>Acmispon glaber</i>	deerweed
<i>Lupinus</i> sp.	lupine
<i>Medicago polymorpha</i> *	bur clover
<i>Melilotus albus</i> *	white sweetclover
<i>Vicia sativa</i> *	spring vetch
<i>Vicia villosa</i> *	winter vetch
FAGACEAE	OAK FAMILY
<i>Quercus agrifolia</i>	coast live oak
<i>Quercus berberidifolia</i>	scrub oak
<i>Quercus john-tuckeri</i>	Tucker's oak
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
GROSSULARIACEAE	GOOSEBERRY FAMILY
<i>Ribes aureum</i>	golden currant
HYDROPHYLLACEAE	WATERLEAF FAMILY
<i>Eriodictyon trichocalyx</i>	hairy yerba santa
<i>Phacelia distans</i>	wild heliotrope
<i>Phacelia minor</i>	wild canterbury-bell
JUGLANDACEAE	WALNUT FAMILY
<i>Juglans regia</i> *	English walnut
LAMIACEAE	MINT FAMILY
<i>Lamium amplexicaule</i> *	giraffe head
<i>Marrubium vulgare</i> *	horehound
<i>Salvia apiana</i>	white sage
<i>Salvia columbariae</i>	chia sage
MALVACEAE	MALLOW FAMILY
<i>Sphaeralcea ambigua</i>	desert mallow
MELIACEAE	MAHOGONY FAMILY
<i>Melia azedarach</i> *	chinaberry tree
MYRTACEAE	MYRTLE FAMILY
<i>Eucalyptus</i> sp.	gum tree
OLEACEAE	OLIVE FAMILY
<i>Olea europaea</i> *	olive
ONAGRACEAE	EVENING PRIMROSE FAMILY
<i>Camissonia</i> sp.	camissonia
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy

PLATANACEAE	SYCAMORE FAMILY
<i>Platanus racemosa</i>	western sycamore
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i>	California buckwheat
PORTULACACEAE	PURSLANE FAMILY
<i>Calandrinia ciliata</i>	red maids
<i>Claytonia perfoliata</i>	miner's lettuce
RHAMNACEAE	BUCKTHORN FAMILY
<i>Ceanothus crassifolius</i>	hoary leaf ceanothus
<i>Ceanothus tomentosus</i>	woolly-leaved ceanothus
<i>Frangula californica</i>	California coffeeberry
ROSACEAE	ROSE FAMILY
<i>Adenostoma fasciculatum</i>	chamise
<i>Prunus fasciculata</i>	desert almond
SALICACEAE	WILLOW FAMILY
<i>Salix exigua</i>	narrow-leaved willow
SAXIFRAGACEAE	SAXIFRAGE FAMILY
<i>Lithophragma affine</i>	woodland star
SCROPHULARIACEAE	FIGWORT FAMILY
<i>Castilleja</i> sp.	paintbrush
<i>Keckiella cordifolia</i>	heart-leaved penstemon
<i>Verbascum thapsus</i> *	woolly mullein
SIMAROUBACEAE	QUASSIA FAMILY
<i>Ailanthus altissima</i> *	tree of heaven
SOLANACEAE	NIGHTSHADE FAMILY
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana glauca</i> *	tree tobacco
TAMARICACEAE	TAMARICK FAMILY
<i>Tamarix ramosissima</i> *	Mediterranean tamarisk
URTICACEAE	NETTLE FAMILY
<i>Urtica dioica</i> ssp. <i>holosericea</i>	giant creek nettle
VIOLACEAE	VIOLET FAMILY
<i>Viola pedunculata</i>	johnny-jump-up
VISCAEAE	MISTLETOE FAMILY
<i>Phoradendron serotinum</i> ssp. <i>tomentosum</i>	oak mistletoe
ANGIOSPERMS (MONOCOTYLEDONS)	
ARECACEAE	PALM FAMILY
<i>Washingtonia filifera</i>	California fan palm
<i>Washingtonia robusta</i> *	Mexican fan palm
IRIDACEAE	IRIS FAMILY
<i>Sisyrinchium bellum</i>	blue-eyed-grass
<i>Chlorogalum pomeridianum</i>	soap plant
LILIACEAE	LILY FAMILY
<i>Bloomeria crocea</i>	common goldenstar
<i>Hesperoyucca whipplei</i>	Our Lord's candle
POACEAE	GRASS FAMILY
<i>Avena fatua</i> *	wild oat
<i>Bromus diandrus</i> *	ripgut grass
<i>Bromus hordeaceus</i> *	soft chess
<i>Bromus madritensis</i> ssp. <i>rubens</i> *	foxtail chess
<i>Bromus tectorum</i> *	cheat grass
<i>Hordeum murinum</i> *	glaucous foxtail barley
<i>Hordeum vulgare</i> *	barley
<i>Polypogon monspeliensis</i> *	annual beard grass
* = Non-native	

Appendix B
Wildlife Compendium

Wildlife Species List	
Scientific name	Common name
INSECTS	
<i>Artogeia rapae</i>	cabbage white
<i>Colias eurytheme</i>	alfalfa sulfur
<i>Pepsis formosa</i>	tarantula hawk
<i>Pieris rapae</i>	common white
REPTILES	
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail
<i>Crotalus oreganus helleri</i>	southern pacific rattlesnake
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Sceloporus orcutti</i>	granite spiny lizard
<i>Uta stansburiana</i>	side-blotched lizard
BIRDS	
<i>Accipiter cooperii**</i>	Cooper's hawk
<i>Amazona sp.*</i>	parrot species
<i>Aphelocoma californica</i>	western scrub jay
<i>Baeolophus inornatus</i>	oak titmouse
<i>Bubo virginianus</i>	great horned owl
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Buteo lineatus</i>	red-shouldered hawk
<i>Callipepla californica</i>	California quail
<i>Calypte anna</i>	Anna's hummingbird
<i>Calypte costae</i>	Costa's hummingbird
<i>Carduelis psaltria</i>	lesser goldfinch
<i>Chamaea fasciata</i>	wrenit
<i>Circus cyaneus**</i>	northern harrier
<i>Colaptes auratus</i>	northern flicker
<i>Columba livia</i>	rock pigeon
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	common raven
<i>Elanus leucurus**</i>	white-tailed kite
<i>Falco mexicanus**</i>	prairie falcon
<i>Falco sparverius</i>	American kestrel
<i>Haemorhous mexicanus</i>	house finch
<i>Icterus cucullatus</i>	hooded oriole
<i>Junco hyemalis</i>	dark-eyed junco
<i>Larus sp.</i>	gull species
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Mimus polyglottos</i>	northern mockingbird
<i>Phainopepla nitens</i>	phainopepla
<i>Phalacrocorax auritus</i>	double-crested cormorant
<i>Picoides nuttallii</i>	Nuttall's woodpecker
<i>Pipilo maculatus</i>	spotted towhee
<i>Psaltriparus minimus</i>	bush tit

<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Setophaga coronata</i>	yellow-rumped warbler
<i>Sialia mexicana</i>	western bluebird
<i>Sturnella neglecta</i>	western meadowlark
<i>Sturnus vulgaris</i> *	European starling
<i>Tachycineta thalassina</i>	violet-green swallow
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Toxostoma redivivum</i>	California thrasher
<i>Troglodytes aedon</i>	house wren
<i>Turdus migratorius</i>	American robin
<i>Tyrannus verticalis</i>	western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Tyto alba</i>	barn owl
<i>Zenaida macroura</i>	mourning dove
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
MAMMALS	
<i>Canis latrans</i>	coyote
<i>Lepus californicus</i>	black-tailed jackrabbit
<i>Mephitis mephitis</i>	striped skunk
<i>Neotoma lepida</i>	wood rat
<i>Odocoileus virginianus</i>	white-tailed deer
<i>Spermophilus beecheyi</i>	California ground squirrel
<i>Sylvilagus audubonii</i>	desert cottontail

* Non-native species

** Special-status species

Special-Status Plant Potential for Occurrence

Scientific Name Common Name	Status		Flowering Period Elevation (meters)	Potential for Occurrence; Habitat
<i>Abronia villosa</i> var. <i>aurita</i> Chaparral sand-verbena	Fed: Ca: CNPS: BLM:	none none 1B.1 none	January- September 80- 1600	Assumed Absent ; Chaparral, Coastal Scrub Sandy Areas. Nearest known occurrence more than 10 miles away.
<i>Acanthoscyphus parishii</i> var. <i>parishii</i> Parish's oxytheca	Fed: Ca: CNPS: BLM:	none none 4.2 none	June-September 1220-2600	Assumed Absent ; Sandy or gravelly soils within Chaparral or Lower Montane Coniferous Forest. Outside of known range.
<i>Allium marvinii</i> Yucaipa onion	Fed: Ca: CNPS: BLM:	none none 1B.1 none	April-May 760-1065	Assumed Absent ; Chaparral. In Openings on Clay Soils. No habitat on the site but known occurrence within 5 miles of the site.
<i>Allium parishii</i> Parish's onion	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-May 900-1465	Assumed Absent ; Rocky within Joshua tree woodland, Mojavean desert scrub, or Pinyon and juniper woodland. No known habitat on the site.
<i>Androsace elongata</i> ssp. <i>acuta</i> California androsace	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-June 150-1200	Low ; Chaparral, Cismontane woodland, Coastal Scrub, Meadows and seeps, Pinyon and juniper woodland, and Valley and foothill grassland. Marginal habitat on the site and nearest known location is more than 5 miles away.
<i>Arabis parishii</i> Parish's rock cress	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-May 1770-2900	Assumed Absent ; Generally Found On Pebble Plains On Clay Soil W/Quartzite Cobbles; Sometimes On Limestone. Outside of known range.
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i> Rock sandwort	Fed: Ca: CNPS: BLM:	none none 2.3 none	July-August 1800-2600	Assumed Absent ; Subalpine Coniferous Forest, Upper Montane Coniferous Forest. Mesic, Sandy Sites. Outside of known range.
<i>Arenaria paludicola</i> Marsh sandwort	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-August 10-170	Assumed Absent ; Growing Up Through Dense Mats Of Typha, Juncus, Scirpus, Etc. In Freshwater Marsh. Outside of known range.
<i>Arenaria ursina</i> Big Bear Valley sandwort	Fed: Ca: CNPS: BLM:	THR none 1B.2 none	May-August 1750-2900	Assumed Absent ; Pebble Plain, Pinyon And Juniper Woodland. Mesic, Rocky Sites. Outside of known range.
<i>Astragalus lentiginosus</i> var. <i>borreganus</i> Borrogo milk-vetch	Fed: Ca: CNPS: BLM:	none none 4.3 none	February-May 30-320	Assumed Absent ; Sandy within Mojavean desert scrub or Sonoran desert scrub. Outside of known range.
<i>Astragalus lentiginosus</i> var. <i>coachellae</i> Coachella Valley milk-vetch	Fed: Ca: CNPS: BLM:	END none 1B.2 none	February-May 60-360	Assumed Absent ; Sonoran Desert Scrub. Sandy Flats, Washes, Outwash Fans, Sometimes On Dunes. Outside of known range.

<i>Astragalus lentiginosus</i> var. sierrae Big Bear Valley milk-vetch	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-August 1800-2600	Assumed Absent ; Stony Meadows And Open Pinewoods; Sandy And Gravelly Soils In A Variety Of Habitats. Outside of known range.
<i>Astragalus leucolobus</i> Big Bear Valley woollypod	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-July (425)1670-2515	Assumed Absent ; Dry Pine Woods, Pebble Plains, Gravelly Knolls Among Sagebrush, Or Stony Lake Shores In The Pine Belt. Outside of known range.
<i>Astragalus pachypus</i> var. jaegeri Jaeger's milk-vetch	Fed: Ca: CNPS: BLM:	none none 1B.1 none	December-June 365-915	Low ; Coastal Scrub, Chaparral, Valley And Foothill Grassland, Cismontane Woodland. Dry Ridges And Valleys. Marginal habitat on the site and nearest known occurrence more than 5 miles away.
<i>Atriplex coronata</i> var. notatior San Jacinto Valley crownscale	Fed: Ca: CNPS: BLM:	END none 1B.1 none	April-August 400-500	Assumed Absent ; Playas, Chenopod Scrub, Valley And Foothill Grassland, Vernal Pools. Dry, Alkaline Flats In The San Jacinto River Valley. Outside of known range.
<i>Berberis nevinii</i> Nevin's barberry	Fed: Ca: CNPS: BLM:	END END 1B.1 none	March-June 290-1575	Assumed Absent ; Multiple Habitats. On Steep, N-Facing Slopes Or In Low Grade Sandy Washes. No habitat on the site and nearest known occurrence more than 10 miles away.
<i>Botrychium crenulatum</i> Scalloped moonwort	Fed: Ca: CNPS: BLM:	none none 2.2 none	June-September 1500-2670	Assumed Absent ; Bogs And Fens, Meadows, Lower Montane Coniferous Forest, Freshwater Marsh. Moist Meadows, Near Creeks. Outside of known range.
<i>Calochortus palmeri</i> var. palmeri Palmer's mariposa lily	Fed: Ca: CNPS: BLM:	none none 1B.2 none	March-July 600-2245	Assumed Absent ; Meadows And Seeps, Chaparral, Lower Montane Coniferous Forest. Vernal Moist Places In Yellow-Pine Forest, Chaparral. No known habitat on the site and nearest known occurrence more than 10 miles away.
<i>Calochortus plummerae</i> Plummer's mariposa lily	Fed: Ca: CNPS: BLM:	none none 1B.2 none	March-July 90-1610	High ; Occurs On Rocky And Sandy Sites, Usually Of Granitic Or Alluvial Material. Can Be Very Common After Fire. Habitat on the site and known occurrence within 1 mile of the site.
<i>Calyptridium pygmaeum</i> Pygmy pussypaws	Fed: Ca: CNPS: BLM:	none none 1B.2 none	June-August 1980-3110	Assumed Absent ; Sandy or gravelly soils within Subalpine coniferous forest or Upper montane coniferous forest. Outside of known range.

<i>Carex occidentalis</i> Western sedge	Fed: Ca: CNPS: BLM:	none none 2.3 none	June-August 1645-3135	Assumed Absent ; Lower montane coniferous forest, Meadows and seeps. Outside of known range.
<i>Castilleja cinerea</i> Ash-gray indian paintbrush	Fed: Ca: CNPS: BLM:	THR none 1B.2 none	June-August 1800-2835	Assumed Absent ; Endemic To The San Bernardino Mountains, In Clay Openings; Often In Meadow Edges. Outside of known range.
<i>Castilleja lasiorhyncha</i> San Bernardino Mountain's owl-clover	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-August 1135-2390	Assumed Absent ; Meadows, Pebble Plain, Upper Montane Coniferous Forest, Chaparral. Stream And Meadow Margins. Outside of known range.
<i>Castilleja montigena</i> Heckard's paintbrush	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 1950-2800	Assumed Absent ; Lower montane coniferous forest, Pinyon and juniper woodland, or Upper montane coniferous forest. Outside of known range.
<i>Caulanthus simulans</i> Payson's jewel-flower	Fed: Ca: CNPS: BLM:	none none 4.2 none	February-June 90-2200	Low ; Sandy, granitic soil within Chaparral or Coastal scrub. Marginal habitat on the site and nearest known occurrence more than 10 miles from the site.
<i>Centromadia pungens</i> <i>ssp. laevis</i> Smooth tarplant	Fed: Ca: CNPS: BLM:	none none 1B.1 none	April-September 0-480	Assumed Absent ; Valley And Foothill Grassland, Chenopod Scrub, Meadows, Playas, Riparian Woodland. Alkali Meadow, Alkali Scrub. Outside of known range.
<i>Chloropyron maritimum</i> <i>ssp. maritimum</i> Salt marsh bird's beak	Fed: Ca: CNPS: BLM:	END END 1B.2 none	May-October 0-30	Assumed Absent ; Coastal dunes and Marshes and swamps (coastal salt). Outside of known range.
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	Fed: Ca: CNPS: BLM:	none none 3.2 none	April-June 40-1705	High ; Coastal Scrub, Chaparral. Dry, Sandy Soils. Habitat on the site and nearest known occurrence within 1 mile of the site.
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> White-bracted spineflower	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-June 300-1200	Assumed Absent ; Mojavean Desert Scrub, Pinyon-Juniper Woodland. No habitat on the site and nearest known occurrence within 5 miles of the site.
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> Peruvian dodder	Fed: Ca: CNPS: BLM:	none none 2.2 none	July-October 15-280	Assumed Absent ; Marshes and swamps (freshwater). San Bernardino county record presumed extirpated. Outside of known range.
<i>Deinandra paniculata</i> Paniculate tarplant	Fed: Ca: CNPS: BLM:	none none 4.2 none	April-November 25-940	Assumed Absent ; Usually vernal mesic areas within Coastal scrub, Valley and Foothill grassland, or Vernal pools. No habitat on the site and nearest known occurrence more than 5 miles away.

<i>Dodecahema leptoceras</i> Slender-horned spineflower	Fed: Ca: CNPS: BLM:	END END 1B.1 none	April-June 200-760	Assumed Absent ; Chaparral, Coastal Scrub Alluvial Fan Sage Scrub. Flood Deposited Terraces And Washes. Outside of known range and no habitat on the site, but known occurrence within 5 miles of the site.
<i>Drymocallis cuneifolia</i> var. cuneifolia Wedgeleaf woodbeauty	Fed: Ca: CNPS: BLM:	none none 1B.1 none	June-August 1800-2215	Assumed Absent ; Sometimes carbonate within Riparian scrub or Upper montane coniferous forest. Outside of known range.
<i>Eriastrum densifolium</i> ssp. sanctorum Santa Ana River woollystar	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-September 150-610	Assumed Absent ; Coastal Scrub, Chaparral. In Sandy Soils On River Floodplains Or Terraced Fluvial Deposits. Outside of known range.
<i>Eriogonum kennedyi</i> var. alpigenum Southern alpine buckwheat	Fed: Ca: CNPS: BLM:	none none 1B.3 none	July-September 2600-3500	Assumed Absent ; Alpine Boulder And Rock Fields, Subalpine Coniferous Forest. Dry Granitic Gravel. Outside of known range.
<i>Eriogonum kennedyi</i> var. austromontanum Southern mountain buckwheat	Fed: Ca: CNPS: BLM:	THR none 1B.2 none	July-September 1755-2375	Assumed Absent ; Usually Found In Pebble Plain Habitats. Outside of known range.
<i>Eriogonum</i> <i>microthecum</i> var. <i>lacus-ursi</i> Bear Lake buckwheat	Fed: Ca: CNPS: BLM:	none none 1B.1 none	July-August 2000-2100	Assumed Absent ; Great Basin Scrub, Lower Montane Coniferous Forest/Clay Outcrops. Outside of known range.
<i>Eriophyllum lanatum</i> var. obovatum Southern Sierra woolly sunflower	Fed: Ca: CNPS: BLM:	none none 1B.1 none	June-July 1114-2500	Assumed Absent ; Sandy loam within Lower montane coniferous forest or Upper montane coniferous forest. Outside of known range.
<i>Galium angustifolium</i> ssp. gabrielense San Antonio Canyon bedstraw	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-August 1200-2650	Assumed Absent ; Granitic, sandy, or rocky soil within Chaparral or Lower montane coniferous forest. Outside of known range.
<i>Galium johnstonii</i> Johnston's bedstraw	Fed: Ca: CNPS: BLM:	none none 4.3 none	June-July 1220-2300	Assumed Absent ; Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, or Riparian woodland. Outside of known range.
<i>Gilia leptantha</i> ssp. <i>leptantha</i> San Bernardino gilia	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-August 1500-2350	Assumed Absent ; Lower Montane Coniferous Forest. Sandy Or Gravelly Sites. Outside of known range, no habitat on the site, but known occurrence within 5 miles of the site.
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	Fed: Ca: CNPS: BLM:	none none 1A none	August-October 5-1675	Assumed Absent ; Marshes And Swamps Coastal Salt And Freshwater. Historical From Southern California. No habitat on the site but known occurrence within 5 miles of the site.

<i>Heuchera caespitosa</i> Urn-flowered alumroot	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 1155-2650	Assumed Absent ; Rocky areas within Cismontane woodland, Lower montane coniferous forest, Riparian forest (montane), or Upper montane coniferous forest. Outside of known range.
<i>Heuchera hirsutissima</i> Shaggy-haired alumroot	Fed: Ca: CNPS: BLM:	none none 1B.3 none	(May) June-July 1500-3500	Assumed Absent ; Subalpine Coniferous Forest, Upper Montane Coniferous Forest. Often Near Large Rocks. Outside of known range.
<i>Heuchera parishii</i> Parish's alumroot	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-August 1500-3800	Assumed Absent ; Lower Montane Conif. Forest, Subalpine Coniferous Forest, Upper Montane Coniferous Forest, Rocky Places. Outside of known range, not habitat on the site, but known occurrence within 5 miles of the site.
<i>Horkelia cuneata ssp. puberula</i> Mesa horkelia	Fed: Ca: CNPS: BLM:	none none 1B.1 none	February-July (September) 70-810	Assumed Absent ; Chaparral, Cismontane Woodland, Coastal Scrub. Sandy or Gravelly Sites. Outside of known range.
<i>Horkelia wilderae</i> Barton Flats horkelia	Fed: Ca: CNPS: BLM:	none none 1B.1 none	May-September 1675-2925	Assumed Absent ; Lower Montane Coniferous Forest, Upper Montane Coniferous Forest. Outside of known range.
<i>Hulsea vestita ssp. parryi</i> Parry's sunflower	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-August 1370-2895	Assumed Absent ; Granitic or carbonate, rocky, openings within Lower montane coniferous forest, pinyon and juniper woodland, and Upper montane coniferous forest. Outside of known range.
<i>Hulsea vestita ssp. pygmaea</i> Pygmy hulsea	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-October 2835-3900	Assumed Absent ; Alpine Boulder And Rock Field, Subalpine Coniferous Forest. Gravelly Sites; On Granite. Outside of known range.
<i>Imperata brevifolia</i> California satintail	Fed: Ca: CNPS: BLM:	none none 2.1 none	September-May 0-500	Assumed Absent ; Chaparral, Coastal scrub, Mojavean Desert Scrub, Meadows and Seepsoften Alkali, Riparian Scrub/Mesic. Outside of known range.
<i>Ivesia argyrocoma</i> Silver-haired ivesia	Fed: Ca: CNPS: BLM:	none none 1B.2 none	June-August 1480-2680	Assumed Absent ; Meadows, Pebble Plains, Upper Montane Coniferous Forest. In Pebble Plains And Meadows With Other Rare Plants. Outside of known range.
<i>Juglans californica</i> Southern California black walnut	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-August 50-900	Assumed Absent ; Alluvial soil within Chaparral, Cismontane woodland, or Coastal scrub. Outside of known range and none observed on the site.

