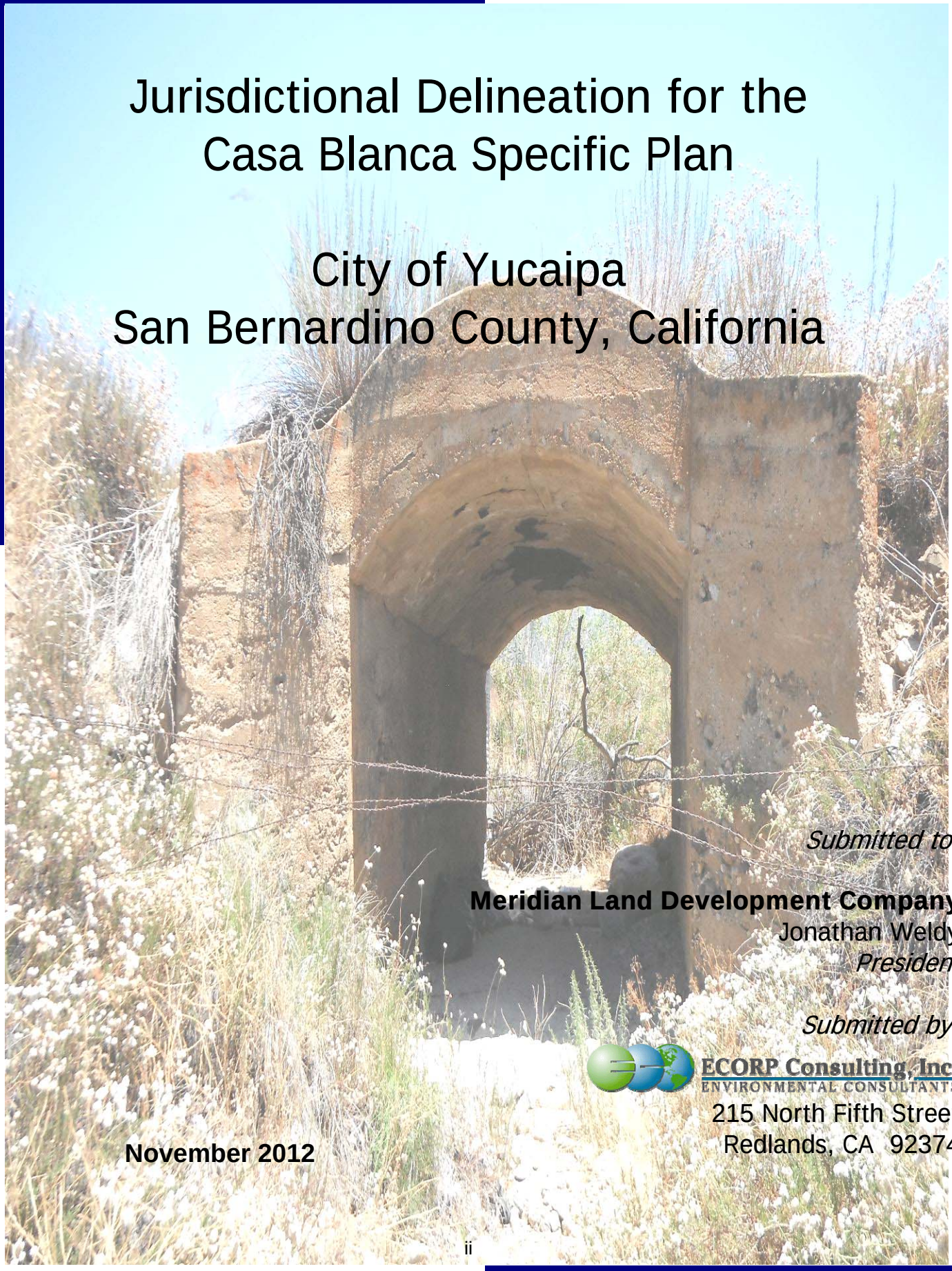
Jurisdictional Delineation for the Casa Blanca Specific Plan

