

3.8-1 JURISDICTIONAL DELINEATION OF WATERS AND WETLANDS

DECEMBER 2010

RIVERSIDE COUNTY

**JURISDICTIONAL DELINEATION
OF WATERS AND WETLANDS**

PREVIOUS TRACT 28416

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1. INTRODUCTION

Three agencies regulate activities within inland streams, wetlands and riparian areas in California. The United States Army Corps of Engineers (Corps) Regulatory Program regulates the discharge of dredged or fill material into “Waters of the United States” pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Section 404 prohibits the use, degradation or destruction of these waters because of the affect on interstate or foreign commerce, or because they are tributaries to waters subject to the ebb and flow of the tides (33 C.F.R. 328.3(a)). The California Department of Fish and Game (CDFG) regulates activities that will substantially divert, obstruct or change the natural flow of waters within lakes, rivers and streams where there is an existing fish and wildlife resource or habitat under California Fish and Game Code Sections 1600-1607. And, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) is responsible for maintaining water quality and the beneficial uses of the State’s water resources in accordance with Section 401 of the CWA and the California Porter-Cologne Act.

This Jurisdictional Delineation of Wetlands and Waters was required because the project may result in impacts that would require prior authorizations from the Corps, CDFG and San Diego Water Board before any development takes place. Both permanent and temporary impacts are regulated, and require these authorizations.

2. PROJECT SITE AND PROJECT DESCRIPTION

2.1 Location of Project Site

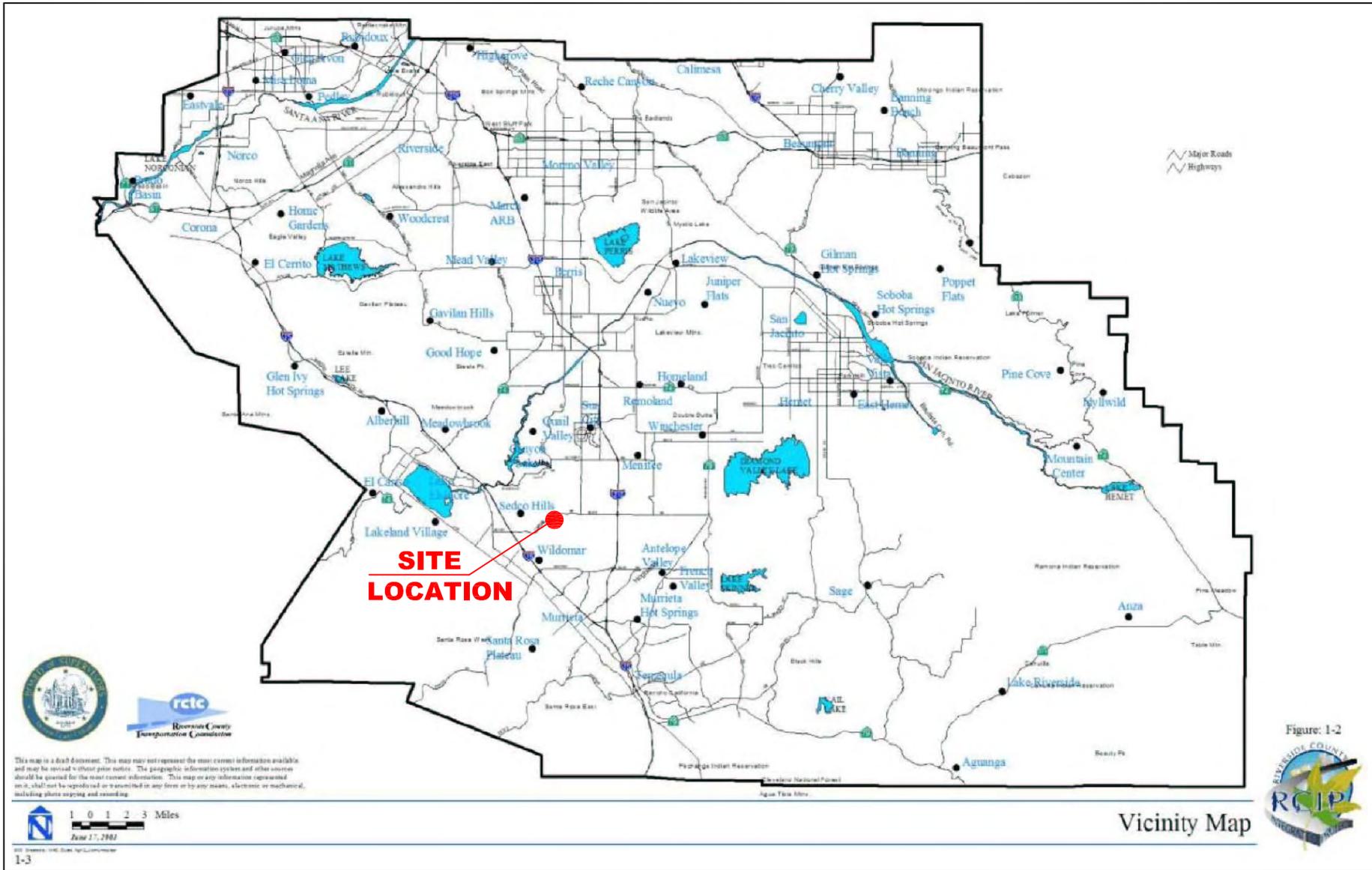
The project site is located north and south of Bundy Canyon Road, approximately midway between Interstate Highways 15 and 215 in the City of Wildomar, Riverside County, California (**Vicinity Map**). The local area is referred to as The Farm. It is mapped in a portion of Section 19, Township 6 South and Range 3 West of the USGS Topographic Map, 7.5 Minute Series, Romoland, California Quadrangle (**Location Map**).