<i>Juncus duranii</i> Duran's rush	Fed: Ca: CNPS: BLM:	none none 4.3 none	July-August 1768-2804	Assumed Absent ; Mesic areas within Lower montane coniferous forest, meadows and seeps, and Upper montane coniferous forest. Outside of known range.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	Fed: Ca: CNPS: BLM:	none none 1B.1 SEN	February-June 1-1400	Assumed Absent ; Coastal Salt Marshes, Playas, Valley And Foothill Grassland, Vernal Pools. No habitat on the site and nearest known occurrence more than 10 miles away.
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper-grass	Fed: Ca: CNPS: BLM:	none none 1B.2 none	January-July 1-945	Assumed Absent ; Chaparral, Coastal Scrub. Dry Soils, Shrubland. No known habitat on the site and nearest known occurrence more than 5 miles away.
<i>Lesquerella kingii</i> ssp. <i>bernardina</i> San Bernardino Mountains bladderpod	Fed: Ca: CNPS: BLM:	END none 1B.1 none	May-June 2030-2485	Assumed Absent ; Pinyon And Juniper Woodland, Lower Montane Coniferous Forest. Dry Sandy To Rocky Carbonate Soils. Outside of known range.
<i>Lewisia brachycalyx</i> Short-sepaled lewisia	Fed: Ca: CNPS: BLM:	none none 2.2 none	February-June 1400-2300	Assumed Absent ; Lower Montane Coniferous Forest, Meadows. Dry To Moist Meadows In Rich Loam. Outside of known range.
<i>Lilium humboldtii</i> var. <i>ocellatum</i> Ocellated Humboldt lily	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-August 30-1800	Assumed Absent ; Openings within Chaparral, Cismontane woodland, Coastal Scrub, Lower montane coniferous forest, or Riparian woodland. No habitat on the site.
<i>Lilium parryi</i> Lemon lily	Fed: Ca: CNPS: BLM:	none none 1B.2 none	July-August 1300-2790	Assumed Absent ; Wet, Mountainous Terrain; Gen. In Forested Areas; On Shady Edges Of Streams, In Open Boggy Meadows & Seeps. Outside of known range.
<i>Malacothamnus parishii</i> Parish's bush mallow	Fed: Ca: CNPS: BLM:	none none 1A none	June-July 485	Assumed Absent ; Chaparral, Coastal Sage Scrub. In A Wash. One Site Known. Outside of known range.
<i>Mentzelia tricusplis</i> Spiny-hair blazing star	Fed: Ca: CNPS: BLM:	none none 2.1 none	March-May 150-1280	Assumed Absent ; Sandy or gravelly soils on slopes and in washes, within Mojavean desert scrub. No habitat on the site and nearest known historical occurrence more than 5 miles away.
<i>Mimulus exiguus</i> San Bernardino Mountains monkeyflower	Fed: Ca: CNPS: BLM:	none none 1B.2 none	June-July 1800-2315	Assumed Absent ; Meadows And Seeps, Pebble Plains, Upper Montane Coniferous Forest. Clay Soils. Outside of known range.

<i>Mimulus johnstonii</i> Johnston's monkeyflower	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 975-2920	Assumed Absent ; Lower montane coniferous forest (scree, disturbed areas, rocky or gravelly, or roadside). Outside of known range and no habitat on the site.
<i>Mimulus purpureus</i> Purple monkey-flower	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-June 1900-2300	Assumed Absent ; Meadows And Seeps, Pebble Plain, Upper Montane Coniferous Forest. Dry Clay Or Gravelly Soils Under Jeffrey Pines. Outside of known range.
<i>Monardella macrantha</i> <i>ssp. hallii</i> Hall's monardella	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-August 695-2195	Moderate ; Broadleaved Upland Forest, Chaparral, Lower Montane Coniferous Forest, Cismontane Woodland, Grassland. Dry Slopes. Marginal habitat on the site and multiple occurrences within 5 miles of the site.
<i>Muhlenbergia californica</i> California muhly	Fed: Ca: CNPS: BLM:	none none 2.3 none	400-2000	Assumed Absent ; Near streams or seeps within Coastal sage, Chaparral, Lower montane coniferous forest, or Meadows. No habitat on the site and nearest known occurrence more than 5 miles away.
<i>Muilla coronata</i> Crowned muilla	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-May 765-1960	Assumed Absent ; Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, or Pinyon and juniper woodland. No known habitat on the site.
<i>Nama stenocarpum</i> Mud nama	Fed: Ca: CNPS: BLM:	none none 2.2 none	January-July 5-500	Assumed Absent ; Marshes And Swamps. Lake Shores, River Banks, Intermittently Wet Areas. Outside of known range.
<i>Navarretia peninsularis</i> Baja navarretia	Fed: Ca: CNPS: BLM:	none none 1B.2 none	Jun-August 1500-2425	Assumed Absent ; Lower Montane Coniferous Forest, Chaparral. Wet Areas In Open Forest. Outside of known range.
<i>Oxytropis oreophila</i> <i>var. oreophila</i> Mountain oxytrope	Fed: Ca: CNPS: BLM:	none none 2.3 none	June-September 3400-3800	Assumed Absent ; Alpine Boulder And Rock Field, Subalpine Coniferous Forest. Gravelly Or Rocky Sites. Outside of known range.
<i>Packera bernardina</i> San Bernardino ragwort	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-July 1800-2300	Assumed Absent ; Meadows And Seeps, Pebble Plains, Upper Montane Coniferous Forest. Mesic, Sometimes Alkaline Meadows, And Dry Rocky Slopes. Outside of known range.
<i>Packera ionophylla</i> Tehachapi ragwort	Fed: Ca: CNPS: BLM:	none none 4.3 none	June-July 1500-2700	Assumed Absent ; Granitic or rocky areas within Lower montane coniferous forest or upper montane coniferous forest. Outside of known range.

<i>Parnassia cirrata</i> var. <i>cirrata</i> San Bernardino grass-of-Parnassus	Fed: Ca: CNPS: BLM:	none none 1B.3 none	August-September 1250-2440	Assumed Absent ; Mesic, streamsides, or sometime calcareous within Lower montane coniferous forest, Meadows and seeps, and Upper montane coniferous forest. Outside of known range.
<i>Perideridia parishii</i> ssp. <i>parishii</i> Parish's yampah	Fed: Ca: CNPS: BLM:	none none 2.2 none	June-August 1390-3000	Assumed Absent ; Lower Montane Coniferous Forest, Meadows, Upper Montane Coniferous Forest. Damp Meadows Or Along Streambeds. Outside of known range.
<i>Phacella mohanvesis</i> Mojave phacelia	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-August 1400-2500	Assumed Absent ; Sandy or gravelly within Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, and Pinyon and juniper woodland. Outside of known range.
<i>Phlox dolichantha</i> Big Bear Valley phlox	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-July 2000-2970	Assumed Absent ; Pebble Plains, Upper Montane Coniferous Forest. Sloping Hillside. Outside of known range.
<i>Pickeringia montana</i> var. <i>tomentosa</i> Woolly chaparral-pea	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 0-1700	Assumed Absent ; Gabbroic, granitic, or clay soils within Chaparral. No habitat on the site and nearest known occurrence more than 5 miles away.
<i>Piperia leptopetala</i> Narrow-petaled rein orchid	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-July 380-2225	Assumed Absent ; Cismontane woodland, Lower montane coniferous forest, or Upper montane coniferous forest. No habitat on the site.
<i>Poa atropurpurea</i> San Bernardino blue grass	Fed: Ca: CNPS: BLM:	END none 1B.2 none	April-August 1350-2455	Assumed Absent ; Meadows And Seeps. Mesic Meadows Of Open Pine Forests And Grassy Slopes, Loamy Alluvial To Sandy Loam Soil. Outside of known range.
<i>Pyrrocoma uniflora</i> var. <i>gossypina</i> Bear Valley pyrrocoma	Fed: Ca: CNPS: BLM:	none none 1B.2 none	July-September 1600-2300	Assumed Absent ; Pebble Plain, Meadows And Seeps. Meadows, Meadow Edges, And Along Streams In Or Near Pebble Plain Habitat. Outside of known range.
<i>Ribes divaricatum</i> var. <i>parishii</i> Parish's gooseberry	Fed: Ca: CNPS: BLM:	none none 1B.1 none	February-April 60-305	Assumed Absent ; Riparian Woodland. Salix Swales In Riparian Habitats. Outside of known range.
<i>Rupertia rigida</i> Parish's rupertia	Fed: Ca: CNPS: BLM:	none none 4.3 none	June-August 700-2500	Assumed Absent ; Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Valley and foothill grassland. No habitat on the site.

<i>Sedum niveum</i> Davidson's stonecrop	Fed: Ca: CNPS: BLM:	none none 4.2 none	June-August 2075-3000	Assumed Absent ; Rocky areas within Lower montane coniferous forest, Subalpine coniferous forest, and Upper montane coniferous forest. Outside of known range.
<i>Senecio astephanus</i> San Gabriel ragwort	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-July 400-1500	Assumed Absent ; Rocky slopes within Coastal bluff scrub or Chaparral. No habitat on the site.
<i>Sidalcea hickmanii</i> ssp. <i>parishii</i> Parish's checkerbloom	Fed: Ca: CNPS: BLM:	CAN RAR 1B.2 none	June-August 1000-2135	Assumed Absent ; Chaparral, Lower Montane Coniferous Forest. Disturbed areas on dry, rocky slopes. No habitat on the site and nearest known occurrence within 5 miles of the site.
<i>Sidalcea pedata</i> Bird-foot checkerbloom	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-August 1600-2500	Assumed Absent ; Meadows And Seeps, Pebble Plains. Vernally Mesic Sites In Meadows Or Pebble Plains. Outside of known range.
<i>Sidotheca caryophylloides</i>	Fed: Ca: CNPS: BLM:	none none 4.3 none	July-September 1114-2600	Assumed Absent ; Sandy areas within Lower montane coniferous forest. Outside of known range and not habitat on the site.
<i>Streptanthus bernardinus</i> Laguna Mountains jewel-flower	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 670-2500	Assumed Absent ; Chaparral or Lower montane coniferous forest. No habitat on the site and nearest known occurrence more than 10 miles away.
<i>Streptanthus campestris</i> Southern jewel-flower	Fed: Ca: CNPS: BLM:	none none 1B.3 none	May-July 600-2790	Assumed Absent ; Chaparral, Lower Montane Coniferous Forest, Pinyon-Juniper Woodland. Open, Rocky Areas. No habitat on the site and nearest known occurrence less than 5 miles away.
<i>Symphotrichum defoliatum</i> San Bernardino aster	Fed: Ca: CNPS: BLM:	none none 1B.2 none	July-November 2-2040	Assumed Absent ; Meadows, Seeps, Marshes And Swamps, Coastal Scrub, Cismontane Woodland, Lower Montane Coniferous Forest. No habitat on the site and nearest known occurrence less than 5 miles of the site.
<i>Taraxacum californicum</i> California dandelion	Fed: Ca: CNPS: BLM:	END none 1B.2 none	May-August 1620-2800	Assumed Absent ; Meadows And Seeps. Mesic Meadows, Usually Free Of Taller Vegetation. Outside of known range.
<i>Thelypodium stenopetalum</i> Slender-petaled thelypodium	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-September 1900-2245	Assumed Absent ; Meadows And Seeps, Pebble Plains. Seasonally Moist Alkaline Clay Soils; Associated With Seeps And Springs In The Pebble Plains. Outside of known range.

<p><i>Thelypteris puberula</i> <i>var. sonorensis</i> Sonoran maiden fern</p>	<p>Fed: Ca: CNPS: BLM:</p>	<p>none none 2.2 none</p>	<p>January- September 50-550</p>	<p>Assumed Absent; Meadows And Seeps. Along Streams, Seepage Areas. Outside of known range.</p>
<p><i>Trichocoronis wrightii</i> <i>var. wrightii</i> Wright's trichocoronis</p>	<p>Fed: Ca: CNPS: BLM:</p>	<p>none none 2.1 none</p>	<p>May-September 5-435</p>	<p>Assumed Absent; Marshes And Swamps, Riparian Forest, Meadows And Seeps, Vernal Pools. Mud Flats Of Vernal Lakes, Drying River Beds. Outside of known range.</p>
<p>Federal Designations (Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS], Bureau of Land Management [BLM]) END: Federally listed, endangered THR: Federally listed, threatened SS: BLM sensitive species</p>				
<p>State Designations: (California Endangered Species Act, California Department of Fish and Wildlife [CDFW], California Native Plant Society [CNPS]) END: State-listed, endangered THR: State-listed, threatened FP: State-fully protected SSC: Species of Special Concern</p>				
<p>CNPS Ranking 1A: Presumed extinct 1B: Rare, threatened, or endangered in California and elsewhere 2: Rare, threatened, or endangered in California, but more common elsewhere 3: Review list of plants requiring more study 4: Plants of limited distribution watch list CNPS Threat Code 0.1: Seriously threatened in California 0.2: Fairly threatened in California 0.3: Not very threatened in California</p>				
<p>Sources: California Natural Diversity Data Base (CDFW) and California Native Plant Society Electronic Inventory (CNPS), Beaumont, Big Bear Lake, El Casco, Forest Falls, Harrison Mountain, Keller Peak, Redlands, Sunnymead, and Yucaipa 7.5 minute USGS quads.</p>				

Special-Status Wildlife Potential for Occurrence

Scientific Name Common Name	Status		Potential for Occurrence; Habitat
INVERTEBRATES			
<i>Carolella busckana</i> Busck's gallmoth	Fed: Ca: BLM: FS:	none none none none	Assumed Absent ; Found in coastal sand dune habitat.
<i>Euchloe hyantis andrewsi</i> Andrew's marble butterfly	Fed: Ca: BLM: FS:	none none none none	Low ; Inhabits shrubland and chaparral habitats in host plants <i>Plantago erecta</i> and <i>Plantago hookeriana californica</i> .
<i>Halictus harmonius</i> Harmonious sweat bee	Fed: Ca: BLM: FS:	none SC none none	Moderate ; the property has small patches of native shrubs that may be suitable for this species, and is within the insect's elevation range (0-7,000 ft.)
FISH			
<i>Rhinichthys osculus ssp. 3</i> Santa Ana speckled dace	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Lives in permanent flowing streams in headwaters of the Santa Ana and San Gabriel Rivers.
<i>Catostomus santaanae</i> Santa Ana Sucker	Fed: Ca: BLM: FS:	THR CSC SS S	Assumed Absent ; Spawns in riffles, usually in coarse gravel bottomed areas of the Colorado River bordering California.
AMPHIBIANS			
<i>Rana aurora draytonii</i> California red-legged frog	Fed: Ca: BLM: FS:	THR CSC none none	Assumed Absent ; Found in lowlands and foothills in or near deep permanent water sources with dense or shrubby riparian vegetation.
<i>Rana muscosa</i> mountain yellow-legged frog	Fed: Ca: BLM: FS:	END CSC none S	Assumed Absent ; Found near permanent sources of water in the San Gabriel, San Jacinto and San Bernardino Mountains.
<i>Scaphiopus hammondi</i> Western spadefoot toad	Fed: Ca: BLM: FS:	none CSC SS none	Low ; Occurs in grassland, scrub, chaparral with nearby vernal pools or other seasonal waters for breeding.
REPTILES			
<i>Phrynosoma coronatum blainvillei</i> Coast (San Diego) horned lizard	Fed: Ca: BLM: FS:	none CSC none S	Moderate ; Occurs in open scrub and other open areas with ample ant prey base.
<i>Aspidoscelis hyperythra beldingi</i> Belding's orange-throated whiptail	Fed: Ca: BLM: FS:	none CSC none none	Low ; Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks.
<i>Aspidoscelis tigris stejnegeri</i> coastal western whiptail	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Found in deserts and semiarid areas with sparse vegetation and open areas with firm, sandy, or rocky soil. Also found in woodland and riparian areas.

<i>Anniella pulchra pulchra</i> silvery legless lizard	Fed: Ca: BLM: FS:	none CSC none S	Low ; Found in moist, sandy or loamy soils with sparse vegetation.
<i>Charina umbratica</i> southern rubber boa	Fed: Ca: BLM: FS:	none THR none S	Assumed Absent ; Occurs in a variety of montane forest habitats within the vicinity of streams or wet meadows in the San Jacinto and San Bernardino Mountains.
<i>Charina trivirgata</i> rosy boa	Fed: Ca: BLM: FS:	none none SS S	Low ; Occurs in desert and chaparral habitats with moderate to dense vegetation.
<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	Fed: Ca: BLM: FS:	none none none S	Moderate ; Found in open, rocky areas in moist microhabitats near intermittent streams.
<i>Lampropeltis zonata (parvirubra)</i> California mountain kingsnake (San Bernardino population)	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Found in a variety of montane habitats in the San Bernardino Mountains.
<i>Thamnophis hammondi</i> two-striped garter snake	Fed: Ca: BLM: FS:	none CSC SS S	Assumed Absent ; Occurs in or near permanent water sources in elevations up to 2,134 meters (7,000') amsl.
<i>Crotalus ruber ruber</i> northern red-diamond rattlesnake	Fed: Ca: BLM: FS:	none CSC none none	Low ; Occurs in chaparral, woodland, grassland, and desert areas in rocky areas with dense vegetation. Requires rodent burrows and/or cracks in rocks for cover.
BIRDS			
<i>Accipiter cooperii</i> Cooper's hawk	Fed: Ca: BLM: FS:	none CSC none none	Observed ; Nests in woodlands, typically in riparian areas and oaks.
<i>Buteo regalis</i> Ferruginous hawk	Fed: Ca: BLM: FS:	none CSC SS none	Low ; Found in prairie, grassland, forest and desert habitats; nests along streams or on steep slopes.
<i>Circus cyaneus</i> northern harrier	Fed: Ca: BLM: FS:	none CSC none none	Observed ; Found in open areas near marshes, fields and prairies.
<i>Elanus leucurus</i> white-tailed kite (nesting)	Fed: Ca: BLM: FS:	none FP none none	Observed ; Nests in trees near marshes or other sources of water in grassland, cropland and woodland-hardwood habitats.
<i>Eremophila alpestris actia</i> California horned lark	Fed: Ca: BLM: FS:	none CSC none none	High ; Occurs in short-grass prairie, open fallow grain fields, and alkali flats in coastal regions from Sonoma to San Diego and east to valley foothills.

<i>Falco mexicanus</i> Prairie falcon	Fed: Ca: BLM: FS:	none CSC none none	Observed ; Hunts in open habitats within the western United States, including grasslands, open desert, open scrub, and agricultural areas. Nests on remote cliff faces.
<i>Progne subis</i> purple martin	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Inhabits woodland and low elevation coniferous forests; nests in old woodpecker cavities.
<i>Cypseloides niger</i> black swift	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Found on cliffs adjacent to or behind waterfalls in the San Bernardino and San Jacinto Mountains.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo (nesting)	Fed: Ca: BLM: FS:	FC END None S	Assumed Absent ; Prefers lower, flood-bottoms of larger river-systems with willows, cottonwoods, and dense understory of nettle, wild grape, or blackberry.
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Occurs on steep, dry hillsides in scrub and chaparral habitats.
<i>Amphispiza belli belli</i> Bell's sage sparrow	Fed: Ca: BLM: FS:	none CSC none none	High ; Occurs in chaparral habitat with dense stands of chamise.
<i>Carduelis lawrencei</i> Lawrence's goldfinch	Fed: Ca: BLM: FS:	none none none none	High ; Nests in open oak woodland and other arid woodland and chaparral habitats near water. Feeds in nearby herbaceous habitats.
<i>Agelaius tricolor</i> tri-colored blackbird (nesting colony)	Fed: Ca: BLM: FS:	none CSC SS none	Assumed Absent ; A highly colonial species. Occurs in wetlands with reeds for nesting.
<i>Lanius ludovicianus</i> loggerhead shrike (nesting)	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Inhabits large, open areas conducive to hunting. Nests in dense brush and shrubs.
<i>Dendroica petechia brewsteri</i> yellow warbler	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Prefers to nest in willows, cottonwoods, aspens and other trees in riparian areas.
<i>Icteria virens</i> yellow-breasted chat (nesting)	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Nests in riparian thickets of willows and other brushy tangles along water courses.
<i>Athene cunicularia</i> burrowing owl (burrow sites)	Fed: Ca: BLM: FS:	none CSC SS none	Moderate ; Associated with low-lying vegetation, open scrub, grassland, and agricultural habitats.
<i>Polioptila californica californica</i> coastal California gnatcatcher	Fed: Ca: BLM: FS:	THR CSC none none	Assumed Absent ; Occurs in coastal sage scrub below 2,500' from Ventura to Baja California.

<i>Plegadis chihi</i> white-faced ibis	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Found in shallow freshwater marshes with dense tule thickets for nesting.
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	Fed: Ca: BLM: FS:	END END none none	Assumed Absent ; Occurs as summer resident in extensive thickets of low dense willows on the edges of wet meadows, ponds, backwaters, and creeks.
<i>Vireo bellii pusillus</i> least Bell's vireo	Fed: Ca: BLM: FS:	END END none none	Assumed Absent ; Nests in low riparian habitat in the vicinity of water or dry river bottoms below 609 meters (2,000') amsl.
MAMMALS			
<i>Antrozous pallidus</i> pallid bat	Fed: Ca: BLM: FS:	none CSC SS S	Low ; Roosts in dry, open habitats. Occurs in desert, grasslands, shrublands, woodlands and forests.
<i>Lasiurus xanthinus</i> western yellow bat	Fed: Ca: BLM: FS:	none none none none	Assumed Absent ; Roosts in palm trees in foothill riparian, desert wash and palm oasis habitats with access to water for foraging.
<i>Eumops perotis californicus</i> western mastiff bat	Fed: Ca: BLM: FS:	none CSC SS none	Low ; Roosts in crevices of high cliffs and trees in open, arid and semi-arid habitats.
<i>Nyctinomops femorosaccus</i> pocketed free-tailed bat	Fed: Ca: BLM: FS:	none CSC none none	Low ; Found in pine-juniper woodlands, desert scrub and palm oasis habitats in southern California.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	Fed: Ca: BLM: FS:	none CSC none none	High ; Found in coastal sage scrub habitats in southern California.
<i>Glaucomys sabrinus californicus</i> San Bernardino flying squirrel	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Found only in the San Bernardino Mountains in Jeffery pine/white fir mixed forests.
<i>Neotamias speciosus speciosus</i> Lodgepole chipmunk	Fed: Ca: BLM: FS:	none none none none	Assumed Absent ; Summits of isolated Piute, San Bernardino and San Jacinto Mountains. Usually found in open canopy forests, especially lodgepole pine forest.
<i>Chaetodipus californicus femoralis</i> Dulzura pocket mouse	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Found in coastal scrub, chaparral and grassland habitats.
<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	Fed: Ca: BLM: FS:	none CSC none none	Low ; Found in sandy, herbaceous areas occurring in desert wash, desert scrub and desert succulent shrub habitats.

<i>Dipodomys merriami parvus</i> San Bernardino kangaroo rat	Fed: Ca: BLM: FS:	END CSC none none	Assumed Absent ; Occurs in alluvial scrub habitat with sandy soils for burrowing.
<i>Dipodomys stephensi</i> Stephen's kangaroo rat	Fed: Ca: BLM: FS:	END THR none none	Low ; Found in annual and perennial grasslands, preferring buckwheat, chamise, brome grass and filaree.
<i>Perognathus alticolus alticolus</i> San Bernardino white-eared pocket mouse	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Historically found in open pine forests, grassy flats and pinyon-juniper woodland habitats.
<i>Perognathus longimembris brevinasus</i> Los Angeles pocket mouse	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Associated with sandy washes, scrub, and grasslands.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	Fed: Ca: BLM: FS:	none CSC none none	Low ; Occurs in scrub with dense canopies and rocky cliffs and slopes.
<i>Onychomys torridus ramona</i> southern grasshopper mouse	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Inhabits desert areas, particularly scrub habitats with moderate shrub cover and friable soils for digging. Dependant on arthropod prey.
<i>Taxidea taxus</i> American badger	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Associated with open stages of dry scrub, forest, and herbaceous habitats. Requires sufficient food, friable soils, and open uncultivated ground.
Federal Designations (Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS], Bureau of Land Management [BLM], Unites States Forest Service [FS]) END: Federally listed, endangered THR: Federally listed, threatened SS: BLM sensitive species			
State Designations: (California Endangered Species Act, California Department of Fish and Game [CDFG], California Native Plant Society [CNPS]) END: State-listed, endangered THR: State-listed, threatened FP: State-fully protected SSC: Species of Special Concern			
Sources: California Natural Diversity Data Base (CDFG) and California Native Plant Society Electronic Inventory (CNPS), Beaumont, Big Bear Lake, El Casco, Forest Falls, Harrison Mountain, Keller Peak, Redlands, Sunnymead, and Yucaipa 7.5 minute USGS quads.			