City of Yucaipa
San Bernardino County, California



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DRAFT

Jurisdictional Delineation

Casa Blanca Specific Plan

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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

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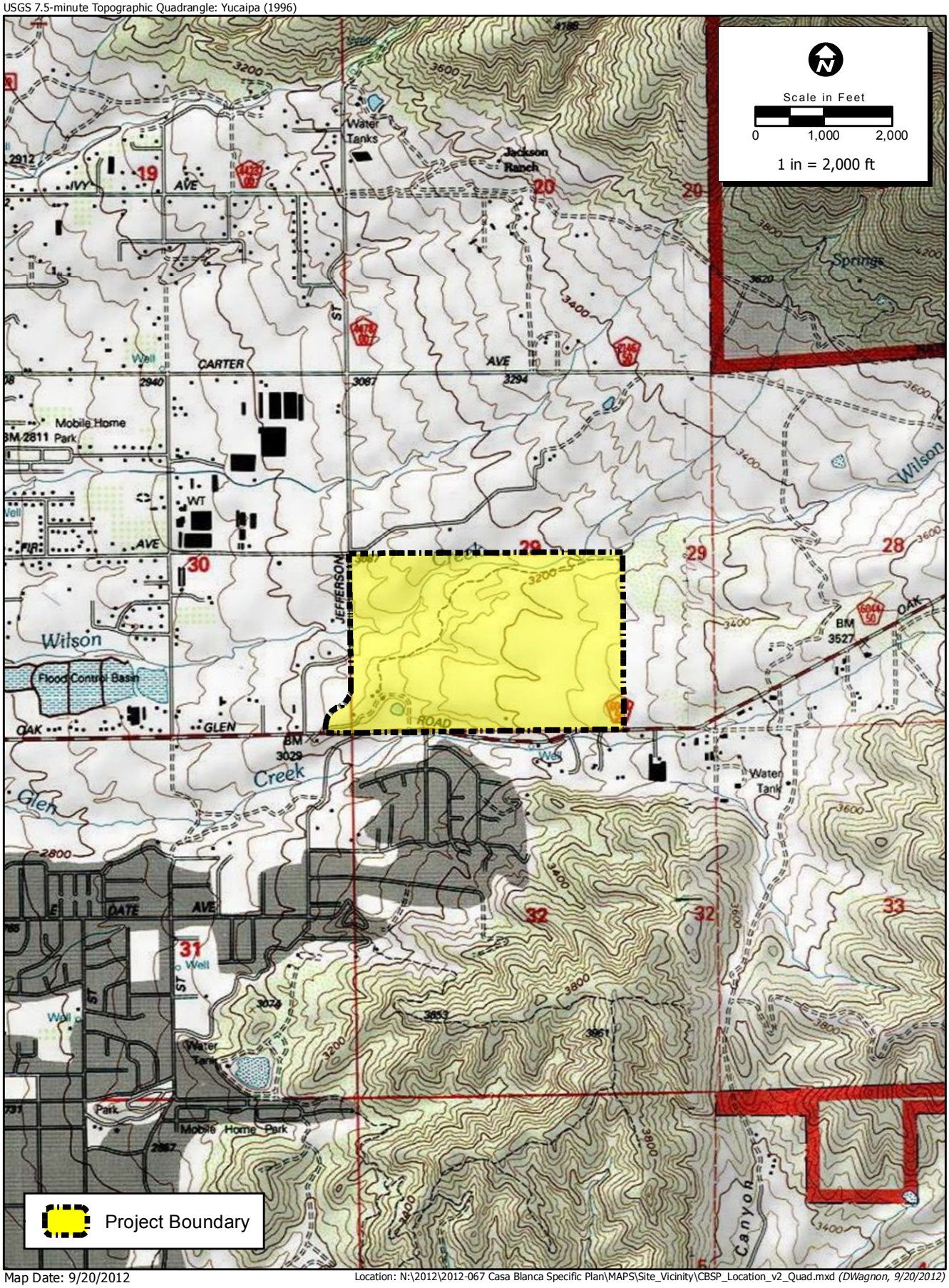
USGS 7.5-minute Topographic Quadrangle: Yucaipa (1996)



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Source: ESRI Online

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Figure 2. Project Location

2012-067 Casa Blanca Specific Plan

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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.