The geographic coordinates near the middle of the site are:

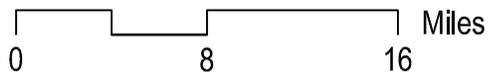
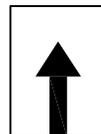
-117°13'55" longitude and 33°38'20" latitude

2.2 Project Site Description

The site is located in the northeast corner of the City of Wildomar, Riverside County, California. It shares its east boundary line with the City of Menifee along Sunset Avenue, and is located approximately 0.5 miles south of the City of Lake Elsinore. The local area is referred to as The Farm. The Farm was originally developed in the 1970s as a 1,600-acre self-sustaining retirement community. It continues to expand and modernize as resident demographics change over time.



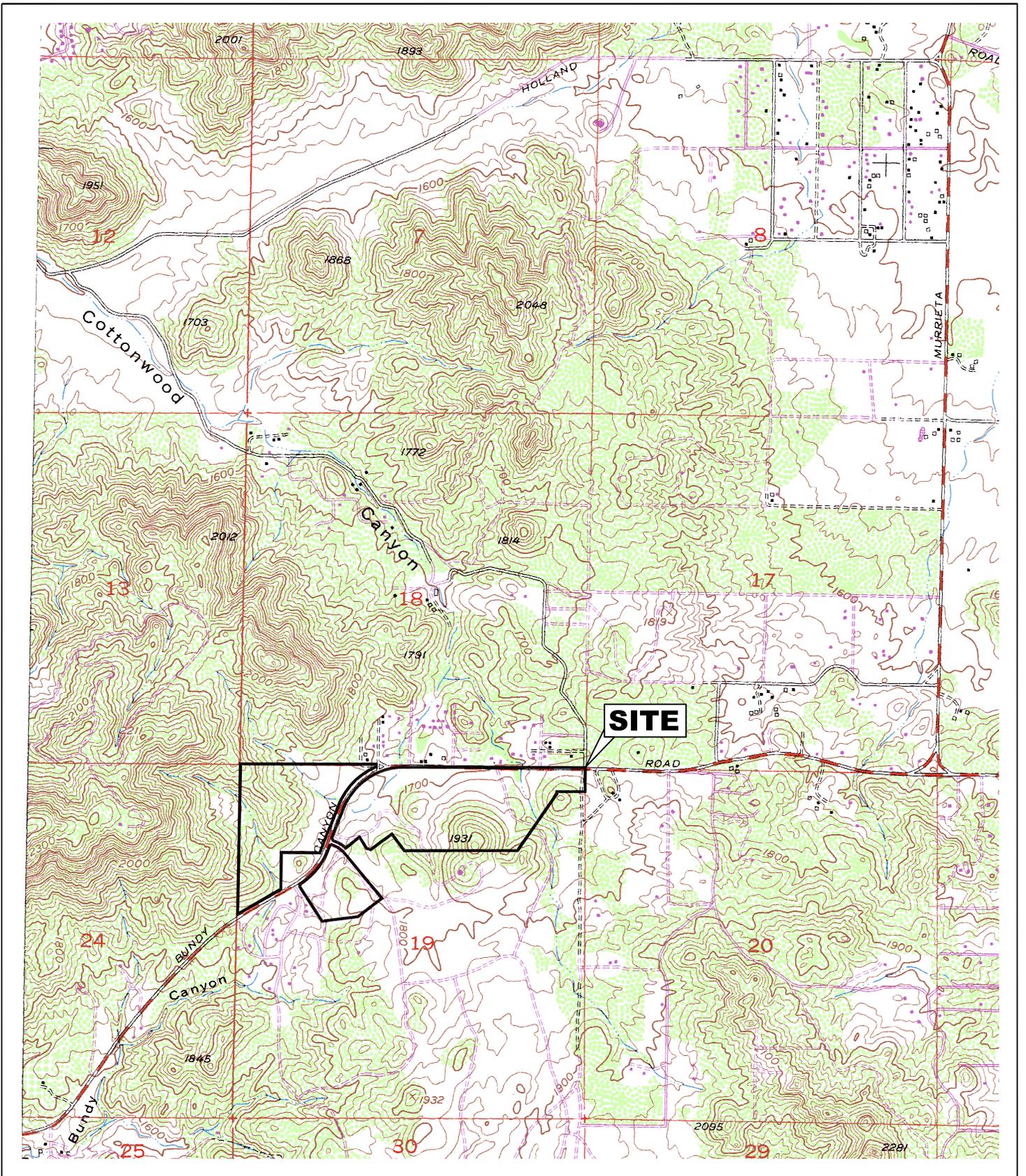
Source: Riverside County (RCIP)
 MSHCP Vicinity Map Fig. 1-2



VICINITY MAP

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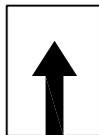


Base Map Source: USGS 7.5 Min.
Romoland, CA Quad.