Appendix E

Representative Photographs



Photo 1. Vegetation community – Annual brome grassland



Photo 2. Vegetation community – California Buckwheat Scrub



Photo 3. Vegetation community – Sparse Mulefat Thickets; scattered annual grassland and California buckwheat habitats around and between mulefat



Photo 4. Vegetation Communities – Oak Woodland and California Buckwheat Scrub



Photo 5. Vegetation Community – Agriculture, Fallow Agriculture in the back, and Annual Grassland to the right



Photo 6. Vegetation Community – Disturbed/Developed



Photo 7. Vegetation Community – Agriculture and Open Orchard



Photo 8. Vegetation Community – Orchard



Photo 9. Pocket of California Buckwheat Scrub within active Agriculture field



Photo 10. Potential Burrowing Owl Burrows – likely a coyote den



Photo 11. Potential Burrowing Owl Burrow - pipe

Biological Resource Assessment,
Focused Rare Plant Survey, and
Burrowing Owl Survey Results for the
Casa Blanca Specific Plan

City of Yucaipa
San Bernardino County, California

Submitted to:

Meridian Land Development Company
Jonathan Weldy
President
19153 Town Center Drive
Apple Valley, California 92380

Submitted by:



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

215 North Fifth Street
Redlands, CA 92374

August 2013

Biological Resource Assessment, Focused
Rare Plant Survey, and Burrowing Owl Survey Results

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1.0 INTRODUCTION

ECORP Consulting, Inc. (ECORP) conducted a biological resource assessment, focused rare plant survey, and protocol breeding-season burrowing owl survey of approximately 240 acres within the Casa Blanca Specific Plan property (property) in the City of Yucaipa, San Bernardino County, California. The property includes Assessor Parcel Numbers 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000, and 0321-082-15-0000. The property is located at 36104 Oak Glen Road, on an historic ranch site which supports residential and agricultural buildings and features dating from 1882 [ECORP 2012a].

The purpose of the assessment, rare plant survey, and burrowing owl survey was to collect information on the biological resources present within the site and to determine any potential biological constraints to site construction according to legislation from the California Environmental Quality Act (CEQA), California Department of Fish and Game (CDFG) Code, the Federal Migratory Bird Treaty Act (MBTA), local ordinances, and other applicable regulations. The assessment included a general characterization, mapping of vegetation communities, a general inventory of plant and wildlife species, an analysis of the potential for special-status plants and animals to occur on the Project, a burrowing owl protocol survey, and a focused rare plant survey. A jurisdictional delineation report is provided under separate cover [ECORP 2012b].

1.1 Project Location

The Project site is located on a property in the northeastern portion of the City of Yucaipa, San Bernardino County, California (Figure 1). It is approximately four miles north of the Interstate 10 freeway. The property is bound by Fir Avenue to the north, Oak Glen Road to the south, Jefferson Street and Cherry Croft Drive to the west, and an undefined north-south line one mile east of Jefferson Street. The property can be found within the southern half of Section 29 and the southeast quarter of the southeast quarter of Section 30, in Township 1 South, Range 1 West, San Bernardino Base Meridian of the U.S. Geological Survey (USGS) Yucaipa 7.5-minute topographic quadrangle (Figure 2).

1.2 Project Description

The Meridian Land Development Company is proposing to build residential development on four land parcels. Details of the Project have not been determined. The data collected in this report will create a biological profile for the property and characterize potential biological constraints of the properties, including habitats, plant and wildlife species, and drainage features.

1.3 Regional Setting

The City of Yucaipa hosts a population of more than 50,000 full-time residents, with an average elevation of about 2,600 feet and a climate typified by about 13.5 inches of precipitation annually. Temperatures in the Yucaipa area usually range from 40° Fahrenheit (F) in the winter to 97° F in the summer. The climate in this part of San Bernardino County tends to be warm, but temperatures can swing from 25 to 33 degrees daily. The warmest month is August and the

coolest month is January [The Weather Channel 2012]. Yucaipa is largely residential with existing one-unit-per-acre zoning.

Yucaipa is located approximately 55 miles east of Los Angeles and 15 miles east of San Bernardino. The city is located along the southern foot of the San Bernardino Mountains and west of the San Geronio Pass along Interstate 10. As a suburb of the greater Los Angeles area, it is an area used by both commuters and by weekend vacationers. The property is located within the Yucaipa Creek Watershed, a watershed of approximately 67 square miles, which ultimately leads to the Santa Ana River Watershed.

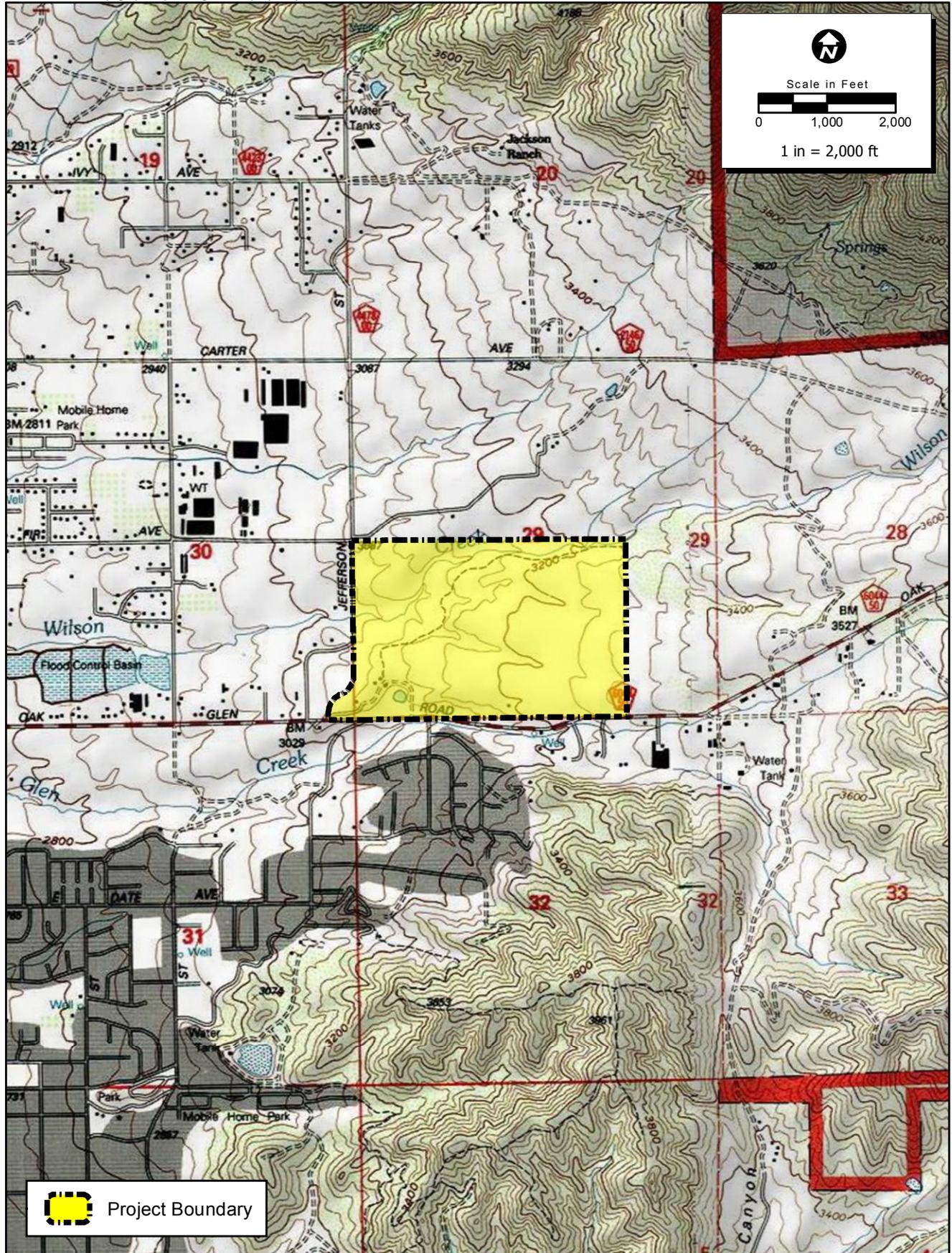
Local topography consists of a hilly landscape. The property ranges in elevation between approximately 3,000 feet (ft) (914 meters (m)) above mean sea level (msl) in the southwest section to 3,460 ft (1,055 m) above msl in the northeast. Drainage tends Wilson Creek, which flows southwest through the site. Vegetation within the site consists mostly of California buckwheat (*Eriogonum fasciculatum*) scrub, agriculture, orchards, and semi-natural herbaceous stands. The nearest peak is Allen Peak at 5,795 ft (1,766 m), two miles northeast of the property. The nearest areas of designated open space include the US Forest Service lands of the San Bernardino National Forest, two and a half miles northeast of the Project.



Map Date: 9/20/2012
 Source: ESRI

Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Site_Vicinity\CBSP_Vicinity_v2.mxd (KOrtega, DWagnon, 9/20/2012)

Figure 1. Vicinity



Map Date: 9/20/2012
Source: ESRI Online

Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Site_Vicinity\CBS_P_Location_v2_Quad.mxd (DWagon, 9/20/2012)

Figure 2. Project Location
2012-067 Casa Blanca Specific Plan

2.0 METHODS

2.1 Literature Search

Using information from a literature review and observations in the field, a list of special-status plant and animal species with potential to occur on the site was generated. Each of these species was assessed for its potential to occur on the site using the criteria described below.

Prior to conducting the surveys, a search was performed using CDFW's California Natural Diversity Database (CNDDDB) [CDFW 2013] and the California Native Plant Society's Electronic Inventory (CNPSEI) [CNPS 2013]. Within these databases, the following nine USGS 7.5-minute topographic quadrangles were searched because they either contained the property or adjacent areas: Beaumont, Big Bear Lake, El Casco, Forest Falls, Harrison Mountain, Keller Peak, Redlands, Sunnymead, and Yucaipa.

Based on the search results, separate Potential for Occurrence tables were created for plants and wildlife including federal, state, California Native Plant Society (CNPS), and Bureau of Land Management (BLM) listing status, and their potential to occur based on the habitat in the study area. These tables were reviewed by ECORP biologists prior to conducting surveys to determine which species could be observed within the study corridor and at what time of year the surveys should occur.

All sensitive species found within the database searches were assessed for their potential to occur on the site based on the following designations:

Present: Species was observed on the site during a site visit or focused survey.

High: Habitat (including soils and elevation requirements) for the species occurs on the site and a known occurrence occurs within five miles of the site.

Moderate: Habitat (including soils and elevation requirements) for the species occurs on the site and a known occurrence occurs within the database search, but not within five miles of the site; or a known occurrence occurs within five miles of the site and marginal or limited amounts of habitat occurs on the site.

Low: Limited habitat (including soils and elevation requirements) for the species occurs on the site and a known occurrence occurs within the database search, but not within five miles of the site.

Assumed

Absent: No suitable habitat (including soils and elevation requirements) occurs on the site, the site is located outside the species' known geographical range, or the species was determined to be absent during focused surveys.

2.2 Site Characterization

The biological assessment was conducted during an initial site visit, and supplemented by information gathered during the focused survey work. Methods consisted of walking and driving

systematically around the property, taking photos, and gathering information on the biological resources present. Biological resource information that was collected included:

- ❖ All plant and animal species directly observed or detected (bird calls, animal tracks, scat);
- ❖ Characterization of habitats present on the site;
- ❖ Bird nests;
- ❖ Burrows and any other special habitat features; and
- ❖ Representative site photographs.

Topographical features and site conditions present at the property, including hills, slopes, drainages, water features, and soils were documented by the biologists conducting the surveys.

2.3 Vegetation Mapping

Vegetation community mapping for the property was performed using community descriptions from the second edition of the *Manual of California Vegetation* [Sawyer et al. 2009]. Biologists used dichotomous keys in the *Manual* to determine vegetation alliances present on the site. Vegetation alliances are defined by one or more diagnostic species, often with high vegetative cover. The alliances reflect regional climates, substrates, hydrology, and disturbance regimes. It is sometimes necessary to break down alliances further into vegetation associations in order to accurately characterize site conditions. Vegetation community mapping for the property was done on an alliance-level scale, and vegetation alliances were not broken down into vegetation associations on the property.

2.4 Focused Surveys

2.4.1 Focused Sensitive Plant Surveys

The target species for the focused sensitive plant surveys were based on the Potential for Occurrence table for plants. Sensitive plant surveys were conducted by qualified botanists with extensive experience conducting botanical surveys and knowledge regarding plant taxonomy, plant species in the region, and sensitive plant species. The purpose of these focused surveys was to determine the presence of sensitive plant species within the Project. Survey methods were based on the following resources: 1) *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* [USFWS 2002], 2) *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* [CDFG 2000], and 3) *CNPS Botanical Survey Guidelines* [CNPS 2001].

Pedestrian surveys were conducted within suitable habitat and suitable soil types throughout the property. Survey transects were spaced 10 m (33 ft) apart; however, topography and vegetation coverage often caused surveyors to deviate from transects. Each biologist used a Trimble™ Juno handheld Global Positioning System (GPS) unit to record the coordinates of any sensitive plant species observed. Each GPS unit displayed a position using the Universal Transverse Mercator (UTM) coordinate system, North American Datum 1983 (NAD 83), Zone 11S. Representative site and plant specimen photographs were taken during the survey.

Taxonomy of plant species identified within the study corridor was based on *The Jepson Manual 2nd Edition* [Baldwin et. al. 2012].

All observed plant species were identified and recorded in order to develop a plant compendium for the property. Plants were identified to the lowest taxonomic level sufficient to determine whether species observed were non-native, native, or special-status. Plants of uncertain identity were collected and subsequently identified using taxonomic keys and a dissecting microscope. Rainfall this past season was minimal and may have prevented some species from germinating this year.

2.4.2 Protocol Breeding-Season Burrowing Owl Surveys

Four protocol breeding-season burrowing owl surveys were conducted by qualified ECORP biologists between March and July, 2013. The surveys were conducted in all areas of suitable burrowing owl habitat within the property and within a 150 m (500 ft) buffer of the property. The purpose of these focused surveys was to determine the presence of burrowing owl or sign within the property and buffer. Surveys were conducted using the March 2012 *Staff Report on Burrowing Owl Mitigation* protocol [CDFG 2012].

The protocol requires four surveys, spaced out during the burrowing owl breeding season (February 15 to July 15). The first survey shall be conducted between February 15 and April 15, and then three additional surveys, at least three weeks apart, between April 15 and July 15, with the fourth survey between June 15 and July 15. Surveys were conducted during good weather conditions for owl observation and winds were less than 20 kilometers per hour with no precipitation or fog.

Morning surveys began at morning civil twilight and ended by 10:00 am and evening surveys began two hours before sunset and ended at evening civil twilight. Surveys were conducted by walking straight-line transects spaced seven to 20 meters apart, depending on the density of vegetation. The biologists alternated walking transects in either a north-south or east-west direction in order to maximize burrowing owl detection. The biologists used a Juno GPS unit for transect guidance. Biologists used binoculars to scan the property at least every 100-m for burrowing owls or their sign. Through the use of binoculars, 100 percent visual coverage of the property was attained.

During the surveys, all occupied burrowing owl burrows, as determined by the presence of burrowing owls, pellets, prey remains, whitewash, or decoration, were recorded with a Juno GPS in NAD 83 UTM coordinates, Zone 11 S. If observed, all live burrowing owls, their habitat, location, and behavior were also recorded. In addition, burrows determined to have the correct size, shape, and depth of burrowing owl burrows but lacking sign (pellets, whitewash, etc.), were recorded as potential burrowing owl burrows. Upon subsequent surveys, each previously recorded burrow was inspected and reassessed. All wildlife species were identified and recorded during each survey.

2.4.3 Jurisdictional Delineation

ECORP conducted a formal jurisdictional delineation of the property following the unified federal method, as updated, for the US Army Corps of Engineers (USACE). The delineation also conformed with guidelines of the California Department of Fish and Wildlife (CDFW) and Regional Water Quality Control Board (RWQCB). The results of this delineation are provided in a separate report.

3.0 RESULTS

ECORP biologists Brad Haley and Scott Taylor conducted a biological assessment on July 24, 2012. A jurisdictional delineation was completed on July 24 and August 15, 2012 by ECORP biologists Brad Haley and Scott Taylor. ECORP biologists Emily Graf and Krissy Walker conducted a rare plant survey on April 16 and 17, 2013. ECORP biologists Emily Graf, Brad Haley, Katherine Vienne, and Krissy Walker conducted the four protocol burrowing owl surveys between March 11 and July 10, 2013. Weather conditions and other survey information are provided in Table 1. Botanical and wildlife compendia for the property can be found in Appendices A and B, respectively.

Table 1. Weather Conditions During Surveys

Type of Survey	Date	Surveyor	Time		Temperature (°F)		Cloud Cover (%)		Wind Speed (mph)	
			start	end	min	max	min	max	min	max
Biological Reconnaissance	7/24/12	BH, ST	0700	1515	71	88	0	0	0	3
Jurisdictional Delineation	7/24/12	BH, ST	0700	1515	71	88	0	0	0	3
	8/15/12	BH, ST	0700	1300	66	82	10	20	0	5
Rare Plant Survey	4/16/13	EG, KW	1115	1230	49	53	50	55	0	4
	4/17/13	EG, KW	0745	1215	47	68	0	0	0	5
Burrowing Owl Survey 1	3/11/13 AM	EG, BH	0650	1030*	44	62	0	0	1	5
	3/11/13 PM	EG, BH	1705	1840	73	81	0	0	1	3
	3/12/13 AM	BH, KW	0655	0940	51	72	0	0	1	5
	3/13/13 AM	BH, KV	0715	0930	52	62	0	0	1	8
Burrowing Owl Survey 2	4/15/13 AM	EG, KV, KW	0620	1000	47	62	90	100	0	3
	4/15/13 PM	EG, KV, KW	1720	1925	54	56	75	95	1	3
	4/16/13 AM	EG, KW	0605	1000	47	52	60	97	0	3
Burrowing Owl Survey 3	6/10/13 AM	BH, EG	0535	0915	50	70	0	0	0	3
	6/10/13 PM	BH, EG	1805	1957	76	82	0	0	0	8
	6/11/13 AM	BH, KV	0535	0900	55	76	0	10	1	3
Burrowing Owl Survey 4	7/9/13 AM	BH, KW	0530	1000	75	96	40	75	1	3
	7/9/13 PM	KV, KW	1830	2025	85	92	5	25	1	1
	7/10/13 AM	KV, KW	0535	0950	74	82	60	95	0	1

EG=Emily Graf, BH=Brad Haley, ST=Scott Taylor, KV=Katherine Vienne, KW=Krissy Walker

* = Survey went past 10:00am due to documentation of the concentrated section of burrows.

3.1 Literature Search

3.1.1 Special-Status Plant Species

According to the CNDDDB and CNPSEI, no special-status plant species have been documented on the property. However, several special-status plant species have been documented within the vicinity of the site and have the potential to occur (Appendix C) [CDFW 2013; CNPS 2013]. Ninety-seven special-status plant species were identified from the database searches.

Plummer's mariposa lily (*Calochortus plummerae*) and Parry's spineflower (*Chorizanthe parryi* var. *parryi*) have a high potential to occur. Hall's monardella (*Monardella macrantha* ssp. *hallii*) has a moderate potential to occur. California androsace (*Androsace elongata* ssp. *acuta*), Jaeger's milk-vetch (*Astragalus pachypus* var. *jaegeri*), and Payson's jewel-flower (*Caulanthus simulans*) have a low potential to occur. None of these plants are state or federal listed species. The remaining plants were either not federal or state protected or not likely to occur.

3.1.2 Special-Status Wildlife Species

No federal or state listed wildlife species were documented on the site during the surveys. Four sensitive species, Cooper's hawk (*Accipiter cooperii*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), and prairie falcon (*Falco mexicanus*), were observed on the Project site. There are several protected and federal and/or state listed wildlife species occurring within a five-mile radius of the site. Many of these are montane species that would not have a potential to occur on the property due to elevation differences or lack of habitat. The special-status wildlife species are discussed in a summary table at the end of this report (Appendix D). Most of the species reviewed are assumed absent, with the exception of some for which the property contains a small amount of suitable habitat.

Bat species could occur within the old buildings and structures present on the property. Although no sensitive bat species are expected, there is still a potential for roosting areas on the property to serve as maternal colonies. Maternal colonies should be avoided to the maximum extent possible and impacts should be minimized.

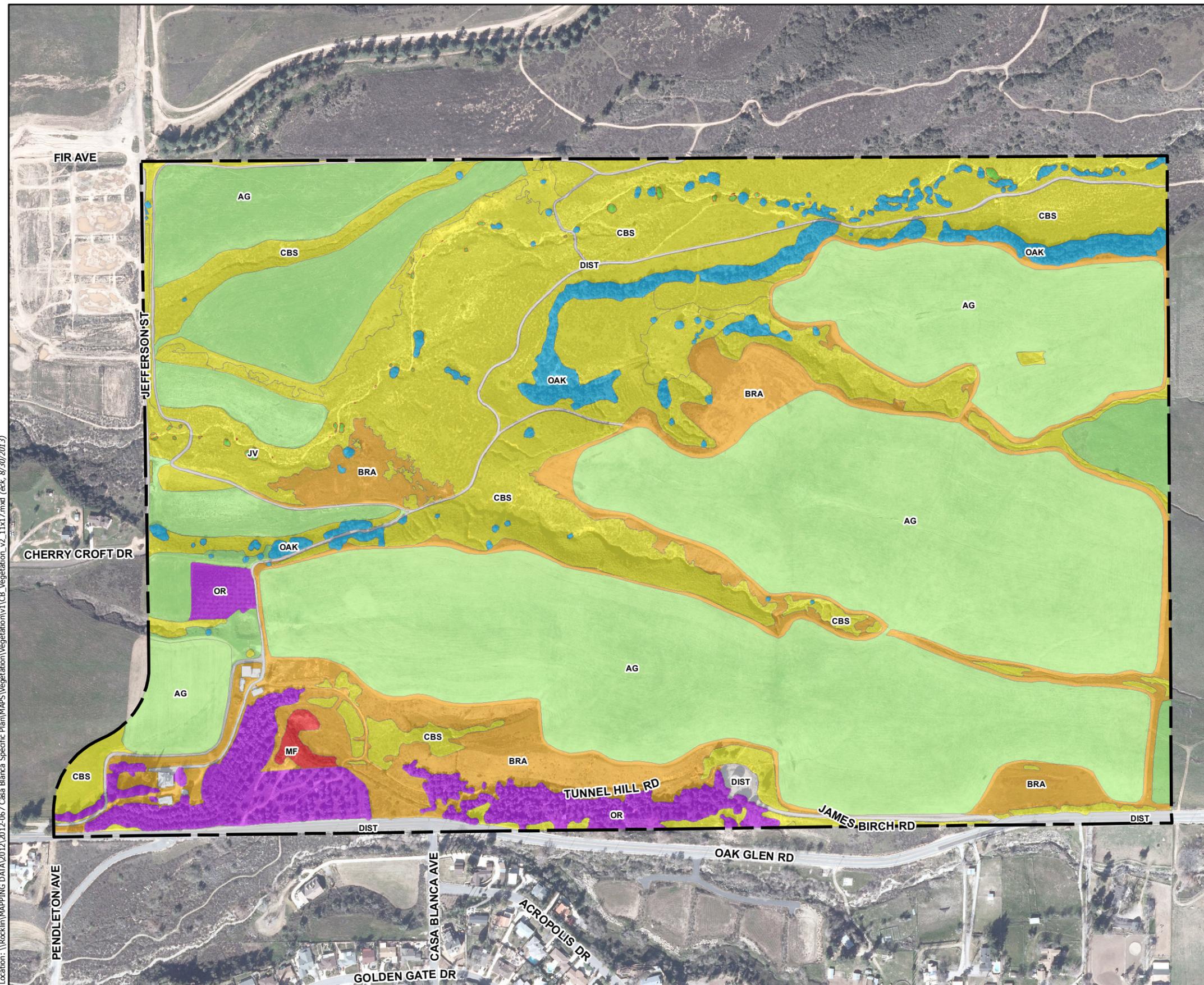
3.2 Vegetation Communities

There are four vegetation communities on the property: Brassica (*nigra*) and other mustards, California buckwheat scrub, mulefat (*Baccharis salicifolia*) thickets, and oak (*Quercus* spp.) woodland, in addition to agriculture, disturbed/developed, and orchard areas (Figure 3). The site consists of disturbed/developed habitat with some native scrub and oak habitats in the wash areas and agriculture or orchards in the upper, flat areas. These vegetation communities are defined below and photographs are included in Appendix A.