<u>Brassica (*nigra*) and other mustards Semi-Natural Herbaceous Stands</u>

<u>Brassica (*nigra*) and other mustards</u> 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.

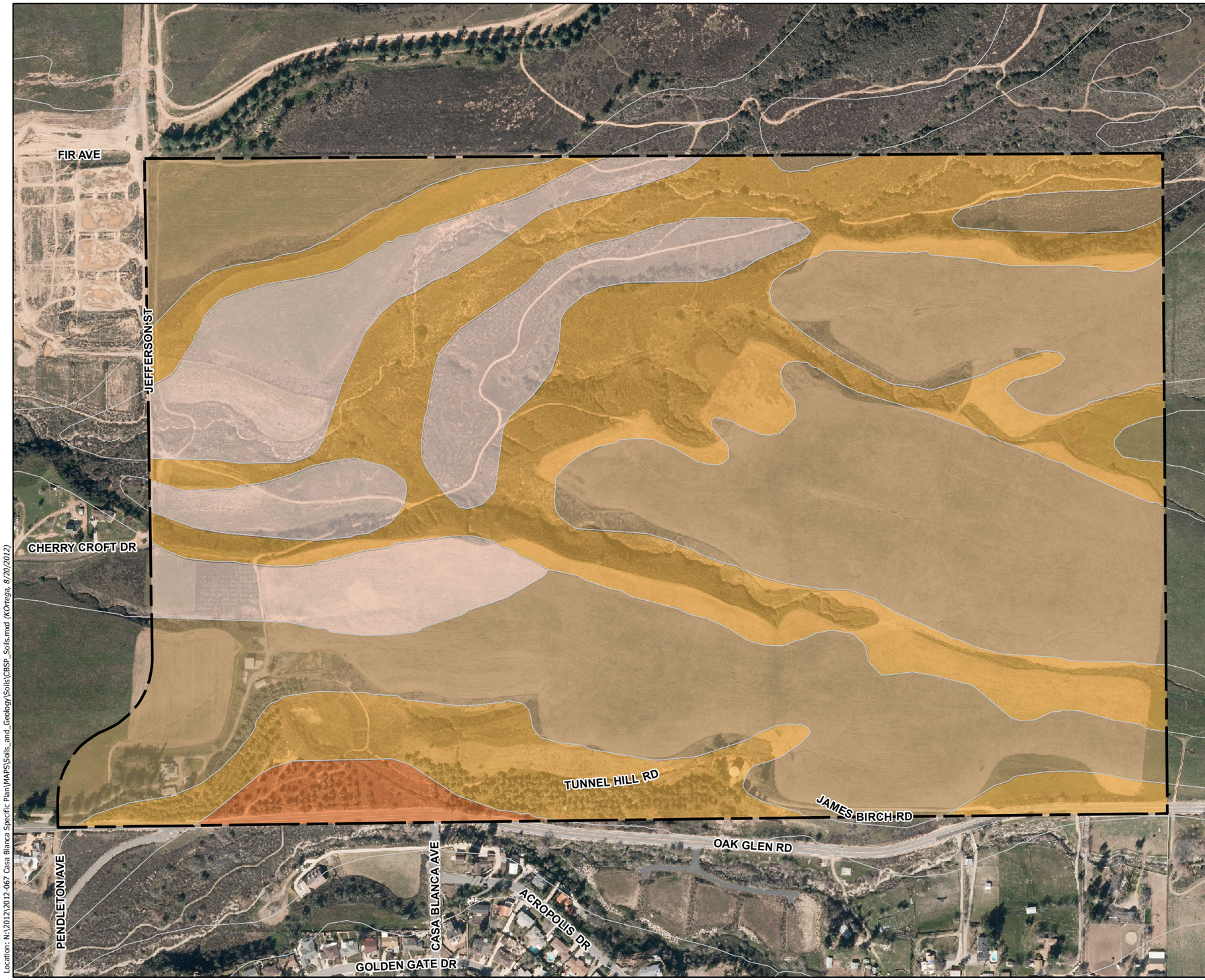
2.4 Watersheds

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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Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Soils_and_Geology\Soils\CBSP_Soils.mxd (KOrtega, 8/20/2012)

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1 " = 400 '

Scale in Feet
0 400

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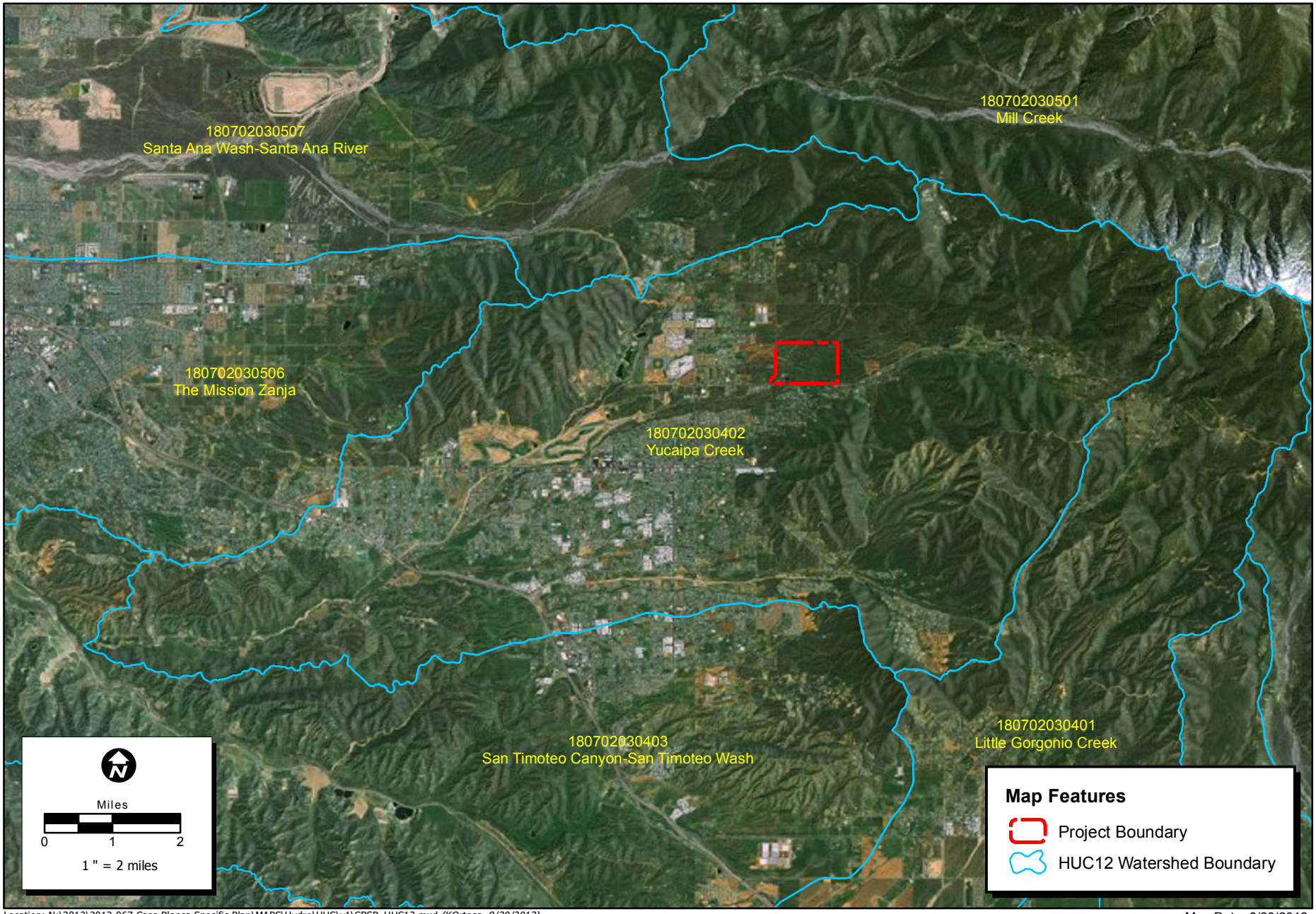
Map Date: 8/20/2012