3.2.1 Brassica (*nigra*) and other mustards

Brassica (*nigra*) occurs mainly along the edges of the agricultural areas and within and around the orchards and disturbed/developed areas. This is characterized by a dominance of annual vegetation that emerges after the rains, produces seeds, and dies before the next rainy season. Dominant plant species observed within this community include black mustard (*Brassica nigra*), slender wild oat (*Avena fatua*), short-podded mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), lamb's quarters (*Chenopodium album*), and Russian thistle (*Salsola tragus*). Native species are generally present in low amounts and include deerweed (*Acmispon glaber*), telegraph weed (*Heterotheca grandiflora*), common fiddleneck (*Amsinckia menziesii*), and western bindweed (*Calystegia macrostegia*).

**Figure 3.
Vegetation Communities**



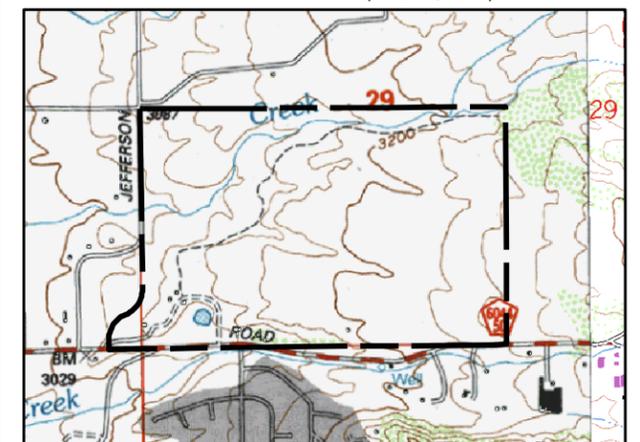
Map Features

Project Boundary

Vegetation Classification

- MF - Mulefat Thicket
- AG - Agriculture
- BRA, Brassica (*nigra*) and Other Mustards
- CBS - California buckwheat scrub
- JV - Jurisdictional Vegetation
- OAK - Oak Woodland
- OR - Orchard
- DIST - Disturbed/Developed

Base Data Source: USGS 7.5' Topo Quad, Yucaipa Ca.



1:24,000



Location: \\Rocklin\MAPPING\DATA\2012\12-067 Casa Blanca Specific Plan\MAPS\Vegetation\Vegetation\1\CB_Vegetation_v2_11x17.mxd (rev. 8/30/2013)

3.2.2 California Buckwheat Scrub

California buckwheat is a somewhat small, semi-woody shrub that can grow to two meters in height and is found in low to mid-elevations throughout central and southern California. This species grows in a variety of topographic conditions and is generally found in coarse, well-drained soils. This alliance is often one of the first to form following disturbance such as fire, floods, grazing, or mechanical disturbance. California buckwheat is scattered throughout the site and is found along with deerweed, scale broom (*Lepidospartum squamatum*), thick-leaved yerba santa (*Eriodictyon crassifolium*), white sage (*Salvia apiana*), and our Lord's candle (*Yucca whipplei*). Inter-shrub spaces often have high amounts of non-native herbaceous species.

3.2.3 Mulefat Thickets

Mulefat is an evergreen shrub that is a member of the sunflower family. It occurs in both seasonally or intermittently flooded habitats, and is variable depending on the amount of inundation and scouring. Dense stands typically form along riparian corridors and lake margins. The mulefat thickets within the site consist mainly of mulefat, but also include Fremont's cottonwood (*Populus fremontii*), golden currant (*Ribes aureum*), and blue elderberry (*Sambucus nigra* ssp. *caerulea*) as well as Brome grasses (*Bromus* spp.) and gum trees (*Eucalyptus* sp.).

3.2.4 Oak Woodland

Tucker's oak (*Quercus john-tuckeri*) is a drought-resistant evergreen shrub that can grow from three to five meters in height and is found along the Transverse Mountain Range and the southern end of the Coast Range. Tucker's oak occurs in a variety of habitats including mountains, chaparral, desert-chaparral transition communities, pinyon-juniper woodland, and Great Basin sage. Coast live oak (*Q. agrifolia*) and scrub oak (*Q. berberidifolia*) are also present within this vegetation community. On the Project site, oak woodland is found along drainages and around otherwise disturbed and developed sites. Oak trees are protected by local Yucaipa ordinances.

3.2.5 Agriculture, Disturbed/Developed, and Orchard

Agriculture, Disturbed/Developed, and Orchard are not vegetation classifications, but land cover types. Areas mapped with this designation are either largely devoid of vegetation due to human development or are dominated by unnatural vegetation such as agricultural fields, lawns, and landscaping. In many cases, areas surrounding development show high amounts of non-native ruderal species. This cover type is generally represented by the agricultural areas, the orchards, and the small area of development around the Casa Blanca house.

3.3 Jurisdictional Delineation

There is a single stream on the site that appears on existing USGS topographic maps as a U.S. Army Corps of Engineers blue-line stream. One main drainage feature, Wilson Creek, was mapped on the property. One smaller feature joins this main feature as a tributary, fully contained within the property. These features are considered to be jurisdictional to the USACE, CDFW, and RWQCB.

3.4 Soils

The Project site consists of four soil types (Figure 4). The soils consist primarily of Greenfield Sandy Loam, two to nine percent slopes (GtC). The steeper portions throughout the site consist of Saugus Sandy Loam, 30 to 50 percent slopes (ShF), with the nearby riverine areas consisting mainly of Tujunga Gravelly Loamy Sand, zero to nine percent slopes (TvC). A small portion of the southern upland area consists of Soboba Gravelly Loamy Sand, zero to nine percent slopes (SoC). Soil types were mapped using the NRCS Web Soil Survey [NRCS 2012].

Hydric soil types are those that may support wetlands. Typically, hydric soils are those that are sufficiently wet in the upper part to develop anaerobic conditions during the growing season. Both GtC and SoC soil types on the property have hydric ratings when located within drainage ways, and TvC has a hydric rating within drainage ways or channels, meaning they are potentially hydric. Of the three potentially hydric soil types, TvC and SoC are located near the delineated drainages on the property.

3.5 Focused Surveys

3.5.1 Focused Sensitive Plant Surveys

Suitable habitat for sensitive plant species was determined by comparing the habitat type for each target species with the vegetation community map (Figure 3). The target species of the focused sensitive plant survey included Yucaipa onion (*Allium marvinii*), California androsace, Jaeger's milk-vetch, Plummer's mariposa lily, Payson's jewel-flower (*Caulanthus simulans*), Parry's spineflower, Hall's monardella, and Parish's checkerbloom (*Sidalcea hickmanii* ssp. *parishii*).

No special-status plant species were observed during the focused sensitive plant survey. Weather conditions during the survey can be found in Table 1. Plant species observed within the property included California sagebrush (*Artemisia californica*), California buckwheat, white sage, and common fiddleneck. Non-native species observed included tree of heaven (*Ailanthus altissima*), tocalote, horehound (*Marrubium vulgare*), short-podded mustard, and brome grasses (*Bromus* spp.).

3.5.2 Protocol Breeding-Season Burrowing Owl Surveys

The burrowing owl is a state species of special concern. Burrowing owls are found throughout much of California and have been in sharp decline throughout much of their California range, especially near urban centers. The species favors open habitats such as grasslands and agricultural fields, but also uses open scrub and desert areas. Due to declines and their ground-nesting habits, burrowing owls have been protected by the state since 1995. Project sites that support burrowing owls often need to relocate owls prior to impacting the Project area. The nearest known occurrence is more than ten miles from the property.

**Figure 4.
NRCS Soils Classification**

Map Features

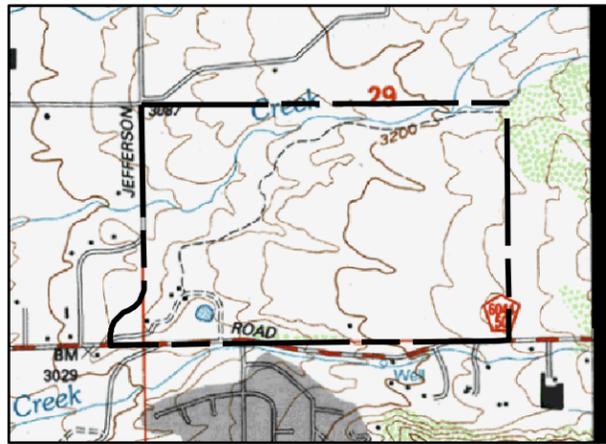
 Project Boundary

Series Number - Series Name

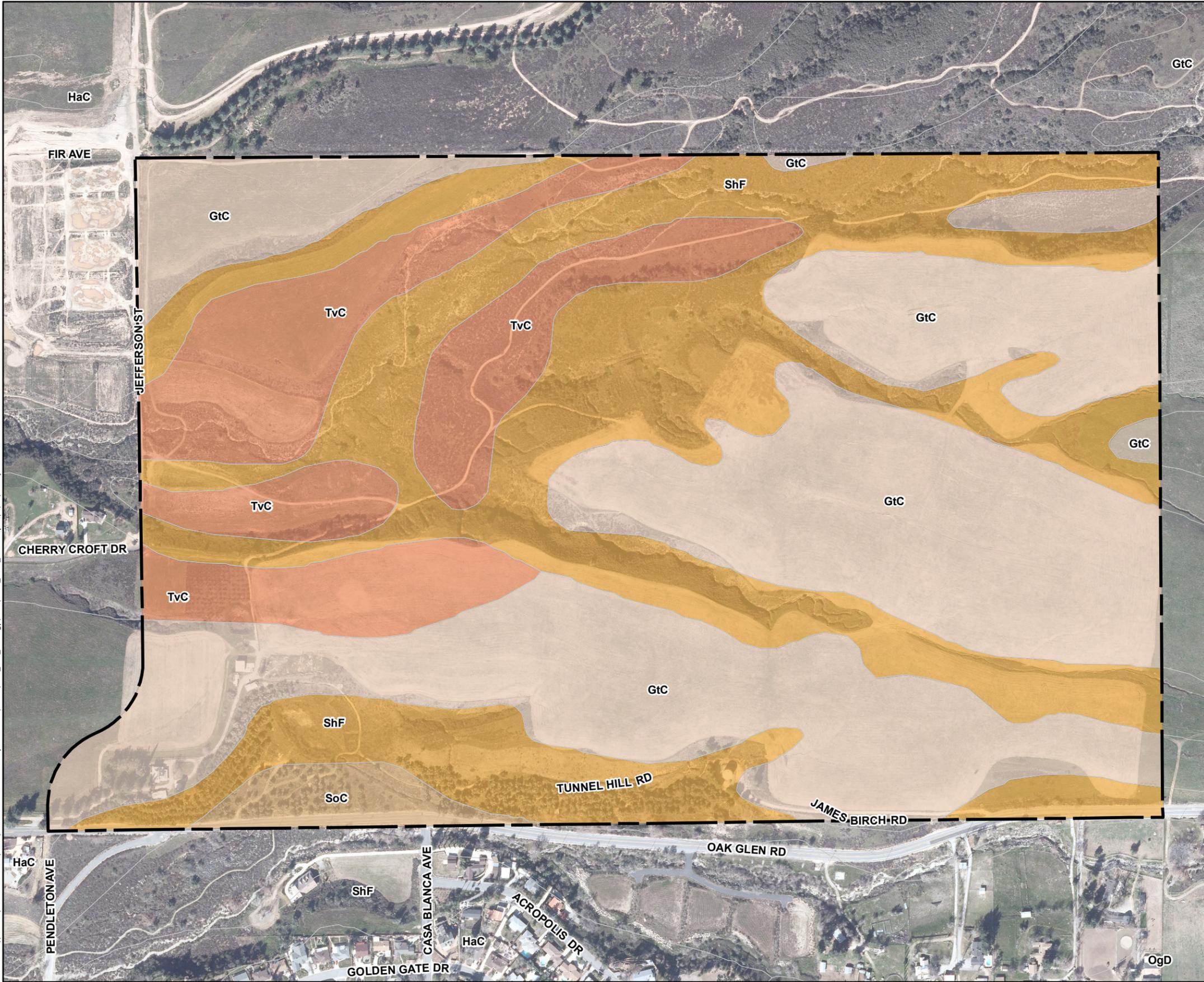
-  GtC - GREENFIELD SANDY LOAM, 2-9% SLOPES
-  ShF - SAUGUS SANDY LOAM, 30-50% SLOPES
-  SoC - SOBOBA GRAVELLY LOAMY SAND, 0-9% SLOPES
-  TvC - TUJUNGA GRAVELLY LOAMY SAND, 0-9% SLOPES

Natural Resources Conservation Service (NRCS)
Soil Survey Geographic (SSURGO) Database for
San Bernardino County, CA

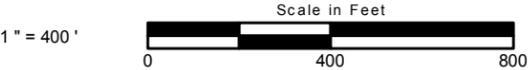
Base Data Source: USGS 7.5' Topo Quad, Yucaipa Ca.



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Location: \\Rocklin\MAPPING\DATA\2012\2012-067 Casa Blanca Specific Plan\MAPS\Soils_and_Geology\Soils\CBS\Soils_v2.mxd (rev. 8/30/2013)



No burrowing owls were detected during the focused survey. Suitable habitat for burrowing owls was identified as disturbed areas, disturbed areas within buckwheat scrub, agriculture, and open orchards. Areas not included as suitable habitat were dense buckwheat scrub, active agriculture, developed (roads or structures), riparian areas, and dense orchards.

During the four surveys, no burrowing owls or sign of their presence was observed within the property or 150-m buffer. Weather conditions during the survey can be found in Table 1. A total of 30 non-occupied potential burrowing owl burrows were observed within the property and 150-m buffer. Figure 5 presents each of these burrows on a property map, Appendix E includes photos of these burrows, and Appendix F provides the details of each burrow recorded. Suitable unoccupied habitat also included areas of California ground squirrel colonies, coyote dens, and debris and rock piles. No owl sign was observed in these places. The California ground squirrels were observed near the Casa Blanca house and along the edges of the agricultural fields. The coyote dens are represented by the polygons of "concentrated potential burrowing owl burrows" in Figure 5. The burrowing owl survey data sheets are found in Appendix G.

3.5.3 Additional Sensitive Species Observations

A Cooper's hawk and multiple northern harriers were observed during the focused surveys. One prairie falcon was observed during the biological assessment. White-tailed kites were observed during both the biological assessment and focused surveys. No other sensitive species were observed during the property surveys.

Northern Harrier

Status: California Species of Special Concern

Northern harriers frequent meadows, grasslands, open rangelands, desert sinks, and freshwater emergent wetlands. They breed and forage in habitats that provide adequate vegetative cover, an abundance of suitable prey, and scattered hunting, plucking, and lookout perches such as shrubs or fence posts. The primary threat to the species is the loss and degradation of nesting and foraging habitat. Like the Cooper's hawk, this species' nesting areas are protected from impact by provisions of the federal MBTA and CDFG Code. Multiple northern harriers were observed flying and hunting over the property during the focused burrowing owl surveys.

White-Tailed Kite

Status: California Species of Special Concern; Fully Protected

The white-tailed kite is a raptorial species of open habitat areas, including agricultural areas, across the western United States. The species declined sharply during the latter part of the 20th Century, but populations have rebounded in recent decades. Like the Cooper's hawk, this species' nesting areas are protected from impact by provisions of the federal MBTA and CDFG Code. They are expected to nest on the site during the breeding season, which runs from February through August. Three individuals were observed flying over the property and another was observed within ornamental trees on the property.

Prairie Falcon

Status: California Species of Special Concern

Falcons are high-level, raptorial predators that nest in inaccessible locations such as remote cliff faces or high building ledges. Prairie falcons will range for many miles to hunt prey such as

mammals and birds. The species has been stable throughout most of its range, but is considered sensitive due to its restrictive nesting requirements. An individual was observed hunting over the Project site. Like the Cooper's hawk, this species' nesting areas are protected from impact by provisions of the federal MBTA and CDFG Code. No nesting habitat occurs on the property.

Cooper's Hawk

Status: California Watch List

Cooper's hawks are found throughout most wooded portions of the state and occur most frequently in dense stands of live oak, riparian deciduous, or other forest habitats near water. The species has shown declines in breeding numbers in the last few decades. Although it does not receive protection as a formally listed species, its nests are protected from impact by provisions of the federal MBTA and CDFG Code. They are expected to nest on the site during the breeding season, which occurs from March through August. One Cooper's hawk was observed flying over the property during the focused burrowing owl surveys.

During the surveys, one nesting bird was observed. Several locations with large trees within and adjacent to the property may contain nesting habitat for protected breeding birds such as raptors, hummingbirds, and other migratory birds. A great horned owl nest is located on the edge of a drainage wall near the center of the property, at UTM coordinates 498955N, 3767900E.

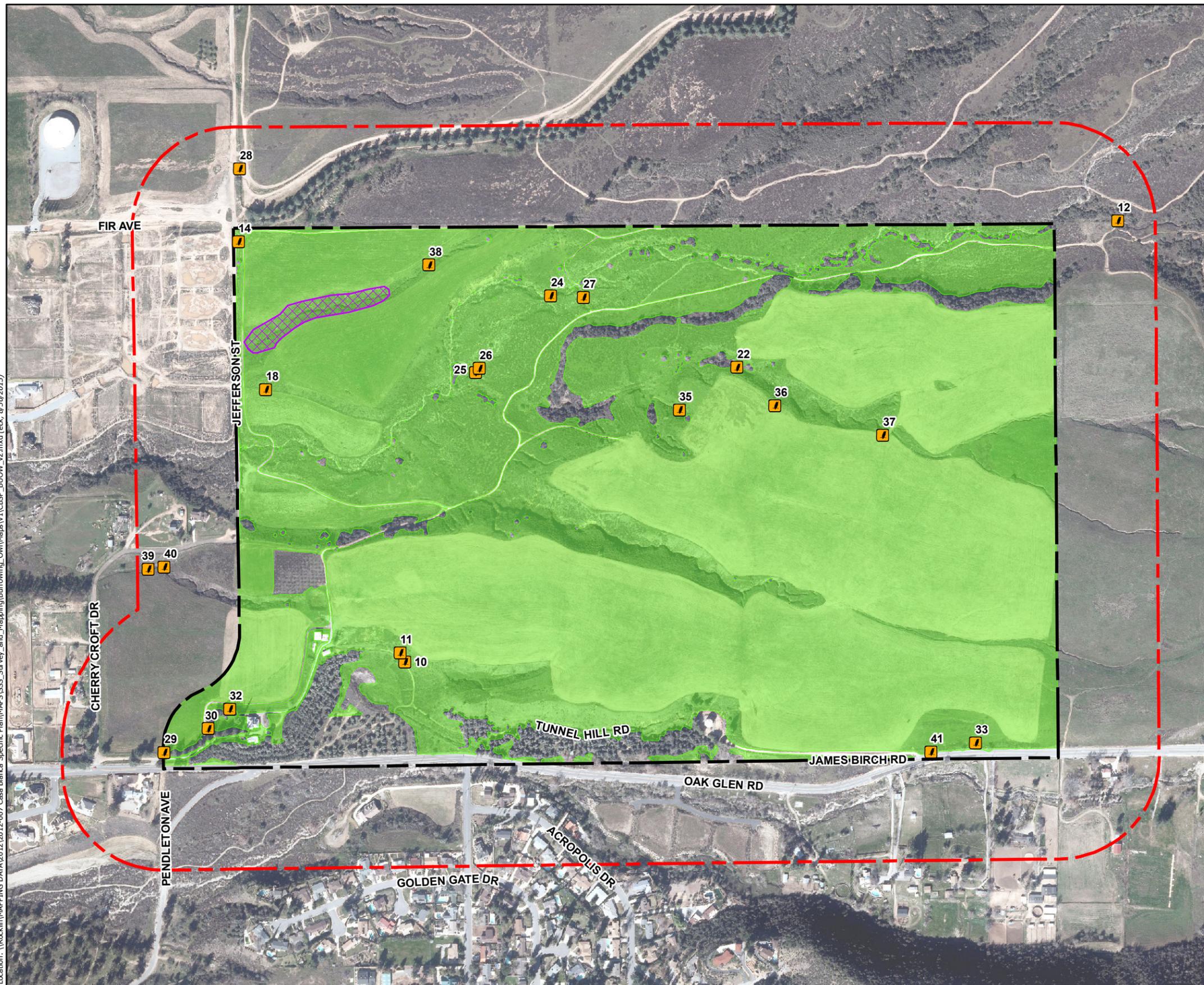
3.6 Wildlife Movement Corridors and Linkages

Linkages and corridors facilitate regional animal movement and are generally centered around waterways, riparian corridors, flood-control channels, contiguous habitat, and upland habitat. Drainages generally serve as movement corridors because wildlife can move easily through these areas, and fresh water is periodically available. Corridors also offer wildlife unobstructed terrain to forage and allow for the dispersal of young individuals. Ridgelines may also serve as movement corridors.

The majority of the site supports a continuous area of open space. One large drainage on the property, which runs east to west, provides connectivity between large tracts of open land that currently surround the site on the north and east, and portions of the west and south. Rural residential areas are located west and south of the property. The drainages and ridgelines eventually lead to developed areas within the City of Yucaipa, located west of the site.

There is a "Wildlife Corridor" sign along Cherry Croft Drive near its intersection with Oak Glen Road. This sign was installed by the Yucaipa Animal Placement Society (YAPS) as a way to help the community co-exist with wildlife, and should not be treated as an official corridor for wildlife [YAPS 2011].

Location: \\Rocklin\MAPPING DATA\2012\067 Casa Blanca Specific Plan\SSS_Survey_and_Mapping\Borrowing_Owl\Maps\1\CBSB_BUOW_v2.mxd (cck, 8/30/2013)

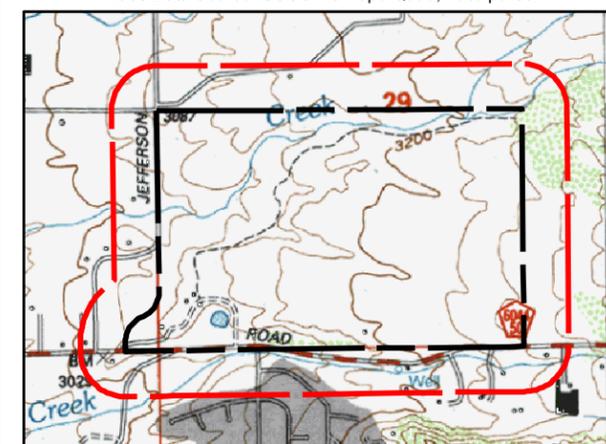


**Figure 5.
Burrowing Owl Survey Results**

Map Features

-  Survey Area (Project Area with 150 m Buffer)
-  Project Boundary
-  Burrowing Owl Habitat (Within Project Area)
-  Concentrated Potential Burrowing Owl Burrows
-  Potential Burrowing Owl Burrow

Base Data Source: USGS 7.5' Topo Quad, Yucaipa Ca.



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ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS



4.0 DISCUSSION AND RECOMMENDATIONS

4.1 Oak Tree Ordinance

Oak trees that are protected by the City of Yucaipa occur on the site. A permit will be necessary prior to cutting, removing, encroaching into the protected zone, or relocating any oak tree meeting certain height and diameter requirements. Project-specific impacts will be determined based on an analysis of the Project footprint once a final design has been approved.

Oak tree mitigation is recommended. This would include surveying the site for oak trees that meet height and diameter requirements and permitting prior to cutting, removing, encroaching into the protected zone, or relocating of any of these oak trees.