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Map Date: 8/20/2012

Figure 4. HUC Watershed

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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 Species[1]

Plant Species Classification	Abbreviation[2]	Probability of Occurring in Wetland
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:

$$PI = \frac{A_{OBL} + 2A_{FACW} + 3A_{FAC} + 4A_{FACU} + 5A_{UPL}}{A_{OBL} + A_{FACW} + A_{FAC} + A_{FACU} + A_{UPL}}$$

Where:

PI = Prevalence Index
A_{OBL} = Summed percent cover values of obligate (OBL) plant species
A_{FACW} = Summed percent cover values of facultative wetland (FACW) plant species
A_{FAC} = Summed percent cover values of facultative (FAC) plant species
A_{FACU} = Summed percent cover values of facultative upland (FACU) plant species
A_{UPL} = 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

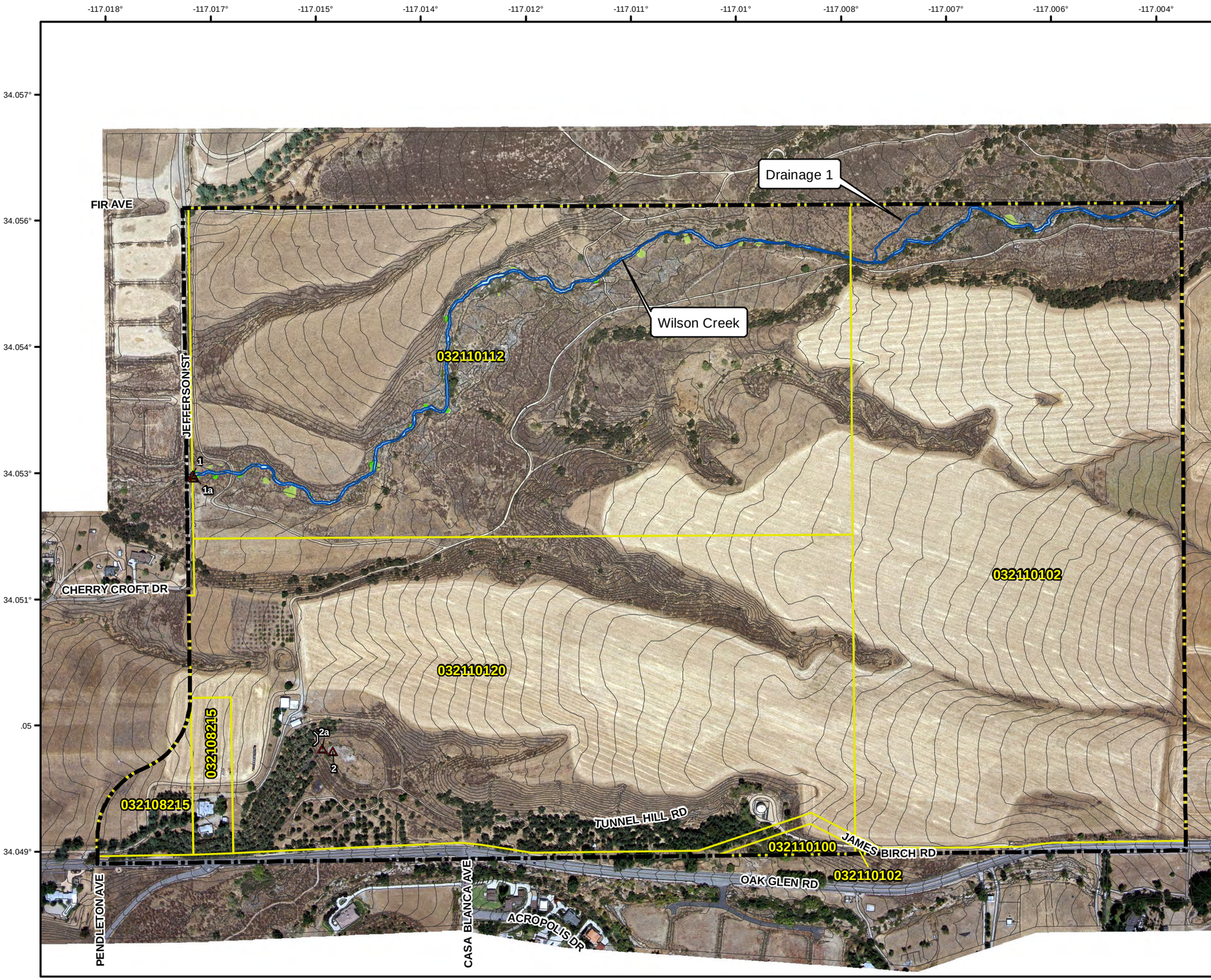

Figure 5.
Jurisdictional Delineation

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

CDFG Habitat						
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	0.000	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\v1\Tables\[JD_Master _Table_20120925.xlsx]RESULTS

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
jswager

Location: N:\2012\2012-067 Casa Blanca Specific Plan\MAPS\Wetland_Mapping\Wetland_Delineation\v1\CB_JDv1.mxd (ECK/JDS, 9/25/2012)

2012-067 Casa Blanca Specific Plan

1 " = 400 '

Scale in Feet
0 200 400

Base Data Source: Topo - Hess Survey; Imagery - Inland Aerial.

Map Date: 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

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Appendix A
Botanical Compendium

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

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

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

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

* Plants are not native to California

Appendix B

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: SP 1

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: 34.052743 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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No _____
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes _____	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 300 Sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 300 Sq ft)			
1. Baccharis salicifolia	50	Y	FAC
2. Eriogonum fasciculatum	3	N	~~NI~~
3. Artemesia dracunculus	1	N	~~NI~~
4. Lepidospartum squamatum	10	N	FACU
5.			
	64 = Total Cover		
Herb Stratum (Plot size: 300 Sq ft)			
1. Datura wrightii	1	Y	–
2. Amsinckia menziesii	1	Y	–
3. Hirshfeldia incana	1	Y	–
4.			
5.			
6.			
7.			
8.			
	3 = Total Cover		
Woody Vine Stratum (Plot size: 300 Sq ft)			
1. N/A			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species	50	x 3 =	150
FACU species	10	x 4 =	40
UPL species		x 5 =	
Column Totals:	60 (A)		190 (B)

Prevalence Index = B/A = 190/60

Hydrophytic Vegetation Indicators:

Dominance Test is >50% 25 - Not dom

Prevalence Index is ≤3.0[1] 3.16

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.

Hydrophytic Vegetation Present? Yes _____ No _____

Total # of dominant across strata

Remarks: Dead Sycamore tree fallen into stream.

Case Blaser
7/24/2012

SOIL

Sampling Point: SP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-9	2.5Y 4/4	80%	None				Sand	~~dug~~

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators 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 X

Remarks: Dug until refusal. No soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- X Sediment Deposits (B2) (**Riverine**)
- X Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

Wetland Hydrology Present? Yes X No ___

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

Remarks: Soils moist in bottom of pit (at refusal).