4.2 Burrowing Owl

No owls were observed during focused surveys but there was documented presence of potential burrows and available foraging habitat. The medium density of unoccupied rodent and coyote dens is a measure of moderate habitat suitability for the burrowing owl in the property.

A pre-construction burrowing owl survey is recommended within 14 days prior to ground-disturbing activities. If burrowing owls are observed during this timeframe, and could be affected by ground-disturbing activities, then the CDFW would need to be consulted and a mitigation plan would need to be developed. Mitigation would likely take the form of a passive relocation of the burrowing owls on the property, along with habitat mitigation. Owl relocations can only take place from September to February, unless otherwise authorized by CDFW.

4.3 Migratory Birds, Raptors and Nesting Birds

All migratory bird species, including raptors, are protected from "take" pursuant to CDFG Code Section 3503.5. Raptors and migratory birds are protected by the MBTA [MBTA 1918]. The oak woodland habitat and steep drainage walls on the site provide potential nesting habitat for several raptors including Cooper's hawk, white-tailed kite, great horned owl (*Bubo virginianus*), and red-tailed hawk (*Buteo jamaicensis*).

Migratory bird species are likely to nest within the trees and shrubs that occur throughout the site. If ground disturbance is scheduled to occur during nesting season, the property should be surveyed for the presence of nesting birds. If ground disturbance occurs outside the nesting season, no surveys would be required. Generally, the breeding season is from February through August of each year.

Pre-construction nesting bird surveys are recommended if clearing is to occur during the bird breeding season (March 1 – August 31). The survey will be conducted by a qualified biologist and an appropriate buffer zone (typically 300 ft radius for songbirds, 500 ft radius for raptors) will need to be established around all active nests (containing eggs, chicks, or fledglings dependent on the nest). Construction activities would need to be avoided within the buffer zone until the nest is deemed to be no longer active by the biologist.

4.4 Bats

Due to the potential presence of maternal roost sites within the abandoned structures on the property, a bat habitat assessment is recommended prior to demolition of any structures. If bat species are found, it is recommended that they be relocated prior to demolition.

5.0 CONCLUSIONS

No federally listed species were detected within the property during the surveys conducted by ECORP. The only sensitive species observed were northern harriers, Cooper's hawk, white-tailed kites, and prairie falcon. All of these species are of relatively low sensitivity status and would not pose a significant constraint to the proposed Project.

No special-status plant species were observed during the rare plant surveys. However, it is unlikely that any other rare plants will occur within the property, as most of the site contains vegetation that is too dense or disturbed for any other rare plant species to occur.

No burrowing owl or burrowing owl sign were observed during the protocol breeding-season burrowing owl surveys. Thirty non-occupied potential burrowing owl burrows were observed within the property and 150-m buffer. However, a pre-construction burrowing owl survey is recommended no less than fourteen days prior to the start of any ground-disturbing activities.

Several large trees within the site may support seasonal nesting by state and federally protected raptors and migratory bird species. Therefore, pre-construction surveys for nesting birds are recommended no less than 30 days prior to the start of any construction-related activities that may occur during the nesting season (February 1 to August 31).

There is potential for bat species to be a Project constraint if they are located within any of the existing structures.

6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the Project applicant or the applicant's representative and that I have no financial interest in the Project.

DATE: _____

SIGNED: _____
Mr. Scott Taylor

7.0 LITERATURE CITED

- [Baldwin et. al. 2012] Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.
- [CDFG] California Department of Fish and Game
2000. Guidelines for assessing the effects of proposed projects on rare, threatened, and endangered plants and natural communities. (Revision of 1983 guidelines.) Sacramento, CA, 2 pp.
2012. Staff Report on Burrowing Owl Mitigation. (Revision of 1995 guidelines.) Sacramento, CA, 34 pp. March 7, 2012.
- [CDFW] California Department of Fish and Wildlife. 2013. California Natural Diversity Database. Biogeographic Data Branch. Rare Find 3.1.0. April 12, 2013.
- [CNPS] California Native Plant Society
2001. CNPS Botanical Survey Guidelines. Originally published December 9, 1983; Revised June 2, 2001.
2013. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed on April 12, 2013, at: <http://www.rareplants.cnps.org/>.
- [ECORP] Environmental Consulting LLC.
2012a. Cultural Resources Inventory and Evaluation for the Casa Blanca Specific Plan: APN: 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000 and 0321-082-15-000. Yucaipa, San Bernardino County, California. September 2012.
- 2012b. Jurisdictional Delineation Report: APN: 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000 and 0321-082-15-000. Yucaipa, San Bernardino County, California. September 2012.
- [MBTA 1918] Migratory Bird Treaty Act (MTBA) of 1918. 16 U.S.C. §§703–712, July 3, 1918; as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986, and 1989.
- [NRCS] U.S. Department of Agriculture. 2012. Natural Resource Conservation Service Web Soil Survey. Accessed on September 5, 2012 at: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.
- [Sawyer, et. al. 2009] Sawyer, J.O., T. Keeler-Wolf, J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society. Sacramento, California.
- [USFWS] United States Fish and Wildlife Service. 2002. General Rare Plant Survey Guidelines. Bakersfield, CA. 2 pp.

[The Weather Channel] Yucaipa, CA. 2012. Accessed on September 5, 2012 at:
<http://www.weather.com/weather/wxclimatology/monthly/graph/92399>.

[YAPS 2011] Yucaipa Animal Placement Society. 2011. Mission and History. Accessed on July
23, 2013 at: <http://www.yaps.org/about/mission-and-history>.

Appendix A
Plant Compendium

VASCULAR PLANTS	
FERNS AND FERN ALLIES	
PTERIDACEAE	BRAKE FAMILY
<i>Pellaea mucronata</i>	Bird's-foot fern
GYMNOSPERMS	
CUPRESSACEAE	CYPRESS FAMILY
<i>Cupressus sempervirens*</i>	Italian Cypress
PINACEAE	PINE FAMILY
<i>Pinus sp.</i>	Pine
ANGIOSPERMS (DICOTYLEDONS)	
ANACARDIACEAE	SUMAC OR CASHEW FAMILY
<i>Rhus aromatica</i>	Skunkbrush
<i>Toxicodendron diversilobum</i>	Poison oak
APIACEAE	CARROT FAMILY
<i>Anthriscus caucalis</i>	bur-chervil
ASTERACEAE	SUNFLOWER FAMILY
<i>Agoseris retrorsa</i>	Spear-leaved agoseris
<i>Ambrosia acanthicarpa</i>	Annual bur-sage
<i>Ambrosia psilostachya</i>	Western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia douglasiana</i>	Mugwort
<i>Artemisia dracunculus</i>	Tarragon
<i>Baccharis salicifolia</i>	Mulefat
<i>Brickellia californica</i>	California brickellbush
<i>Centaurea melitensis*</i>	Tocalote
<i>Cirsium vulgare</i>	Bull thistle
<i>Corethrogyne filaginifolia</i>	cudweed aster
<i>Ericameria linearifolia</i>	interior goldenbush
<i>Gutierrezia californica</i>	California matchweed
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Lactuca serriola*</i>	prickly lettuce
<i>Lepidospartum squamatum</i>	scale-broom
<i>Matricaria discoidea *</i>	Pineapple weed
<i>Pseudognaphalium californicum</i>	California everlasting
<i>Senecio flaccidus</i>	shrubby butterweed
<i>Stephanomeria exigua</i>	small wreathplant
<i>Stephanomeria virgata</i>	twiggy wreathplant
<i>Tetradymia stenolepis</i>	horsebrush
<i>Uropappus lindleyi</i>	silver puffs
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia menziesii</i>	common fiddleneck
<i>Cryptantha sp.</i>	cryptantha
<i>Cryptantha intermedia</i>	common forget-me-not
BRASSICACEAE	MUSTARD FAMILY
<i>Boechea arcuata</i>	arching rockcress
<i>Brassica nigra*</i>	black mustard
<i>Descurainia pinnata</i>	western tansy-mustard
<i>Hirschfeldia incana*</i>	short-podded mustard
<i>Raphanus sativus*</i>	radish
<i>Sisymbrium irio*</i>	London rocket
CACTACEAE	CACTUS FAMILY
<i>Cylindropuntia acanthocarpa</i>	buckhorn cholla
<i>Opuntia phaeacantha</i>	brown-spined prickly pear
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY
<i>Lonicera sp.</i>	honeysuckle

<i>Lonicera subspicata</i>	southern honeysuckle
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Mexican elderberry
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Chenopodium album</i> *	lamb's quarters
<i>Salsola tragus</i> *	Russian thistle
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	wild morning glory
<i>Convolvulus arvensis</i> *	bindweed
CUCURBITACEAE	GOURD FAMILY
<i>Cucurbita palmata</i>	coyote melon
<i>Marah macrocarpus</i>	wild cucumber
CUSCUTACEAE	DODDER FAMILY
<i>Cuscuta californica</i>	California dodder
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce albomarginata</i>	rattlesnake weed
<i>Croton californicus</i>	California croton
<i>Croton setiger</i>	dove weed
FABACEAE	LEGUME FAMILY
<i>Acmispon glaber</i>	deerweed
<i>Lupinus</i> sp.	lupine
<i>Medicago polymorpha</i> *	bur clover
<i>Melilotus albus</i> *	white sweetclover
<i>Vicia sativa</i> *	spring vetch
<i>Vicia villosa</i> *	winter vetch
FAGACEAE	OAK FAMILY
<i>Quercus agrifolia</i>	coast live oak
<i>Quercus berberidifolia</i>	scrub oak
<i>Quercus john-tuckeri</i>	Tucker's oak
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
GROSSULARIACEAE	GOOSEBERRY FAMILY
<i>Ribes aureum</i>	golden currant
HYDROPHYLLACEAE	WATERLEAF FAMILY
<i>Eriodictyon trichocalyx</i>	hairy yerba santa
<i>Phacelia distans</i>	wild heliotrope
<i>Phacelia minor</i>	wild canterbury-bell
JUGLANDACEAE	WALNUT FAMILY
<i>Juglans regia</i> *	English walnut
LAMIACEAE	MINT FAMILY
<i>Lamium amplexicaule</i> *	giraffe head
<i>Marrubium vulgare</i> *	horehound
<i>Salvia apiana</i>	white sage
<i>Salvia columbariae</i>	chia sage
MALVACEAE	MALLOW FAMILY
<i>Sphaeralcea ambigua</i>	desert mallow
MELIACEAE	MAHOGONY FAMILY
<i>Melia azedarach</i> *	chinaberry tree
MYRTACEAE	MYRTLE FAMILY
<i>Eucalyptus</i> sp.	gum tree
OLEACEAE	OLIVE FAMILY
<i>Olea europaea</i> *	olive
ONAGRACEAE	EVENING PRIMROSE FAMILY
<i>Camissonia</i> sp.	camissonia
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy

PLATANACEAE	SYCAMORE FAMILY
<i>Platanus racemosa</i>	western sycamore
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i>	California buckwheat
PORTULACACEAE	PURSLANE FAMILY
<i>Calandrinia ciliata</i>	red maids
<i>Claytonia perfoliata</i>	miner's lettuce
RHAMNACEAE	BUCKTHORN FAMILY
<i>Ceanothus crassifolius</i>	hoary leaf ceanothus
<i>Ceanothus tomentosus</i>	woolly-leaved ceanothus
<i>Frangula californica</i>	California coffeeberry
ROSACEAE	ROSE FAMILY
<i>Adenostoma fasciculatum</i>	chamise
<i>Prunus fasciculata</i>	desert almond
SALICACEAE	WILLOW FAMILY
<i>Salix exigua</i>	narrow-leaved willow
SAXIFRAGACEAE	SAXIFRAGE FAMILY
<i>Lithophragma affine</i>	woodland star
SCROPHULARIACEAE	FIGWORT FAMILY
<i>Castilleja</i> sp.	paintbrush
<i>Keckiella cordifolia</i>	heart-leaved penstemon
<i>Verbascum thapsus</i> *	woolly mullein
SIMAROUBACEAE	QUASSIA FAMILY
<i>Ailanthus altissima</i> *	tree of heaven
SOLANACEAE	NIGHTSHADE FAMILY
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana glauca</i> *	tree tobacco
TAMARICACEAE	TAMARICK FAMILY
<i>Tamarix ramosissima</i> *	Mediterranean tamarisk
URTICACEAE	NETTLE FAMILY
<i>Urtica dioica</i> ssp. <i>holosericea</i>	giant creek nettle
VIOLACEAE	VIOLET FAMILY
<i>Viola pedunculata</i>	johnny-jump-up
VISCAEAE	MISTLETOE FAMILY
<i>Phoradendron serotinum</i> ssp. <i>tomentosum</i>	oak mistletoe
ANGIOSPERMS (MONOCOTYLEDONS)	
ARECACEAE	PALM FAMILY
<i>Washingtonia filifera</i>	California fan palm
<i>Washingtonia robusta</i> *	Mexican fan palm
IRIDACEAE	IRIS FAMILY
<i>Sisyrinchium bellum</i>	blue-eyed-grass
<i>Chlorogalum pomeridianum</i>	soap plant
LILIACEAE	LILY FAMILY
<i>Bloomeria crocea</i>	common goldenstar
<i>Hesperoyucca whipplei</i>	Our Lord's candle
POACEAE	GRASS FAMILY
<i>Avena fatua</i> *	wild oat
<i>Bromus diandrus</i> *	ripgut grass
<i>Bromus hordeaceus</i> *	soft chess
<i>Bromus madritensis</i> ssp. <i>rubens</i> *	foxtail chess
<i>Bromus tectorum</i> *	cheat grass
<i>Hordeum murinum</i> *	glaucous foxtail barley
<i>Hordeum vulgare</i> *	barley
<i>Polypogon monspeliensis</i> *	annual beard grass
* = Non-native	

Appendix B
Wildlife Compendium

Wildlife Species List	
Scientific name	Common name
INSECTS	
<i>Artogeia rapae</i>	cabbage white
<i>Colias eurytheme</i>	alfalfa sulfur
<i>Pepsis formosa</i>	tarantula hawk
<i>Pieris rapae</i>	common white
REPTILES	
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Sceloporus orcutti</i>	granite spiny lizard
<i>Uta stansburiana</i>	side-blotched lizard
BIRDS	
<i>Accipiter cooperii**</i>	Cooper's hawk
<i>Amazona sp.*</i>	parrot species
<i>Aphelocoma californica</i>	western scrub jay
<i>Baeolophus inornatus</i>	oak titmouse
<i>Bubo virginianus</i>	great horned owl
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Buteo lineatus</i>	red-shouldered hawk
<i>Callipepla californica</i>	California quail
<i>Calypte anna</i>	Anna's hummingbird
<i>Carduelis psaltria</i>	lesser goldfinch
<i>Chamaea fasciata</i>	wren tit
<i>Circus cyaneus**</i>	northern harrier
<i>Colaptes auratus</i>	northern flicker
<i>Columba livia</i>	rock pigeon
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	common raven
<i>Elanus leucurus**</i>	white-tailed kite
<i>Falco mexicanus**</i>	prairie falcon
<i>Falco sparverius</i>	American kestrel
<i>Haemorhous mexicanus</i>	house finch
<i>Icterus cucullatus</i>	hooded oriole
<i>Junco hyemalis</i>	dark-eyed junco
<i>Larus sp.</i>	gull species
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Mimus polyglottos</i>	northern mockingbird
<i>Phainopepla nitens</i>	phainopepla
<i>Phalacrocorax auritus</i>	double-crested cormorant
<i>Picoides nuttallii</i>	Nuttall's woodpecker
<i>Pipilo maculatus</i>	spotted towhee
<i>Psaltriparus minimus</i>	bushtit
<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Setophaga coronata</i>	yellow-rumped warbler

<i>Sialia mexicana</i>	western bluebird
<i>Sturnella neglecta</i>	western meadowlark
<i>Sturnus vulgaris</i> *	European starling
<i>Tachycineta thalassina</i>	violet-green swallow
<i>Toxostoma redivivum</i>	California thrasher
<i>Troglodytes aedon</i>	house wren
<i>Turdus migratorius</i>	American robin
<i>Tyrannus verticalis</i>	western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Tyto alba</i>	barn owl
<i>Zenaida macroura</i>	mourning dove
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
MAMMALS	
<i>Canis latrans</i>	coyote
<i>Lepus californicus</i>	black-tailed jackrabbit
<i>Mephitis mephitis</i>	striped skunk
<i>Neotoma lepida</i>	wood rat
<i>Odocoileus virginianus</i>	white-tailed deer
<i>Spermophilus beecheyi</i>	California ground squirrel
<i>Sylvilagus audubonii</i>	desert cottontail

* Non-native species

** Special-status species

Special-Status Plant Potential for Occurrence

Scientific Name Common Name	Status		Flowering Period Elevation (meters)	Potential for Occurrence; Habitat
<i>Abronia villosa</i> var. <i>aurita</i> Chaparral sand-verbena	Fed: Ca: CNPS: BLM:	none none 1B.1 none	January- September 80- 1600	Assumed Absent ; Chaparral, Coastal Scrub Sandy Areas. Nearest known occurrence more than 10 miles away.
<i>Acanthoscyphus parishii</i> var. <i>parishii</i> Parish's oxytheca	Fed: Ca: CNPS: BLM:	none none 4.2 none	June-September 1220-2600	Assumed Absent ; Sandy or gravelly soils within Chaparral or Lower Montane Coniferous Forest. Outside of known range.
<i>Allium marvinii</i> Yucaipa onion	Fed: Ca: CNPS: BLM:	none none 1B.1 none	April-May 760-1065	Assumed Absent ; Chaparral. In Openings on Clay Soils. No habitat on the site but known occurrence within 5 miles of the site.
<i>Allium parishii</i> Parish's onion	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-May 900-1465	Assumed Absent ; Rocky within Joshua tree woodland, Mojavean desert scrub, or Pinyon and juniper woodland. No known habitat on the site.
<i>Androsace elongata</i> ssp. <i>acuta</i> California androsace	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-June 150-1200	Low ; Chaparral, Cismontane woodland, Coastal Scrub, Meadows and seeps, Pinyon and juniper woodland, and Valley and foothill grassland. Marginal habitat on the site and nearest known location is more than 5 miles away.
<i>Arabis parishii</i> Parish's rock cress	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-May 1770-2900	Assumed Absent ; Generally Found On Pebble Plains On Clay Soil W/Quartzite Cobbles; Sometimes On Limestone. Outside of known range.
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i> Rock sandwort	Fed: Ca: CNPS: BLM:	none none 2.3 none	July-August 1800-2600	Assumed Absent ; Subalpine Coniferous Forest, Upper Montane Coniferous Forest. Mesic, Sandy Sites. Outside of known range.
<i>Arenaria paludicola</i> Marsh sandwort	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-August 10-170	Assumed Absent ; Growing Up Through Dense Mats Of Typha, Juncus, Scirpus, Etc. In Freshwater Marsh. Outside of known range.
<i>Arenaria ursina</i> Big Bear Valley sandwort	Fed: Ca: CNPS: BLM:	THR none 1B.2 none	May-August 1750-2900	Assumed Absent ; Pebble Plain, Pinyon And Juniper Woodland. Mesic, Rocky Sites. Outside of known range.
<i>Astragalus lentiginosus</i> var. <i>borreganus</i> Borrogo milk-vetch	Fed: Ca: CNPS: BLM:	none none 4.3 none	February-May 30-320	Assumed Absent ; Sandy within Mojavean desert scrub or Sonoran desert scrub. Outside of known range.
<i>Astragalus lentiginosus</i> var. <i>coachellae</i> Coachella Valley milk-vetch	Fed: Ca: CNPS: BLM:	END none 1B.2 none	February-May 60-360	Assumed Absent ; Sonoran Desert Scrub. Sandy Flats, Washes, Outwash Fans, Sometimes On Dunes. Outside of known range.

<i>Astragalus lentiginosus</i> var. sierrae Big Bear Valley milk-vetch	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-August 1800-2600	Assumed Absent ; Stony Meadows And Open Pinewoods; Sandy And Gravelly Soils In A Variety Of Habitats. Outside of known range.
<i>Astragalus leucolobus</i> Big Bear Valley woollypod	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-July (425)1670-2515	Assumed Absent ; Dry Pine Woods, Pebble Plains, Gravelly Knolls Among Sagebrush, Or Stony Lake Shores In The Pine Belt. Outside of known range.
<i>Astragalus pachypus</i> var. jaegeri Jaeger's milk-vetch	Fed: Ca: CNPS: BLM:	none none 1B.1 none	December-June 365-915	Low ; Coastal Scrub, Chaparral, Valley And Foothill Grassland, Cismontane Woodland. Dry Ridges And Valleys. Marginal habitat on the site and nearest known occurrence more than 5 miles away.
<i>Atriplex coronata</i> var. notatior San Jacinto Valley crownscale	Fed: Ca: CNPS: BLM:	END none 1B.1 none	April-August 400-500	Assumed Absent ; Playas, Chenopod Scrub, Valley And Foothill Grassland, Vernal Pools. Dry, Alkaline Flats In The San Jacinto River Valley. Outside of known range.
<i>Berberis nevinii</i> Nevin's barberry	Fed: Ca: CNPS: BLM:	END END 1B.1 none	March-June 290-1575	Assumed Absent ; Multiple Habitats. On Steep, N-Facing Slopes Or In Low Grade Sandy Washes. No habitat on the site and nearest known occurrence more than 10 miles away.
<i>Botrychium crenulatum</i> Scalloped moonwort	Fed: Ca: CNPS: BLM:	none none 2.2 none	June-September 1500-2670	Assumed Absent ; Bogs And Fens, Meadows, Lower Montane Coniferous Forest, Freshwater Marsh. Moist Meadows, Near Creeks. Outside of known range.
<i>Calochortus palmeri</i> var. palmeri Palmer's mariposa lily	Fed: Ca: CNPS: BLM:	none none 1B.2 none	March-July 600-2245	Assumed Absent ; Meadows And Seeps, Chaparral, Lower Montane Coniferous Forest. Vernal Moist Places In Yellow-Pine Forest, Chaparral. No known habitat on the site and nearest known occurrence more than 10 miles away.
<i>Calochortus plummerae</i> Plummer's mariposa lily	Fed: Ca: CNPS: BLM:	none none 1B.2 none	March-July 90-1610	High ; Occurs On Rocky And Sandy Sites, Usually Of Granitic Or Alluvial Material. Can Be Very Common After Fire. Habitat on the site and known occurrence within 1 mile of the site.
<i>Calyptridium pygmaeum</i> Pygmy pussypaws	Fed: Ca: CNPS: BLM:	none none 1B.2 none	June-August 1980-3110	Assumed Absent ; Sandy or gravelly soils within Subalpine coniferous forest or Upper montane coniferous forest. Outside of known range.