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: SP1A

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 _____

Is the Sampled Area within a Wetland? Yes _____ No _____

Remarks:

VEGETATION – Use scientific names of plants.

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 ~~it~~ = (A)

Tree Stratum (Plot size: 300 Sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
		= Total Cover	

Sapling/Shrub Stratum (Plot size: 300 Sq ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Eriogonum fasciculatum	30	Y-1	NI
2. Baccharis salicifolia	5	N	FAC
3. Tetradymia Comosa	5	N	—
4. Artemesia dracunculus	8	N	~~NI~~
5. Lepidospartum squamatum	8	N	FACU
	56	= Total Cover	

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Hirshfelda incana	5	N 2	—
2. Bromus madritensis spp. rubens	60	Y	—
3. Amsinckia menziesii	10	N	—
4. Bromus diandrus	5	N	—
5.			
6.			
7.			
8.			
	80	= Total Cover	

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

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: 0 (A)	0 (B)

Prevalence Index = B/A = 0

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.

Hydrophytic Vegetation Present? Yes _____ No _____

Remarks:

7/24/2012
Casa Blanca

SOIL

Sampling Point: SP1a

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

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

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators 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 X

Remarks:
No indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

Wetland Hydrology Present? Yes ___ No X

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: SP 2

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

Landform (hillslope, terrace, etc.): detention basin Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): L RR-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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No _____
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes _____	No _____	

Remarks: man made detention basin

VEGETATION – Use scientific names of plants.

50/20 rule

Tree Stratum (Plot size: 2000 ft²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lacvigata	5	Y	FACW
2.			
3.			
4.			
	50/20		= Total Cover
Sapling/Shrub Stratum (Plot size: 2000 ft²)			
1. Nicotiana glauca	5	Y	FAC
2. Baccharis sarothroides	5	Y	FAC
3.			
4. Tamarix parviflora	1		FAC
5.			
lin or <			= Total Cover
Herb Stratum (Plot size: 2000 ft²)			
1. Nicotiana (attenuata)	3		FACU
2. Hirschfeldia incana	10	Y	—
3. Bromus madritensis	3		—
4. ~~Erigonum~~			
5. Polygonum argyrocoleon	<1		FAC
6. Cirsium	15	Y	
7. plant #1	3		
8.			
	34		= Total Cover
Woody Vine Stratum (Plot size: _____)			
1. N/A			
2.			
			= Total Cover

Ind.

mustard

20/20 rule

absolute cover

½ = 15.5

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

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 = _____

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.

Hydrophytic Vegetation Present? Yes _____ No _____

Remarks: dead cat tails / bull rushes 90% cover

dead cat tails

Polygonum Persicaria

ribbon test

Cash blanca 8/15/12

SOIL

Sampling Point: SP2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3	10 YR 3/3	90	10R 4/8	10			clay loam	(1 in ribbon test)
3-18	7.5 YR 3/4	100					sandy loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8) ?
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6) ?
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- X Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- X Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No _____

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

Remarks: Spugeti present

8/15/2012

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Casa Blanca Specific Plan City/County: _____ Sampling Date: SP2A

Applicant/Owner: _____ State: _____ Sampling Point: Sp2A

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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes _____	No _____	

Remarks: Berm around retention basin

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 600 ft.²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	5		FACW
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Eriogonum fasciculatum	40	Y	—
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: centaurea)			
1. Cent. melitensis	60	Y	—
2. Bromus mad. rubens	50	N	—
3. Hirschfeldia incana	20	N	—
4. Marrubium vulgare	3	N	FACU
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. None			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

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 = _____

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.

Hydrophytic Vegetation Present? Yes _____ No _____

Remarks:

casablanca 8/15/12

SOIL

Sampling Point: SP2A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/4	100	N/A				Sandy loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators 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)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ 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

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