<i>Carex occidentalis</i> Western sedge	Fed: Ca: CNPS: BLM:	none none 2.3 none	June-August 1645-3135	Assumed Absent ; Lower montane coniferous forest, Meadows and seeps. Outside of known range.
<i>Castilleja cinerea</i> Ash-gray indian paintbrush	Fed: Ca: CNPS: BLM:	THR none 1B.2 none	June-August 1800-2835	Assumed Absent ; Endemic To The San Bernardino Mountains, In Clay Openings; Often In Meadow Edges. Outside of known range.
<i>Castilleja lasiorhyncha</i> San Bernardino Mountain's owl-clover	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-August 1135-2390	Assumed Absent ; Meadows, Pebble Plain, Upper Montane Coniferous Forest, Chaparral. Stream And Meadow Margins. Outside of known range.
<i>Castilleja montigena</i> Heckard's paintbrush	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 1950-2800	Assumed Absent ; Lower montane coniferous forest, Pinyon and juniper woodland, or Upper montane coniferous forest. Outside of known range.
<i>Caulanthus simulans</i> Payson's jewel-flower	Fed: Ca: CNPS: BLM:	none none 4.2 none	February-June 90-2200	Low ; Sandy, granitic soil within Chaparral or Coastal scrub. Marginal habitat on the site and nearest known occurrence more than 10 miles from the site.
<i>Centromadia pungens</i> <i>ssp. laevis</i> Smooth tarplant	Fed: Ca: CNPS: BLM:	none none 1B.1 none	April-September 0-480	Assumed Absent ; Valley And Foothill Grassland, Chenopod Scrub, Meadows, Playas, Riparian Woodland. Alkali Meadow, Alkali Scrub. Outside of known range.
<i>Chloropyron maritimum</i> <i>ssp. maritimum</i> Salt marsh bird's beak	Fed: Ca: CNPS: BLM:	END END 1B.2 none	May-October 0-30	Assumed Absent ; Coastal dunes and Marshes and swamps (coastal salt). Outside of known range.
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	Fed: Ca: CNPS: BLM:	none none 3.2 none	April-June 40-1705	High ; Coastal Scrub, Chaparral. Dry, Sandy Soils. Habitat on the site and nearest known occurrence within 1 mile of the site.
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> White-bracted spineflower	Fed: Ca: CNPS: BLM:	none none 1B.2 none	April-June 300-1200	Assumed Absent ; Mojavean Desert Scrub, Pinyon-Juniper Woodland. No habitat on the site and nearest known occurrence within 5 miles of the site.
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> Peruvian dodder	Fed: Ca: CNPS: BLM:	none none 2.2 none	July-October 15-280	Assumed Absent ; Marshes and swamps (freshwater). San Bernardino county record presumed extirpated. Outside of known range.
<i>Deinandra paniculata</i> Paniculate tarplant	Fed: Ca: CNPS: BLM:	none none 4.2 none	April-November 25-940	Assumed Absent ; Usually vernal mesic areas within Coastal scrub, Valley and Foothill grassland, or Vernal pools. No habitat on the site and nearest known occurrence more than 5 miles away.

<i>Dodecahema leptoceras</i> Slender-horned spineflower	Fed: Ca: CNPS: BLM:	END END 1B.1 none	April-June 200-760	Assumed Absent ; Chaparral, Coastal Scrub Alluvial Fan Sage Scrub. Flood Deposited Terraces And Washes. Outside of known range and no habitat on the site, but known occurrence within 5 miles of the site.
<i>Drymocallis cuneifolia</i> var. cuneifolia Wedgeleaf woodbeauty	Fed: Ca: CNPS: BLM:	none none 1B.1 none	June-August 1800-2215	Assumed Absent ; Sometimes carbonate within Riparian scrub or Upper montane coniferous forest. Outside of known range.
<i>Eriastrum densifolium</i> ssp. sanctorum Santa Ana River woollystar	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-September 150-610	Assumed Absent ; Coastal Scrub, Chaparral. In Sandy Soils On River Floodplains Or Terraced Fluvial Deposits. Outside of known range.
<i>Eriogonum kennedyi</i> var. alpigenum Southern alpine buckwheat	Fed: Ca: CNPS: BLM:	none none 1B.3 none	July-September 2600-3500	Assumed Absent ; Alpine Boulder And Rock Fields, Subalpine Coniferous Forest. Dry Granitic Gravel. Outside of known range.
<i>Eriogonum kennedyi</i> var. austromontanum Southern mountain buckwheat	Fed: Ca: CNPS: BLM:	THR none 1B.2 none	July-September 1755-2375	Assumed Absent ; Usually Found In Pebble Plain Habitats. Outside of known range.
<i>Eriogonum</i> <i>microthecum</i> var. <i>lacus-ursi</i> Bear Lake buckwheat	Fed: Ca: CNPS: BLM:	none none 1B.1 none	July-August 2000-2100	Assumed Absent ; Great Basin Scrub, Lower Montane Coniferous Forest/Clay Outcrops. Outside of known range.
<i>Eriophyllum lanatum</i> var. obovatum Southern Sierra woolly sunflower	Fed: Ca: CNPS: BLM:	none none 1B.1 none	June-July 1114-2500	Assumed Absent ; Sandy loam within Lower montane coniferous forest or Upper montane coniferous forest. Outside of known range.
<i>Galium angustifolium</i> ssp. gabrielense San Antonio Canyon bedstraw	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-August 1200-2650	Assumed Absent ; Granitic, sandy, or rocky soil within Chaparral or Lower montane coniferous forest. Outside of known range.
<i>Galium johnstonii</i> Johnston's bedstraw	Fed: Ca: CNPS: BLM:	none none 4.3 none	June-July 1220-2300	Assumed Absent ; Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, or Riparian woodland. Outside of known range.
<i>Gilia leptantha</i> ssp. <i>leptantha</i> San Bernardino gilia	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-August 1500-2350	Assumed Absent ; Lower Montane Coniferous Forest. Sandy Or Gravelly Sites. Outside of known range, no habitat on the site, but known occurrence within 5 miles of the site.
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	Fed: Ca: CNPS: BLM:	none none 1A none	August-October 5-1675	Assumed Absent ; Marshes And Swamps Coastal Salt And Freshwater. Historical From Southern California. No habitat on the site but known occurrence within 5 miles of the site.

<i>Heuchera caespitosa</i> Urn-flowered alumroot	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 1155-2650	Assumed Absent ; Rocky areas within Cismontane woodland, Lower montane coniferous forest, Riparian forest (montane), or Upper montane coniferous forest. Outside of known range.
<i>Heuchera hirsutissima</i> Shaggy-haired alumroot	Fed: Ca: CNPS: BLM:	none none 1B.3 none	(May) June-July 1500-3500	Assumed Absent ; Subalpine Coniferous Forest, Upper Montane Coniferous Forest. Often Near Large Rocks. Outside of known range.
<i>Heuchera parishii</i> Parish's alumroot	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-August 1500-3800	Assumed Absent ; Lower Montane Conif. Forest, Subalpine Coniferous Forest, Upper Montane Coniferous Forest, Rocky Places. Outside of known range, not habitat on the site, but known occurrence within 5 miles of the site.
<i>Horkelia cuneata ssp. puberula</i> Mesa horkelia	Fed: Ca: CNPS: BLM:	none none 1B.1 none	February-July (September) 70-810	Assumed Absent ; Chaparral, Cismontane Woodland, Coastal Scrub. Sandy or Gravelly Sites. Outside of known range.
<i>Horkelia wilderae</i> Barton Flats horkelia	Fed: Ca: CNPS: BLM:	none none 1B.1 none	May-September 1675-2925	Assumed Absent ; Lower Montane Coniferous Forest, Upper Montane Coniferous Forest. Outside of known range.
<i>Hulsea vestita ssp. parryi</i> Parry's sunflower	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-August 1370-2895	Assumed Absent ; Granitic or carbonate, rocky, openings within Lower montane coniferous forest, pinyon and juniper woodland, and Upper montane coniferous forest. Outside of known range.
<i>Hulsea vestita ssp. pygmaea</i> Pygmy hulsea	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-October 2835-3900	Assumed Absent ; Alpine Boulder And Rock Field, Subalpine Coniferous Forest. Gravelly Sites; On Granite. Outside of known range.
<i>Imperata brevifolia</i> California satintail	Fed: Ca: CNPS: BLM:	none none 2.1 none	September-May 0-500	Assumed Absent ; Chaparral, Coastal scrub, Mojavean Desert Scrub, Meadows and Seepsoften Alkali, Riparian Scrub/Mesic. Outside of known range.
<i>Ivesia argyrocoma</i> Silver-haired ivesia	Fed: Ca: CNPS: BLM:	none none 1B.2 none	June-August 1480-2680	Assumed Absent ; Meadows, Pebble Plains, Upper Montane Coniferous Forest. In Pebble Plains And Meadows With Other Rare Plants. Outside of known range.
<i>Juglans californica</i> Southern California black walnut	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-August 50-900	Assumed Absent ; Alluvial soil within Chaparral, Cismontane woodland, or Coastal scrub. Outside of known range and none observed on the site.

<i>Juncus duranii</i> Duran's rush	Fed: Ca: CNPS: BLM:	none none 4.3 none	July-August 1768-2804	Assumed Absent ; Mesic areas within Lower montane coniferous forest, meadows and seeps, and Upper montane coniferous forest. Outside of known range.
<i>Lasthenia glabrata ssp. coulteri</i> Coulter's goldfields	Fed: Ca: CNPS: BLM:	none none 1B.1 SEN	February-June 1-1400	Assumed Absent ; Coastal Salt Marshes, Playas, Valley And Foothill Grassland, Vernal Pools. No habitat on the site and nearest known occurrence more than 10 miles away.
<i>Lepidium virginicum var. robinsonii</i> Robinson's pepper-grass	Fed: Ca: CNPS: BLM:	none none 1B.2 none	January-July 1-945	Assumed Absent ; Chaparral, Coastal Scrub. Dry Soils, Shrubland. No known habitat on the site and nearest known occurrence more than 5 miles away.
<i>Lesquerella kingii ssp. bernardina</i> San Bernardino Mountains bladderpod	Fed: Ca: CNPS: BLM:	END none 1B.1 none	May-June 2030-2485	Assumed Absent ; Pinyon And Juniper Woodland, Lower Montane Coniferous Forest. Dry Sandy To Rocky Carbonate Soils. Outside of known range.
<i>Lewisia brachycalyx</i> Short-sepaled lewisia	Fed: Ca: CNPS: BLM:	none none 2.2 none	February-June 1400-2300	Assumed Absent ; Lower Montane Coniferous Forest, Meadows. Dry To Moist Meadows In Rich Loam. Outside of known range.
<i>Lilium humboldtii var. ocellatum</i> Ocellated Humboldt lily	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-August 30-1800	Assumed Absent ; Openings within Chaparral, Cismontane woodland, Coastal Scrub, Lower montane coniferous forest, or Riparian woodland. No habitat on the site.
<i>Lilium parryi</i> Lemon lily	Fed: Ca: CNPS: BLM:	none none 1B.2 none	July-August 1300-2790	Assumed Absent ; Wet, Mountainous Terrain; Gen. In Forested Areas; On Shady Edges Of Streams, In Open Boggy Meadows & Seeps. Outside of known range.
<i>Malacothamnus parishii</i> Parish's bush mallow	Fed: Ca: CNPS: BLM:	none none 1A none	June-July 485	Assumed Absent ; Chaparral, Coastal Sage Scrub. In A Wash. One Site Known. Outside of known range.
<i>Mentzelia tricusplis</i> Spiny-hair blazing star	Fed: Ca: CNPS: BLM:	none none 2.1 none	March-May 150-1280	Assumed Absent ; Sandy or gravelly soils on slopes and in washes, within Mojavean desert scrub. No habitat on the site and nearest known historical occurrence more than 5 miles away.
<i>Mimulus exiguus</i> San Bernardino Mountains monkeyflower	Fed: Ca: CNPS: BLM:	none none 1B.2 none	June-July 1800-2315	Assumed Absent ; Meadows And Seeps, Pebble Plains, Upper Montane Coniferous Forest. Clay Soils. Outside of known range.

<i>Mimulus johnstonii</i> Johnston's monkeyflower	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 975-2920	Assumed Absent ; Lower montane coniferous forest (scree, disturbed areas, rocky or gravelly, or roadside). Outside of known range and no habitat on the site.
<i>Mimulus purpureus</i> Purple monkey-flower	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-June 1900-2300	Assumed Absent ; Meadows And Seeps, Pebble Plain, Upper Montane Coniferous Forest. Dry Clay Or Gravelly Soils Under Jeffrey Pines. Outside of known range.
<i>Monardella macrantha</i> <i>ssp. hallii</i> Hall's monardella	Fed: Ca: CNPS: BLM:	none none 1B.3 none	June-August 695-2195	Moderate ; Broadleaved Upland Forest, Chaparral, Lower Montane Coniferous Forest, Cismontane Woodland, Grassland. Dry Slopes. Marginal habitat on the site and multiple occurrences within 5 miles of the site.
<i>Muhlenbergia californica</i> California muhly	Fed: Ca: CNPS: BLM:	none none 2.3 none	400-2000	Assumed Absent ; Near streams or seeps within Coastal sage, Chaparral, Lower montane coniferous forest, or Meadows. No habitat on the site and nearest known occurrence more than 5 miles away.
<i>Muilla coronata</i> Crowned muilla	Fed: Ca: CNPS: BLM:	none none 4.2 none	March-May 765-1960	Assumed Absent ; Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, or Pinyon and juniper woodland. No known habitat on the site.
<i>Nama stenocarpum</i> Mud nama	Fed: Ca: CNPS: BLM:	none none 2.2 none	January-July 5-500	Assumed Absent ; Marshes And Swamps. Lake Shores, River Banks, Intermittently Wet Areas. Outside of known range.
<i>Navarretia peninsularis</i> Baja navarretia	Fed: Ca: CNPS: BLM:	none none 1B.2 none	Jun-August 1500-2425	Assumed Absent ; Lower Montane Coniferous Forest, Chaparral. Wet Areas In Open Forest. Outside of known range.
<i>Oxytropis oreophila</i> <i>var. oreophila</i> Mountain oxytrope	Fed: Ca: CNPS: BLM:	none none 2.3 none	June-September 3400-3800	Assumed Absent ; Alpine Boulder And Rock Field, Subalpine Coniferous Forest. Gravelly Or Rocky Sites. Outside of known range.
<i>Packera bernardina</i> San Bernardino ragwort	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-July 1800-2300	Assumed Absent ; Meadows And Seeps, Pebble Plains, Upper Montane Coniferous Forest. Mesic, Sometimes Alkaline Meadows, And Dry Rocky Slopes. Outside of known range.
<i>Packera ionophylla</i> Tehachapi ragwort	Fed: Ca: CNPS: BLM:	none none 4.3 none	June-July 1500-2700	Assumed Absent ; Granitic or rocky areas within Lower montane coniferous forest or upper montane coniferous forest. Outside of known range.

<i>Parnassia cirrata</i> var. <i>cirrata</i> San Bernardino grass-of-Parnassus	Fed: Ca: CNPS: BLM:	none none 1B.3 none	August-September 1250-2440	Assumed Absent ; Mesic, streamsides, or sometime calcareous within Lower montane coniferous forest, Meadows and seeps, and Upper montane coniferous forest. Outside of known range.
<i>Perideridia parishii</i> ssp. <i>parishii</i> Parish's yampah	Fed: Ca: CNPS: BLM:	none none 2.2 none	June-August 1390-3000	Assumed Absent ; Lower Montane Coniferous Forest, Meadows, Upper Montane Coniferous Forest. Damp Meadows Or Along Streambeds. Outside of known range.
<i>Phacella mohanvesis</i> Mojave phacelia	Fed: Ca: CNPS: BLM:	none none 4.3 none	April-August 1400-2500	Assumed Absent ; Sandy or gravelly within Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, and Pinyon and juniper woodland. Outside of known range.
<i>Phlox dolichantha</i> Big Bear Valley phlox	Fed: Ca: CNPS: BLM:	none none 1B.2 none	May-July 2000-2970	Assumed Absent ; Pebble Plains, Upper Montane Coniferous Forest. Sloping Hillside. Outside of known range.
<i>Pickeringia montana</i> var. <i>tomentosa</i> Woolly chaparral-pea	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 0-1700	Assumed Absent ; Gabbroic, granitic, or clay soils within Chaparral. No habitat on the site and nearest known occurrence more than 5 miles away.
<i>Piperia leptopetala</i> Narrow-petaled rein orchid	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-July 380-2225	Assumed Absent ; Cismontane woodland, Lower montane coniferous forest, or Upper montane coniferous forest. No habitat on the site.
<i>Poa atropurpurea</i> San Bernardino blue grass	Fed: Ca: CNPS: BLM:	END none 1B.2 none	April-August 1350-2455	Assumed Absent ; Meadows And Seeps. Mesic Meadows Of Open Pine Forests And Grassy Slopes, Loamy Alluvial To Sandy Loam Soil. Outside of known range.
<i>Pyrocoma uniflora</i> var. <i>gossypina</i> Bear Valley pyrocoma	Fed: Ca: CNPS: BLM:	none none 1B.2 none	July-September 1600-2300	Assumed Absent ; Pebble Plain, Meadows And Seeps. Meadows, Meadow Edges, And Along Streams In Or Near Pebble Plain Habitat. Outside of known range.
<i>Ribes divaricatum</i> var. <i>parishii</i> Parish's gooseberry	Fed: Ca: CNPS: BLM:	none none 1B.1 none	February-April 60-305	Assumed Absent ; Riparian Woodland. Salix Swales In Riparian Habitats. Outside of known range.
<i>Rupertia rigida</i> Parish's rupertia	Fed: Ca: CNPS: BLM:	none none 4.3 none	June-August 700-2500	Assumed Absent ; Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Valley and foothill grassland. No habitat on the site.

<i>Sedum niveum</i> Davidson's stonecrop	Fed: Ca: CNPS: BLM:	none none 4.2 none	June-August 2075-3000	Assumed Absent ; Rocky areas within Lower montane coniferous forest, Subalpine coniferous forest, and Upper montane coniferous forest. Outside of known range.
<i>Senecio astephanus</i> San Gabriel ragwort	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-July 400-1500	Assumed Absent ; Rocky slopes within Coastal bluff scrub or Chaparral. No habitat on the site.
<i>Sidalcea hickmanii</i> ssp. <i>parishii</i> Parish's checkerbloom	Fed: Ca: CNPS: BLM:	CAN RAR 1B.2 none	June-August 1000-2135	Assumed Absent ; Chaparral, Lower Montane Coniferous Forest. Disturbed areas on dry, rocky slopes. No habitat on the site and nearest known occurrence within 5 miles of the site.
<i>Sidalcea pedata</i> Bird-foot checkerbloom	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-August 1600-2500	Assumed Absent ; Meadows And Seeps, Pebble Plains. Vernally Mesic Sites In Meadows Or Pebble Plains. Outside of known range.
<i>Sidotheca caryophylloides</i>	Fed: Ca: CNPS: BLM:	none none 4.3 none	July-September 1114-2600	Assumed Absent ; Sandy areas within Lower montane coniferous forest. Outside of known range and not habitat on the site.
<i>Streptanthus bernardinus</i> Laguna Mountains jewel-flower	Fed: Ca: CNPS: BLM:	none none 4.3 none	May-August 670-2500	Assumed Absent ; Chaparral or Lower montane coniferous forest. No habitat on the site and nearest known occurrence more than 10 miles away.
<i>Streptanthus campestris</i> Southern jewel-flower	Fed: Ca: CNPS: BLM:	none none 1B.3 none	May-July 600-2790	Assumed Absent ; Chaparral, Lower Montane Coniferous Forest, Pinyon-Juniper Woodland. Open, Rocky Areas. No habitat on the site and nearest known occurrence less than 5 miles away.
<i>Symphotrichum defoliatum</i> San Bernardino aster	Fed: Ca: CNPS: BLM:	none none 1B.2 none	July-November 2-2040	Assumed Absent ; Meadows, Seeps, Marshes And Swamps, Coastal Scrub, Cismontane Woodland, Lower Montane Coniferous Forest. No habitat on the site and nearest known occurrence less than 5 miles of the site.
<i>Taraxacum californicum</i> California dandelion	Fed: Ca: CNPS: BLM:	END none 1B.2 none	May-August 1620-2800	Assumed Absent ; Meadows And Seeps. Mesic Meadows, Usually Free Of Taller Vegetation. Outside of known range.
<i>Thelypodium stenopetalum</i> Slender-petaled thelypodium	Fed: Ca: CNPS: BLM:	END END 1B.1 none	May-September 1900-2245	Assumed Absent ; Meadows And Seeps, Pebble Plains. Seasonally Moist Alkaline Clay Soils; Associated With Seeps And Springs In The Pebble Plains. Outside of known range.

<p><i>Thelypteris puberula</i> <i>var. sonorensis</i> Sonoran maiden fern</p>	<p>Fed: none Ca: none CNPS: 2.2 BLM: none</p>		<p>January-September 50-550</p>	<p>Assumed Absent; Meadows And Seeps. Along Streams, Seepage Areas. Outside of known range.</p>
<p><i>Trichocoronis wrightii</i> <i>var. wrightii</i> Wright's trichocoronis</p>	<p>Fed: none Ca: none CNPS: 2.1 BLM: none</p>		<p>May-September 5-435</p>	<p>Assumed Absent; Marshes And Swamps, Riparian Forest, Meadows And Seeps, Vernal Pools. Mud Flats Of Vernal Lakes, Drying River Beds. Outside of known range.</p>
<p>Federal Designations (Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS], Bureau of Land Management [BLM]) END: Federally listed, endangered THR: Federally listed, threatened SS: BLM sensitive species</p>				
<p>State Designations: (California Endangered Species Act, California Department of Fish and Wildlife [CDFW], California Native Plant Society [CNPS]) END: State-listed, endangered THR: State-listed, threatened FP: State-fully protected SSC: Species of Special Concern</p>				
<p>CNPS Ranking 1A: Presumed extinct 1B: Rare, threatened, or endangered in California and elsewhere 2: Rare, threatened, or endangered in California, but more common elsewhere 3: Review list of plants requiring more study 4: Plants of limited distribution watch list CNPS Threat Code 0.1: Seriously threatened in California 0.2: Fairly threatened in California 0.3: Not very threatened in California</p>				
<p>Sources: California Natural Diversity Data Base (CDFW) and California Native Plant Society Electronic Inventory (CNPS), Beaumont, Big Bear Lake, El Casco, Forest Falls, Harrison Mountain, Keller Peak, Redlands, Sunnymead, and Yucaipa 7.5 minute USGS quads.</p>				

Special-Status Wildlife Potential for Occurrence

Scientific Name Common Name	Status		Potential for Occurrence; Habitat
INVERTEBRATES			
<i>Carolella busckana</i> Busck's gallmoth	Fed: Ca: BLM: FS:	none none none none	Assumed Absent ; Found in coastal sand dune habitat.
<i>Euchloe hyantis andrewsi</i> Andrew's marble butterfly	Fed: Ca: BLM: FS:	none none none none	Low ; Inhabits shrubland and chaparral habitats in host plants <i>Plantago erecta</i> and <i>Plantago hookeriana californica</i> .
<i>Halictus harmonius</i> Harmonious sweat bee	Fed: Ca: BLM: FS:	none SC none none	Moderate ; the property has small patches of native shrubs that may be suitable for this species, and is within the insect's elevation range (0-7,000 ft.)
FISH			
<i>Rhinichthys osculus ssp. 3</i> Santa Ana speckled dace	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Lives in permanent flowing streams in headwaters of the Santa Ana and San Gabriel Rivers.
<i>Catostomus santaanae</i> Santa Ana Sucker	Fed: Ca: BLM: FS:	THR CSC SS S	Assumed Absent ; Spawns in riffles, usually in coarse gravel bottomed areas of the Colorado River bordering California.
AMPHIBIANS			
<i>Rana aurora draytonii</i> California red-legged frog	Fed: Ca: BLM: FS:	THR CSC none none	Assumed Absent ; Found in lowlands and foothills in or near deep permanent water sources with dense or shrubby riparian vegetation.
<i>Rana muscosa</i> mountain yellow-legged frog	Fed: Ca: BLM: FS:	END CSC none S	Assumed Absent ; Found near permanent sources of water in the San Gabriel, San Jacinto and San Bernardino Mountains.
<i>Scaphiopus hammondi</i> Western spadefoot toad	Fed: Ca: BLM: FS:	none CSC SS none	Low ; Occurs in grassland, scrub, chaparral with nearby vernal pools or other seasonal waters for breeding.
REPTILES			
<i>Phrynosoma coronatum blainvillei</i> Coast (San Diego) horned lizard	Fed: Ca: BLM: FS:	none CSC none S	Moderate ; Occurs in open scrub and other open areas with ample ant prey base.
<i>Aspidoscelis hyperythra beldingi</i> Belding's orange-throated whiptail	Fed: Ca: BLM: FS:	none CSC none none	Low ; Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks.
<i>Aspidoscelis tigris stejnegeri</i> coastal western whiptail	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Found in deserts and semiarid areas with sparse vegetation and open areas with firm, sandy, or rocky soil. Also found in woodland and riparian areas.

<i>Anniella pulchra pulchra</i> silvery legless lizard	Fed: Ca: BLM: FS:	none CSC none S	Low ; Found in moist, sandy or loamy soils with sparse vegetation.
<i>Charina umbratica</i> southern rubber boa	Fed: Ca: BLM: FS:	none THR none S	Assumed Absent ; Occurs in a variety of montane forest habitats within the vicinity of streams or wet meadows in the San Jacinto and San Bernardino Mountains.
<i>Charina trivirgata</i> rosy boa	Fed: Ca: BLM: FS:	none none SS S	Low ; Occurs in desert and chaparral habitats with moderate to dense vegetation.
<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	Fed: Ca: BLM: FS:	none none none S	Moderate ; Found in open, rocky areas in moist microhabitats near intermittent streams.
<i>Lampropeltis zonata (parvirubra)</i> California mountain kingsnake (San Bernardino population)	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Found in a variety of montane habitats in the San Bernardino Mountains.
<i>Thamnophis hammondi</i> two-striped garter snake	Fed: Ca: BLM: FS:	none CSC SS S	Assumed Absent ; Occurs in or near permanent water sources in elevations up to 2,134 meters (7,000') amsl.
<i>Crotalus ruber ruber</i> northern red-diamond rattlesnake	Fed: Ca: BLM: FS:	none CSC none none	Low ; Occurs in chaparral, woodland, grassland, and desert areas in rocky areas with dense vegetation. Requires rodent burrows and/or cracks in rocks for cover.
BIRDS			
<i>Accipiter cooperii</i> Cooper's hawk	Fed: Ca: BLM: FS:	none CSC none none	Observed ; Nests in woodlands, typically in riparian areas and oaks.
<i>Buteo regalis</i> Ferruginous hawk	Fed: Ca: BLM: FS:	none CSC SS none	Low ; Found in prairie, grassland, forest and desert habitats; nests along streams or on steep slopes.
<i>Circus cyaneus</i> northern harrier	Fed: Ca: BLM: FS:	none CSC none none	Observed ; Found in open areas near marshes, fields and prairies.
<i>Elanus leucurus</i> white-tailed kite (nesting)	Fed: Ca: BLM: FS:	none FP none none	Observed ; Nests in trees near marshes or other sources of water in grassland, cropland and woodland-hardwood habitats.
<i>Eremophila alpestris actia</i> California horned lark	Fed: Ca: BLM: FS:	none CSC none none	High ; Occurs in short-grass prairie, open fallow grain fields, and alkali flats in coastal regions from Sonoma to San Diego and east to valley foothills.

<i>Falco mexicanus</i> Prairie falcon	Fed: Ca: BLM: FS:	none CSC none none	Observed ; Hunts in open habitats within the western United States, including grasslands, open desert, open scrub, and agricultural areas. Nests on remote cliff faces.
<i>Progne subis</i> purple martin	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Inhabits woodland and low elevation coniferous forests; nests in old woodpecker cavities.
<i>Cypseloides niger</i> black swift	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Found on cliffs adjacent to or behind waterfalls in the San Bernardino and San Jacinto Mountains.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo (nesting)	Fed: Ca: BLM: FS:	FC END None S	Assumed Absent ; Prefers lower, flood-bottoms of larger river-systems with willows, cottonwoods, and dense understory of nettle, wild grape, or blackberry.
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Occurs on steep, dry hillsides in scrub and chaparral habitats.
<i>Amphispiza belli belli</i> Bell's sage sparrow	Fed: Ca: BLM: FS:	none CSC none none	High ; Occurs in chaparral habitat with dense stands of chamise.
<i>Carduelis lawrencei</i> Lawrence's goldfinch	Fed: Ca: BLM: FS:	none none none none	High ; Nests in open oak woodland and other arid woodland and chaparral habitats near water. Feeds in nearby herbaceous habitats.
<i>Agelaius tricolor</i> tri-colored blackbird (nesting colony)	Fed: Ca: BLM: FS:	none CSC SS none	Assumed Absent ; A highly colonial species. Occurs in wetlands with reeds for nesting.
<i>Lanius ludovicianus</i> loggerhead shrike (nesting)	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Inhabits large, open areas conducive to hunting. Nests in dense brush and shrubs.
<i>Dendroica petechia brewsteri</i> yellow warbler	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Prefers to nest in willows, cottonwoods, aspens and other trees in riparian areas.
<i>Icteria virens</i> yellow-breasted chat (nesting)	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Nests in riparian thickets of willows and other brushy tangles along water courses.
<i>Athene cunicularia</i> burrowing owl (burrow sites)	Fed: Ca: BLM: FS:	none CSC SS none	Moderate ; Associated with low-lying vegetation, open scrub, grassland, and agricultural habitats.
<i>Polioptila californica californica</i> coastal California gnatcatcher	Fed: Ca: BLM: FS:	THR CSC none none	Assumed Absent ; Occurs in coastal sage scrub below 2,500' from Ventura to Baja California.

<i>Plegadis chihi</i> white-faced ibis	Fed: Ca: BLM: FS:	none CSC none none	Assumed Absent ; Found in shallow freshwater marshes with dense tule thickets for nesting.
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	Fed: Ca: BLM: FS:	END END none none	Assumed Absent ; Occurs as summer resident in extensive thickets of low dense willows on the edges of wet meadows, ponds, backwaters, and creeks.
<i>Vireo bellii pusillus</i> least Bell's vireo	Fed: Ca: BLM: FS:	END END none none	Assumed Absent ; Nests in low riparian habitat in the vicinity of water or dry river bottoms below 609 meters (2,000') amsl.
MAMMALS			
<i>Antrozous pallidus</i> pallid bat	Fed: Ca: BLM: FS:	none CSC SS S	Low ; Roosts in dry, open habitats. Occurs in desert, grasslands, shrublands, woodlands and forests.
<i>Lasiurus xanthinus</i> western yellow bat	Fed: Ca: BLM: FS:	none none none none	Assumed Absent ; Roosts in palm trees in foothill riparian, desert wash and palm oasis habitats with access to water for foraging.
<i>Eumops perotis californicus</i> western mastiff bat	Fed: Ca: BLM: FS:	none CSC SS none	Low ; Roosts in crevices of high cliffs and trees in open, arid and semi-arid habitats.
<i>Nyctinomops femorosaccus</i> pocketed free-tailed bat	Fed: Ca: BLM: FS:	none CSC none none	Low ; Found in pine-juniper woodlands, desert scrub and palm oasis habitats in southern California.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	Fed: Ca: BLM: FS:	none CSC none none	High ; Found in coastal sage scrub habitats in southern California.
<i>Glaucomys sabrinus californicus</i> San Bernardino flying squirrel	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Found only in the San Bernardino Mountains in Jeffery pine/white fir mixed forests.
<i>Neotamias speciosus speciosus</i> Lodgepole chipmunk	Fed: Ca: BLM: FS:	none none none none	Assumed Absent ; Summits of isolated Piute, San Bernardino and San Jacinto Mountains. Usually found in open canopy forests, especially lodgepole pine forest.
<i>Chaetodipus californicus femoralis</i> Dulzura pocket mouse	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Found in coastal scrub, chaparral and grassland habitats.
<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	Fed: Ca: BLM: FS:	none CSC none none	Low ; Found in sandy, herbaceous areas occurring in desert wash, desert scrub and desert succulent shrub habitats.

<i>Dipodomys merriami parvus</i> San Bernardino kangaroo rat	Fed: Ca: BLM: FS:	END CSC none none	Assumed Absent ; Occurs in alluvial scrub habitat with sandy soils for burrowing.
<i>Dipodomys stephensi</i> Stephen's kangaroo rat	Fed: Ca: BLM: FS:	END THR none none	Low ; Found in annual and perennial grasslands, preferring buckwheat, chamise, brome grass and filaree.
<i>Perognathus alticolus alticolus</i> San Bernardino white-eared pocket mouse	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Historically found in open pine forests, grassy flats and pinyon-juniper woodland habitats.
<i>Perognathus longimembris brevinasus</i> Los Angeles pocket mouse	Fed: Ca: BLM: FS:	none CSC none S	Assumed Absent ; Associated with sandy washes, scrub, and grasslands.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	Fed: Ca: BLM: FS:	none CSC none none	Low ; Occurs in scrub with dense canopies and rocky cliffs and slopes.
<i>Onychomys torridus ramona</i> southern grasshopper mouse	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Inhabits desert areas, particularly scrub habitats with moderate shrub cover and friable soils for digging. Dependant on arthropod prey.
<i>Taxidea taxus</i> American badger	Fed: Ca: BLM: FS:	none CSC none none	Moderate ; Associated with open stages of dry scrub, forest, and herbaceous habitats. Requires sufficient food, friable soils, and open uncultivated ground.
Federal Designations (Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS], Bureau of Land Management [BLM], Unites States Forest Service [FS]) END: Federally listed, endangered THR: Federally listed, threatened SS: BLM sensitive species			
State Designations: (California Endangered Species Act, California Department of Fish and Game [CDFG], California Native Plant Society [CNPS]) END: State-listed, endangered THR: State-listed, threatened FP: State-fully protected SSC: Species of Special Concern			
Sources: California Natural Diversity Data Base (CDFG) and California Native Plant Society Electronic Inventory (CNPS), Beaumont, Big Bear Lake, El Casco, Forest Falls, Harrison Mountain, Keller Peak, Redlands, Sunnymead, and Yucaipa 7.5 minute USGS quads.			

Appendix E

Representative Photographs



Photo 1. Vegetation community - Brassica (*nigra*) and other mustards



Photo 2. Vegetation community – California Buckwheat Scrub; non-suitable (dense) buckwheat on left with suitable buckwheat on right



Photo 3. Vegetation community – Mulefat Thickets; front left and center of photo



Photo 4. Vegetation Community – Oak Woodland



Photo 5. Vegetation Community – Agriculture



Photo 6. Vegetation Community – Disturbed/Developed



Photo 7. Vegetation Community – Open Orchard



Photo 8. Vegetation Community – Orchard



Photo 9. Pocket of suitable habitat within active agriculture field



Photo 10. Potential Burrowing Owl Burrows – likely a coyote den



Photo 11. Potential Burrowing Owl Burrow - pipe

Appendix F

Burrowing Owl Results Table

Burrow Number	Easting	Northing	Number of potential burrows; Notes
2*	498634.4	3768225.0	Two burrows; in a drainage in buckwheat scrub
3*	498615.9	3768221.8	One burrow; coyote den with coyote scat in buckwheat scrub
4*	498589.4	3768210.4	One burrow; 12" entrance in buckwheat scrub
5*	498552.2	3768206.6	One burrow; 12" entrance in buckwheat scrub
6*	498534.3	3768204.7	Two burrows; coyote den, both 12" in buckwheat scrub
7*	498510.5	3768191.8	Two burrows; coyote den, both 12" in buckwheat scrub
8*	498492.6	3768173.9	One burrow; coyote den, 24" in buckwheat scrub
9*	498461.6	3768166.0	One burrow; squirrel burrow, 10" in buckwheat scrub
10	498673.9	3767686.1	One burrow; 10" pipe in buckwheat scrub
11	498666.6	3767698.6	Two burrows; 10" pipe openings in buckwheat scrub
12	499737.9	3768328.2	One burrow; 12cm squirrel burrow in buckwheat scrub
14	498433.0	3768310.1	One burrow; Berm on edge of road in buckwheat scrub
18	498471.3	3768091.2	One burrow; South facing in buckwheat scrub
22	499170.8	3768116.6	One burrow; 12" entrance in buckwheat scrub
24	498895.5	3768225.2	One burrow; 12" opening in boulder outcrop in drainage
25	498783.3	3768112.5	One burrow; 10" pipe in buckwheat scrub
26	498788.5	3768118.7	One burrow; 10" pipe in buckwheat scrub
27	498943.7	3768222.4	One burrow; 10" pipe in buckwheat scrub
28	498435.8	3768418.2	One burrow; Along road edge
29	498315.1	3767555.1	One burrow; squirrel burrow on edge of road/ag field
30	498380.8	3767590.0	One burrow; squirrel burrow along fence line
32	498412.8	3767618.6	Two burrows; squirrel burrow on edge of road/ag field
33	499519.1	3767557.1	One burrow; edge of ag field between field and oak glen road
35	499084.7	3768054.2	One burrow; north facing in drainage in buckwheat scrub
36	499226.4	3768059.4	Two burrows; coyote den in drainage in buckwheat scrub
37	499386.1	3768013.8	Two burrows; concrete pipe on edge of ag field
38	498715.4	3768273.0	One burrow; 6" wide, SE aspect in drainage in buckwheat scrub
39	498294.2	3767826.5	Two burrows; 6" wide in grassland
40	498318.1	3767829.3	One burrow; rock outcrop in grassland
41	499452.6	3767544.9	Two burrows; one 8", one 5", S aspect in buckwheat scrub
* = Concentrated Burrows in drainage			

Burrowing Owl Survey Data Sheets

Date: 3/11/2013

Survey Season: Breeding

Survey #: 1

GPS File Name: Cab|20130311buowl

Burrowing Owl Survey



Project #: 2012-067/001/E3

Client: Meridian

General Information		Weather Data			
Observers: <u>Brad Harey</u> <u>Emily Graf</u>	Time (24 hr)	AM		PM	
	Start: <u>0650</u> End: <u>1015</u>	Start: <u>1700</u> End: <u>1845</u>			
	Temp* (°F) <small>* above ground in shade</small>	Start: <u>44</u> End: <u>62</u>	Start: <u>81</u> End: <u>73</u>		
	Wind (mph)	Start: <u>3-5</u> End: <u>1-3</u>	Start: <u>1-3</u> End: <u>1-3</u>		
	% Cloud Cover	Start: <u>0</u> End: <u>0</u>	Start: <u>0</u> End: <u>0</u>		

Site Information

Project Name: Casa Blanca

Location: Yucalpa Photos Taken? [Y] [N]

County: San Bernardino County

Area Surveyed: West side & south side + 150m buffer

Physical Characteristics

Elevation: _____ Soils: _____

Land Form*: _____ Other: _____

* e.g. mesa, bajada, wash

Land Uses: _____

N: _____ S: _____

E: _____ W: _____

Disturbances on Site: [e.g. tracks (vehicle, human, livestock); trash; dump sites; blading; other]
Active agriculture taking place in project area (recently diked + planted crops)

Transect Width: 20 meters

Field Observations

Vegetation Communities: _____

Plants: _____

Animals: [include: B - burrow, S - scat, O - observed, T - tracks, C - carcass, or Other (specify)]

<u>Weme</u>	<u>SPTO</u>	<u>CAQU</u>	<u>NUWO</u>
<u>AMKe</u>	<u>DEJunc</u>	<u>sosp</u>	<u>SAPH</u>
<u>lego</u>	<u>RSHAWK</u>	<u>WSJAY</u>	<u>CATrasher</u>
<u>YRbWA</u>	<u>BLPH</u>	<u>CALT</u>	<u>gullsp.</u>
<u>CORA</u>	<u>Parrots!</u>	<u>VGSwallow</u>	
<u>AMCR</u>	<u>MOdo</u>	<u>CA grand squirrel</u>	
<u>WEBL</u>	<u>-coyote</u>	<u>cottontail</u>	
<u>NOHA*</u>	<u>Kingbird</u>	<u>deer (tracks)</u>	
<u>ANHU</u>	<u>HOFF</u>	<u>NOFL</u>	
<u>AMRO</u>	<u>WESP</u>		

Comments

- Surveyed from 10-1015 b/c while walking back to vehicle, multiple potential burrows (coyote dens) observed in survey area.

- Did not survey active ag/crop fields - just edges

Date: 3/11/2013
 Survey Season: Breeding
 Survey #: 1
 GPS File Name: Calv 20130311burrow bh

Burrowing Owl Survey



Project #: 2012-067/001/E3
 Client: Meridian

Burrowing Owl Sign			
Sign	# features	Location (UTM Northing/Easting)	Comments (aspect, dimensions, etc.)
Pot. burrow	1	3767612/498388	No sign; 11cm wide, N. facing, under olive tree; egg burrow w/ rocks in front
Pot. burrow	2	3768224/498633	Scat in front (Coyote), in drainage No Burrow sign
Pot. burrow	1	3768221/498614	Scat in front (Coyote); 15cm wide burrow No Burrow sign; in drainage
Pot. burrow	1	3768204/498588	No Burrow sign; above drainage 12" wide
Pot. burrow	1	3768206/498551	No Burrow sign; above drainage 12" wide
Pot. burrow	2	3768204/498532	No Burrow sign; above drainage 12"; Coyote den (both)
Pot. burrow	2	3768192/498509	No Burrow sign; above drainage 12" (both)
Pot. burrow	1	3768173/498492	No Burrow sign; above drainage 24" wide
Pot. burrow	1	3768165/498460	10" wide
Pot. burrow	1	3767689/498674	10" wide in old drainage pipe
Pot. burrow	2	3767701/498664	2 openings in drainage pipe side of 10" wide drainage
Pot. burrow	3	3768328/499738	No Burrow sign 12cm wide; egg burrow
Comments:			

A.M. ↑
 ↓ P.M.

Date: 3/12/2013
 Survey Season: Breeding
 Survey #: 1
 GPS File Name: 2

Burrowing Owl Survey



Project #: 2012-067/001/E3
 Client: Meridian

General Information		Weather Data			
Observers: <u>Brad Haley</u> <u>Krissy Day</u>	Time (24 hr)	AM		PM	
	Temp* (°F) <small>* above ground in shade</small>	Start: <u>0645</u>	End: <u>0945</u>	Start: <u>0945</u>	End: _____
	Wind (mph)	Start: <u>48</u>	End: <u>72</u>	Start: _____	End: _____
	% Cloud Cover	Start: <u>1-3</u>	End: <u>1-3</u>	Start: _____	End: _____
		Start: <u>0</u>	End: <u>0</u>	Start: _____	End: _____

Site Information

Project Name: Casa Blanca

Location: Yucaipa Photos Taken? [N]

County: San Bernardino County

Area Surveyed: east side + buffer of drainage edges

Physical Characteristics

Elevation: _____ Soils: _____

Land Form*: _____ Other: _____
* e.g. mesa, bajada, wash

Land Uses:

N: _____ S: _____

E: _____ W: _____

Disturbances on Site: [e.g. tracks (vehicle, human, livestock); trash; dump sites; blading; other]

Transect Width: 20 meters

Field Observations

Vegetation Communities:

Plants

Animals: [include: B - burrow, S - scat, O - observed, T - tracks, C - carcass, or Other (specify)]

CO RA
CGS
Cottontail
CA TH
WSJAY
MO DO
AM KE
NO HA*

Comments

Didn't survey active ag/crop fields - just the edges

Date: 3/13/2013

Survey Season: Breeding

Survey #: 1

GPS File Name: Cal\20130313 burowlam-bh

Burrowing Owl Survey



Project #: 2012-067/001/E3

Client: Meridian

General Information		Weather Data			
Observers: Brad Haley Katherine Vienne	Time (24 hr)	AM		PM	
	Temp* (°F) <small>6" above ground in shade</small>	Start: 0700	End: 0915	Start: _____	End: _____
	Wind (mph)	Start: 5-8	End: 1-3	Start: _____	End: _____
	% Cloud Cover	Start: 0	End: 0	Start: _____	End: _____

Site Information

Project Name: Casa Blanca

Location: Yucaipa Photos Taken? [Y] [N]

County: San Bernardino County

Area Surveyed: NW corner in 150m buffer zone

Physical Characteristics

Elevation: ~~3075 ft~~ 3000 ft - 3460 ft Soils: Green field sandy loam 2-9% slopes

Land Form*: hillside Other: Sanguis sandy loam 30-50% slopes
* e.g. mesa, bajada, wash Tijuna Gravelly Loamy slopes

Land Uses:

N: open space S: low density residential

E: Rural (low density) residential w/horses W: Rural (low) density residential

Disturbances on Site: [e.g. tracks (vehicle, human, livestock); trash; dump sites; blading; other]
In buffer survey area, previous pads created for housing development. Trash + OHV use prevalent

Transect Width: 20 meters

Field Observations

Vegetation Communities:

Plants

Animals: [include: B - burrow, S - scat, O - observed, T - tracks, C - carcass, or Other (specify)]

Cotton tail COBA
SP TO RTHA
WSC JAF CALT
~~BH~~ Web1 NOHA
AmKE ANHU
WSP MODO
~~GFF~~ Lego

Comments

NOHA 3768297/498426 flyover/swaging in grassland

Date: 4/15/2013

Survey Season: Breeding

Survey #: 2

GPS File Name: CABL20130415BUOW2

Burrowing Owl Survey



Project #: 2012-067/001/E3

Client: Meridian

General Information		Weather Data			
Observers:		AM		PM	
KRISSEY DAY Emily Graf Katherine Vienne		Time (24 hr)	Start: 0600 End: 1000	Start: 1720 End: 1925	
		Temp* (°F) <small>6" above ground in shade</small>	Start: 47°F End: 62°F	Start: 56°F End: 54°F	
		Wind (mph)	Start: 0-2 End: 1-3	Start: 1-3 End: 1-3	
		% Cloud Cover	Start: 100% End: 90%	Start: 75% End: 95%	

Site Information

Project Name: Casa Blanca

Location: Yucaipa Photos Taken? [N]

County: San Bernardino County

Area Surveyed: WEST SIDE, NORTH SIDE, 150m Buffer & NW corner Buffer

Physical Characteristics

Elevation: _____ Soils: _____

Land Form*: _____ Other: _____

* e.g. mesa, bajada, wash

Land Uses:

N: _____ S: _____

E: _____ W: _____

Disturbances on Site: [e.g. tracks (vehicle, human, livestock); trash; dump sites; blading; other]

Transect Width: 7-10 meters

Field Observations

Vegetation Communities:

Plants

Animals: [include: B - burrow, S - scat, O - observed, T - tracks, C - carcass, or Other (specify)]

AMCR SPTD RTHA
 CORA CATO CA ERAND SQUIRREL
 HOFI WEST Cottontail
 AMKE WEKI
 WCSP NOHA*
 ANHU ~~WEKA~~ WEWE
 BLPH CAQU

Comments

Date: 04/16/13

Survey Season: Breeding

Survey #: 2

GPS File Name: Cab1120130916 Burrow 2

Burrowing Owl Survey



Project #: 2012-067/001/E3

Client: Meridian

General Information		Weather Data			
Observers: KRissy RAN Emily Graf		AM		PM	
Time (24 hr)		Start: 0555	End: 1000	Start: _____	End: _____
Temp* (°F) <small>6" above ground in shade</small>		Start: 47F	End: 52	Start: _____	End: _____
Wind (mph)		Start: 0-2	End: 1-3	Start: _____	End: _____
% Cloud Cover		Start: 97%	End: 100	Start: _____	End: _____

Site Information

Project Name: Casa Blanca

Location: Yucaipa Photos Taken? [Y] [N]

County: San Bernardino County

Area Surveyed: EAST SIDE + Bottom 7 DRAWING AREAS + SOUTH SIDE

Physical Characteristics

Elevation: _____ Soils: _____

Land Form*: _____ Other: _____

* e.g. mesa, bajada, wash

Land Uses:

N: _____ S: _____

E: _____ W: _____

Disturbances on Site: [e.g. tracks (vehicle, human, livestock); trash; dump sites; blading; other]

Transect Width: 7-20 meters

Field Observations

Vegetation Communities:

Plants

Animals: [include: B - burrow, S - scat, O - observed, T - tracks, C - carcass, or Other (specify)]

LATO WEST

NO HE (2) ANNU

CORA

MOMO

MEGA WRM

COYOTE

WCSP

RTHA

Comments

Date: 6/10/13

Survey Season: Breeding

Survey #: 3

GPS File Name: CARL20130610BH

Burrowing Owl Survey



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Project #: 2012-067/001/E3

Client: Meridian

General Information		Weather Data			
Observers: B. HAVEN, E GRAF	Time (24 hr)	AM		PM	
	Temp* (°F) <small>6" above ground in shade</small>	Start: 0535	End: 0915	Start: 005	End: 1957
	Wind (mph)	Start: 50	End: 70	Start: 02	End: 76
	% Cloud Cover	Start: 0-2	End: 0-3	Start: 3-8	End: 0-2
		Start: 0%	End: 0%	Start: 0%	End: 0

Site Information

Project Name: Casa Blanca

Location: Yucaipa Photos Taken? [Y] [N]

County: San Bernardino County

Area Surveyed:

Physical Characteristics

Elevation: Soils:

Land Form*: Other:

* e.g. mesa, bajada, wash

Land Uses:

N: S:

E: W:

Disturbances on Site: [e.g. tracks (vehicle, human, livestock); trash; dump sites; blading; other]

Transect Width: 20 meters

Field Observations

Vegetation Communities:

Plants

Animals: [include: B - burrow, S - scat, O - observed, T - tracks, C - carcass, or Other (specify)]

COTTONTAIL ROPI LEGO
 SPTD CATO HONR
 CAQU MOTO AMKE
 CORA
 BLPH
 PTHA PUPETS
 PHAI HOOR
 WEKI SPINER (ZAW)
 WREW CALIFORNIA GROUND SQ

Comments

Date: 6/11/13

Survey Season: Breeding

Survey #: 3

GPS File Name: CABL20120611 BH

Burrowing Owl Survey



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Project #: 2012-067/001/E3

Client: Meridian

General Information		Weather Data				
Observers:		AM		PM		
B. Halay K. Vienne		Time (24 hr)	Start: <u>0535</u>	End: <u>9:00</u>	Start: _____	End: _____
		Temp* (°F) <small>6" above ground in shade</small>	Start: <u>55</u>	End: <u>76</u>	Start: _____	End: _____
		Wind (mph)	Start: <u>1-3</u>	End: <u>1-3</u>	Start: _____	End: _____
		% Cloud Cover	Start: <u>Clear</u>	End: <u>10%</u>	Start: _____	End: _____

Site Information

Project Name: Casa Blanca

Location: Yucaipa

County: San Bernardino County

Area Surveyed: _____

Photos Taken? [Y] [N]

Physical Characteristics

Elevation: 3000 - 3460 (#)

Land Form*: _____
* e.g. mesa, bajada, wash

Soils: _____

Other: _____

Land Uses:

N: Ag

E: Ag

S: Ag

W: Ag

Disturbances on Site: [e.g. tracks (vehicle, human, livestock); trash; dump sites; blading; other]
off Road vehicle tracks, discing, Ag.

Transect Width: 20 meters

Field Observations

Vegetation Communities:

Plants

Animals: [include: B - burrow, S - scat, O - observed, T - tracks, C - carcass, or Other (specify)]

desert cottontail granite Spiny Lizard
White-tailed deer

WEDL CALT ANHU
EUST AMCR SPTO
HOPI CORA CALT
WEKI MODO cormorant sp.
NOMO WEME Great H. OWL (x2) GHAOW
LEGO PHAI WESC
BLPH

Comments

Date: 7/9/2013
 Survey Season: Breeding
 Survey #: 4
 GPS File Name: Cabl20130709buow4-KW

Burrowing Owl Survey



Project #: 2012-067/001/E3
 Client: Meridian

Cabl20130709buow4-KW

General Information		Weather Data			
Observers: <u>Brad Haly</u> <u>Krissy Walker</u> <u>Katherine Venne</u>		AM		PM <u>2026</u>	
	Time (24 hr)	Start: <u>0530</u>	End: <u>1000</u>	Start: <u>0630</u>	End: <u>0826</u>
	Temp* (°F) <small>6" above ground in shade</small>	Start: <u>75</u>	End: <u>96</u>	Start: <u>92</u>	End: <u>85</u>
	Wind (mph)	Start: <u>1-3</u>	End: <u>1-2</u>	Start: <u>1</u>	End: <u>1</u>
	% Cloud Cover	Start: <u>75</u>	End: <u>40</u>	Start: <u>5</u>	End: <u>25</u>

Site Information

Project Name: Casa Blanca

Location: Yucaipa Photos Taken? [Y] [N]

County: San Bernardino County

Area Surveyed:

Physical Characteristics

Elevation: Soils:

Land Form*: Other:

* e.g. mesa, bajada, wash

Land Uses:

N: S:

E: W:

Disturbances on Site: [e.g. tracks (vehicle, human, livestock); trash; dump sites; blading; other]

Transect Width: 20 meters

Field Observations

Vegetation Communities:

Plants

Animals: [include: B - burrow, S - scat, O - observed, T - tracks, C - carcass, or Other (specify)]

CORA Coyote Deer
CARU Lego ~~Western Scrub Jay~~
DELO Weki Western Scrub Jay
PHAM Cotton tail
CALT SAPIA
ANHU
MODO

Comments

Date: 7/10/13

Survey Season: Breeding

Survey #: 4

GPS File Name: cab00130710-buow4am-kw

Burrowing Owl Survey



Project #: 2012-067/001/E3

Client: Meridian

General Information		Weather Data			
Observers:		AM		PM	
	Time (24 hr)	Start: 0635	End: 01000	Start: _____	End: _____
	Temp* (°F) <small>8" above ground in shade</small>	Start: 74	End: 82	Start: _____	End: _____
	Wind (mph)	Start: 0-1	End: 0-1	Start: _____	End: _____
% Cloud Cover	Start: 100 95	End: 60	Start: _____	End: _____	

Site Information

Project Name: Casa Blanca

Location: Yucaipa

County: San Bernardino County

Area Surveyed:

Photos Taken? [Y] [N]

Physical Characteristics

Elevation: _____ Soils: _____

Land Form*: _____ Other: _____

* e.g. mesa, bajada, wash

Land Uses:

N: _____ S: _____

E: _____ W: _____

Disturbances on Site: [e.g. tracks (vehicle, human, livestock); trash; dump sites; blading; other]

Transect Width: ²⁰ meters

Field Observations

Vegetation Communities:

Plants

Animals: [include: B - burrow, S - scat, O - observed, T - tracks, C - carcass, or Other (specify)]

GA OU Cottontail Coyote juvenile RTHA

WH KI Deer ANHU

CORA Skunk Say's Pheobe

WE ME Am Ke juvenile

MO DO Western Scrub Jay AMCR

PH PE Rock Pigeon

Comments

Memorandum

To Joseph Lambert, Development Services Director, City of Yucaipa Page 1

CC

Subject Oak Tree Survey Report for the City of Yucaipa in Support of the Wilson Creek Estates Project, San Bernardino County, California

From AECOM

Date January 28, 2016

This letter report documents the findings of the 2016 oak tree survey for the proposed Wilson Creek Estates Project (Project) conducted by AECOM for the City of Yucaipa (City), within San Bernardino County, California. This letter report was prepared per request from the City to inventory all potentially impacted oak trees within the Project. The location of all protected oak trees including density estimates are detailed in this report. This tree survey is required for activities associated with development of the site and was conducted in accordance with the Yucaipa Municipal Code:

- **89.0501 Purpose.** *Further uncontrolled and indiscriminate destruction of oak trees would detrimentally affect the safety and welfare of the citizens of Yucaipa. The conservation program outlined in this chapter contributes to the welfare and aesthetics of the community and retains the great historical and environmental value of these trees. This chapter sets forth the policy of the City to require the conservation of all healthy oak trees unless reasonable and conforming use of the property justifies the removal, cutting, pruning and/or encroachment into the protected zone of an oak tree.*
 - (f) "Oak tree" shall mean any oak tree of the Genus *Quercus* except for Scrub Oak (*Quercus dumosa*).

As indicated in the Yucaipa Municipal Code, a permit is required to remove any of the protected *Quercus* species associated with the Project site:

- **89.0515 Permit Required.**
 - (a) *Permit required. No person shall cut, remove, encroach into the protected zone, or relocate any oak tree on any public or private property within the City unless a valid oak tree permit has been issued by the City pursuant to the provisions of this chapter and the Oak Tree Conservation and Protection Guidelines. The status of limbs or trees as deadwood or dead trees must be confirmed by an Oak Tree Conservation Consultant.*
 - (b) *Exemptions. A permit is not required to cut or remove a tree(s) under the following circumstances:*
 - *Trees that do not exceed two inches (2") in diameter when measured at a point four and half feet (4 1/2") above the tree's natural grade.*

The proposed Project includes the development of an approximate 247-acre property within the City of Yucaipa, California. The project is generally located approximately four miles north of Interstate 10 freeway, along Glen Oaks Road (Figure 1). Located in the northeastern portion of the City of Yucaipa, the project is bound by Fir Avenue to the north, Oak Glen Road to the south, Jefferson Street and Cherry Croft Drive to the west, and an undefined north-south line one mile east of Jefferson Street. The property can be found within the southern half of Section 29 and the southeast quarter of the southeast quarter of Section 30, in Township 1 South, Range 1 West, San Bernardino Base Meridian of the U.S. Geological Survey (USGS) Yucaipa 7.5-minute topographic quadrangle (Figure 2).

The property adjacent to the south of the site is located at 36204 Oak Glen Road, on an historic ranch which supports residential and agricultural buildings and features dating from 1882. The property includes Assessor Parcel Numbers 0321-101-02-0000, 0321-101-12-0000, 0321-101-20-0000 and 0321-082-15-0000.

METHODS

The oak tree survey was performed by AECOM biologists Carol Thompson and John Parent on January 18, 2016. Biologists completed a pedestrian survey of the project area, with the purpose of identifying and mapping all individuals of the genus *Quercus* with a trunk diameter greater than 2 ½ inches at 4 ½ feet above grade.

Data were collected using a Trimble™ Juno handheld Global Positioning System (GPS) unit to record the coordinates of the groves and aerial imagery field maps of the project site (Figure 3). Representative site and plant specimen photographs were taken during the survey. Taxonomy of oak species identified within the study area was based on *The Jepson Manual 2nd Edition* (Baldwin *et al.* 2012).

Due to the location and growth form of the dominant oak species on site, *Quercus john-tuckerii* (Tucker's Oak) it was unfeasible to count and obtain coordinates for each individual oak tree within the project area given the time permitted. To obtain an accurate inventory of the oaks on-site, measurements were taken in the field using GPS to establish an estimated density of oaks within the groves. The oak groves were divided into two groups. The first group is an approximately one acre stand of Tucker's Oak in the northeast quadrant of the project. The average density for this grove was estimated to be approximately 1 oak tree per every 225 ft². The second group consisted of all remaining groves of Tucker's Oaks within the project. The average density for these combined groves was estimated to be approximately 1 oak tree per every 400 ft². In addition, total area of the groves was obtained from the GPS data and results of ground-truthing.

RESULTS

A total area of 386,263 ft² was calculated for the Oak species on-site. Based on the calculations an estimated 1,716 individual Tucker's Oaks, 1 Canyon Live Oak, and 1 Coast

Live Oak are present within the project area. Table 1 details the associated survey data including oak species and inventory information.

Site photographs taken during the survey are provided in Appendix A.

Table 1. Survey Data			
Common Name	Scientific Name	Protection Status	Number
Coast Live Oak	<i>Quercus agrifolia</i>	Protected by City of Yucaipa Oak Tree Conservation Ordinance	1
Canyon Live Oak	<i>Quercus chrysolepis</i>	Protected by City of Yucaipa Oak Tree Conservation Ordinance	1
Tucker’s Oak	<i>Quercus john-tuckerii</i>	Protected by City of Yucaipa Oak Tree Conservation Ordinance	1,075 (Based on estimations)

RECOMMENDATIONS

The removal of protected oak trees by Project activities would be potentially significant and therefore mitigation is necessary.

The project will be subject to Yucaipa Development Code Division 9, Plant Protection and Management, Chapter 5 Oak Tree Conservation, requiring an application and applicable fee paid to the City for removal of protected oak trees. The Ordinance indicates that the Community Development Director may approve, deny, or conditionally approve a request for removal of three or fewer oak trees on a single parcel. Any request for removal of four or more oak trees on a single parcel shall be reviewed by the Planning Commission which shall make recommendations to the Council which shall approve or deny the oak tree permit.

The Ordinance further identifies that conditions that may be imposed upon approval of an oak tree removal permit may include but not limited to, any of the following:

- A condition requiring the replacement or placement of additional trees on the subject property to offset the impacts associated with the loss of a tree, limbs or encroachment into the protected zone of an oak tree;
- The relocating of a tree on-site or off-site, or the planting of a new tree off-site within the City to offset the loss of a tree;
- A condition requiring an objectively observable maintenance and care program be initiated to insure the continued health and care of oak tree(s) on the property;

- Payment of a fee equal to the replacement cost of the tree or donation of a boxed tree to the City or other public agency to be used elsewhere in the community should a suitable replacement location of the tree not be possible on-site or off-site.

Based on the significant number of trees potentially impacted and the uncertainty of how and when future development of infrastructure and individual lots will impact the protected trees, AECOM recommends the City include the following mitigation measure to address this issue and to clarify the implementation of the Ordinance prior to the construction of infrastructure as well as the proposed individual parcels:

Prior to the issuance of grading permits for infrastructure facilities (Project roadways) it will be the responsibility of the Project proponent (master developer) to obtain the necessary permits for removal of protected oak trees as applicable. Subsequent oak tree removal permits outside of the public right-of-way will be the responsibility of the individual lot owners as applicable.

Nesting surveys will be required within 72 hours of protected oak tree removal outside of the raptor breeding season of January 1 through July 15, where feasible, to avoid take of the fully protected nesting white-tailed kite, state protected Cooper's hawk, and any additional protected nesting birds under the Migratory Bird Treaty Act (MBTA).

- In order to comply with Section 10 of the MBTA and relevant sections of the California Fish and Game Code (e.g., 3503, 3503.4, 3504, 3505, et seq.), any removal of protected oak trees within the Project footprint should take place during September through December, outside of the raptor breeding season (January 1 to July 15) and outside of the typical avian nesting season (February 15 to September 15), to the maximum extent practical.
- In the event that removal of protected oak trees is necessary during the breeding season (i.e., February 1–September 1), a qualified biologist will conduct a preconstruction survey of construction areas and appropriate buffer no more than 72 hours prior to construction to identify the locations of avian nests. Should nests be found, an appropriate buffer will be established around each nest site (typically 200 feet, or 500 feet for raptors and listed species). To the extent feasible, no construction will take place within this buffer until the nest is no longer active. In the event that construction must occur within the buffer, the biological monitor will take steps to ensure that construction activities are not disturbing or disrupting nesting activities. If the biological monitor determines that construction activities are disturbing or disrupting nesting activities, then the biologist shall have the authority to halt construction in order to reduce the noise and/or disturbance to the nests, as appropriate and with consultation with California Department of Fish and Wildlife (CDFW).

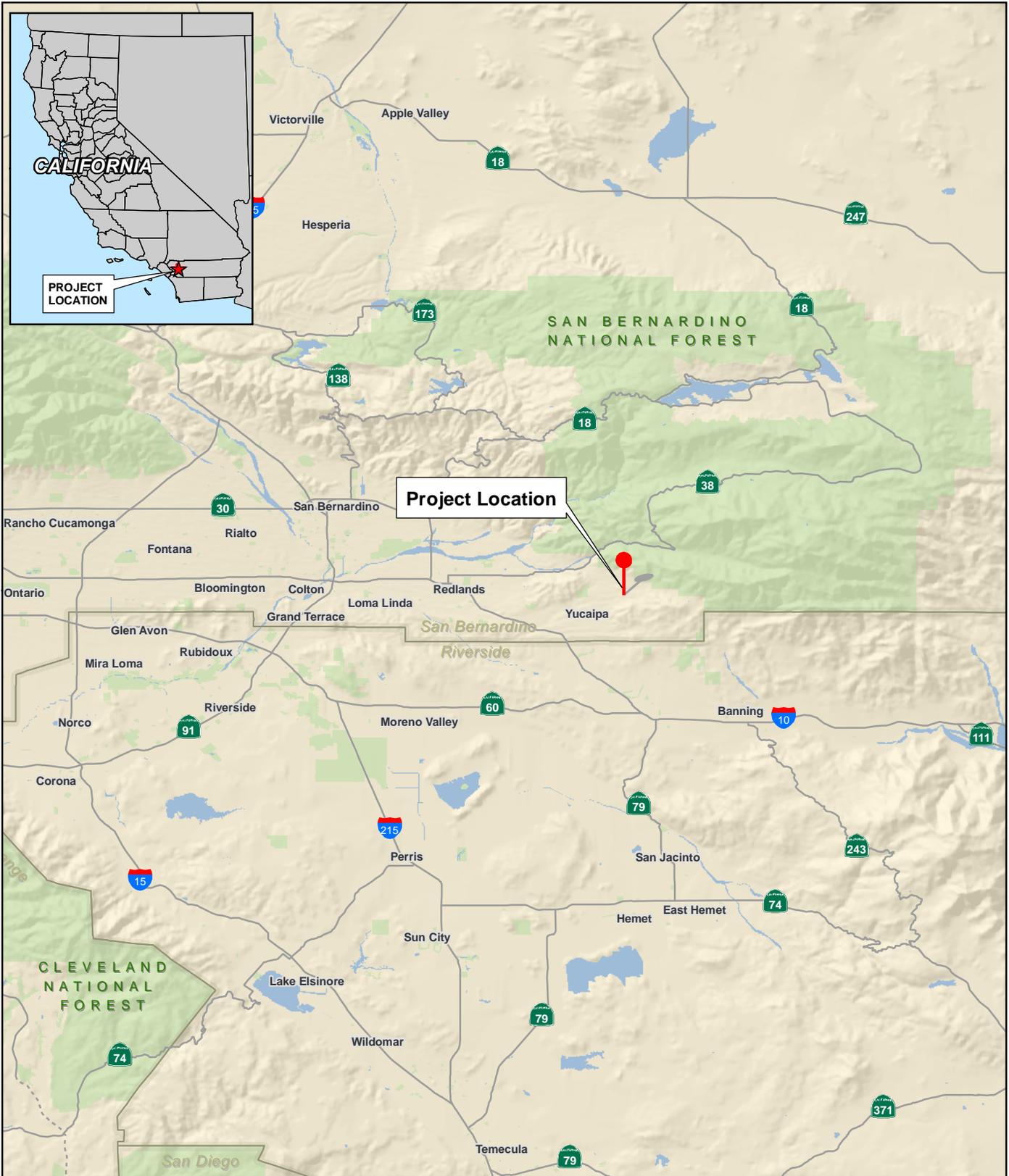
REFERENCES

Baldwin, B.G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012 The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

CNPS (California Native Plant Society). 2015. CNPS Electronic Inventory of Rare and Endangered Plants. URL: <http://www.rareplants.cnps.org/>.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, Department of Fish and Game. October.

USGS (United States Geological Service). 1981. 7.5-Minute Quadrangle Map, Anaheim, California.



I:\Yucaipa Wilson Creek\MXD\Figure1_Regional.mxd

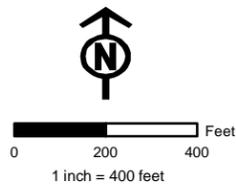
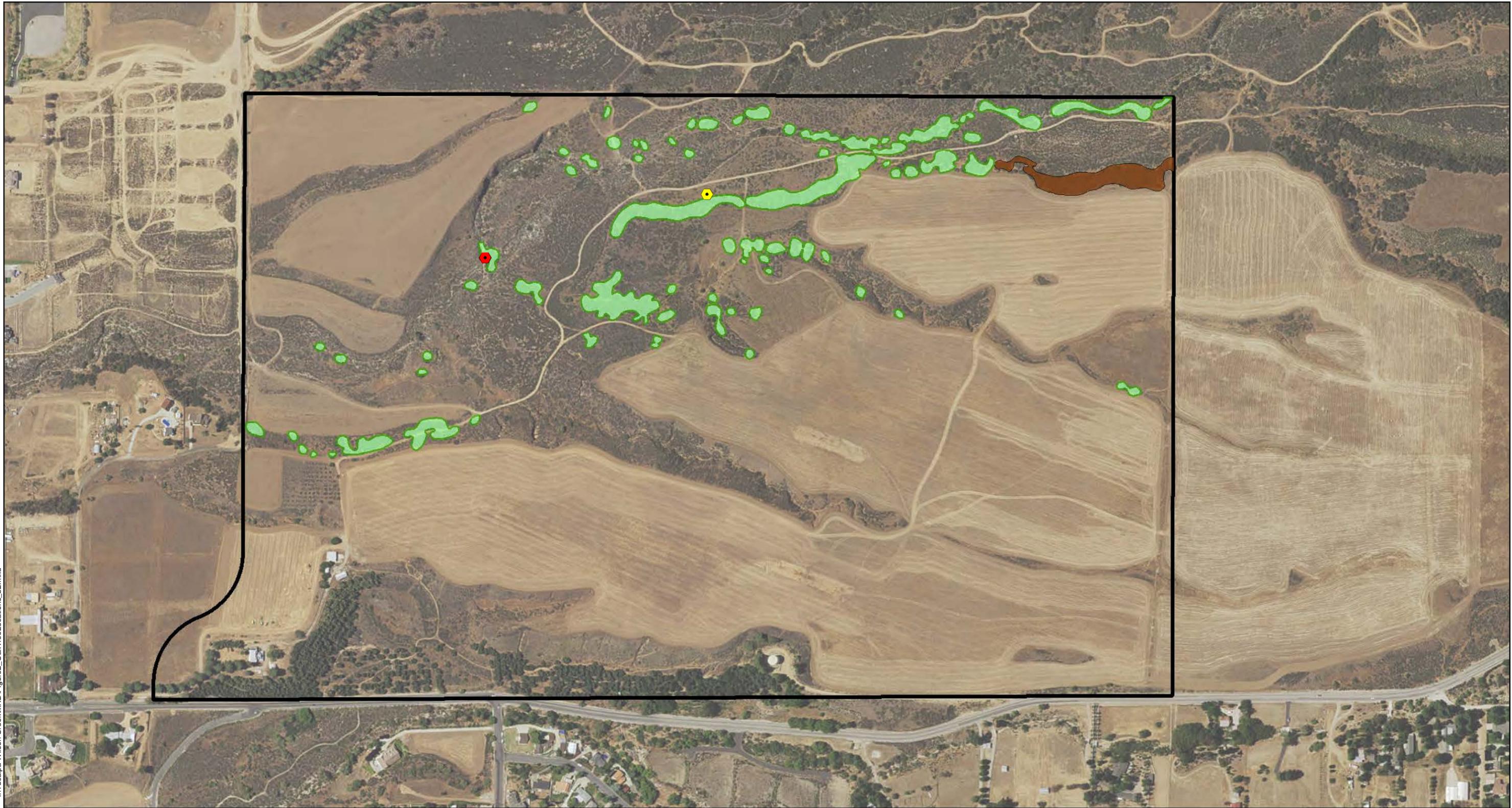
Figure 1
Regional Location

Wilson Creek - Yucaipa



0 10 Miles

I:\Yucaipa Wilson Creek\MXD\Figure2_OakTreeLocations_b2.mxd



-  Project Site
-  Canyon Live Oak
-  Coast Live Oak
-  High Density Oak Scrub
-  Low Density Oak Scrub

Figure 2
Protected Oak Tree Locations

Wilson Creek - Yucaipa



**Appendix A
Site Photographs**



Photograph: 1

Photo Date: January 18, 2016

Location: Northern boundary of the project area.

Description: Southeast-facing view of the project area.



Photograph: 2

Photo Date: January 18, 2016

Location: Northern boundary of the project area.

Description: South-facing view of the project area.



Photograph: 3

Photo Date: January 18, 2016

Location: Northern boundary of the project area.

Description: Southwest-facing view of the project area.



Photograph: 4

Photo Date: January 18, 2016

Location: Western boundary of the project area.

Description: East-facing view of the project area.