LOCATION MAP

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0 2000 4000 Feet



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Two of the 18 parcels of land comprising the site are located within Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Conservation Planning Criteria Areas. A total of 0.26 acres of the 163.25-acre site are located within Cell #5046 of Cell Group J' of the Sedco Hills Subunit (SU4) of the Elsinore Area Plan. The extreme southwest tip of the site is located across Bundy Canyon Road from Western Riverside County Regional Conservation Authority (RCA) Conserved Lands.

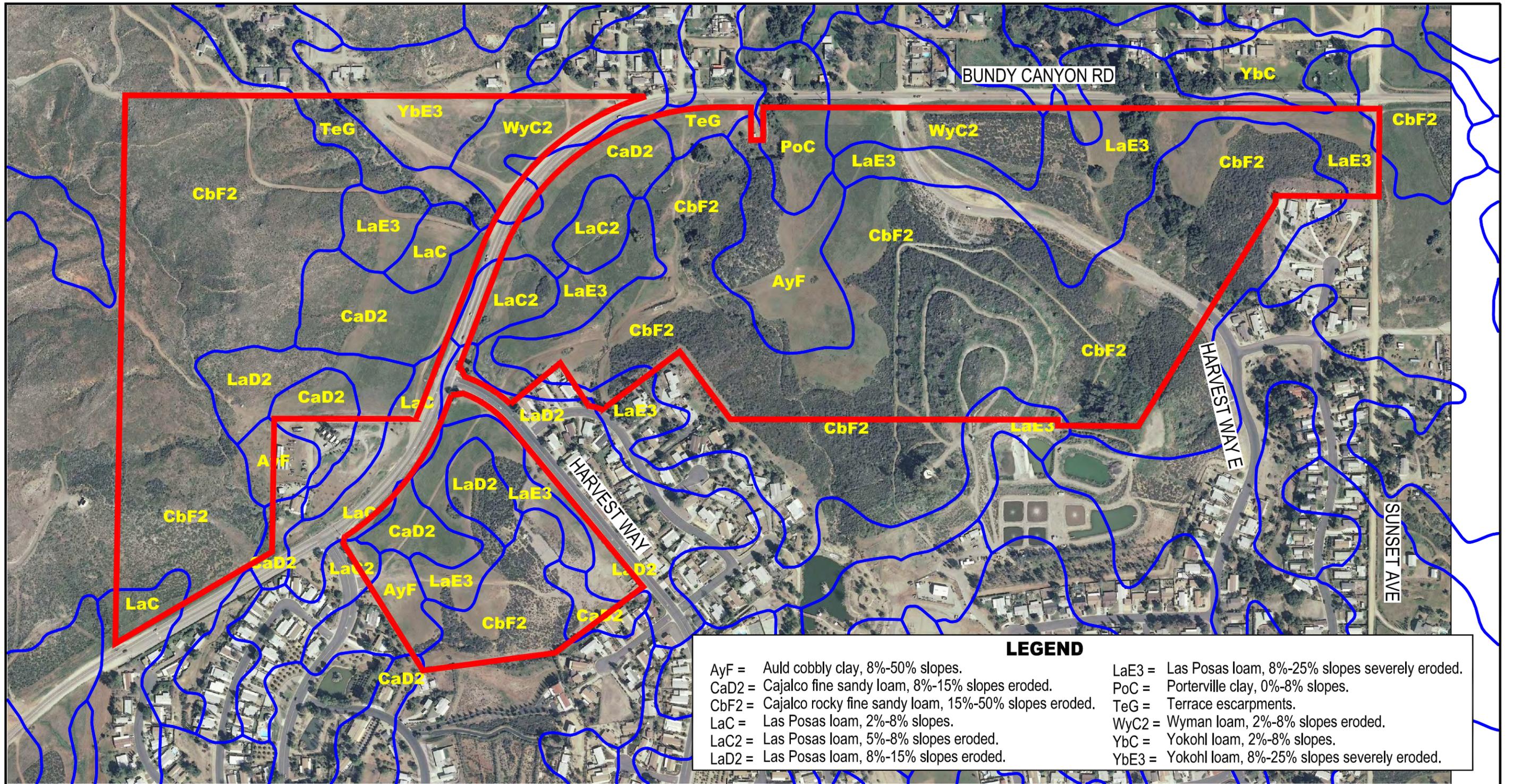
The recorded sizes of the 18 lots total 163.25 acres. The Assessor's Parcel Numbers are 362-070-001, -003, -006, -010, -013, -018, -021, -023, and -024; 362-080-004, -005, -007, -008, -009, and -012; and, 362-090-004, -009, and -015.

Topography of the site is varied, ranging from relatively flat-lying areas with gentle slopes to moderately sloping foothills to steep sloping hillsides with stream-cut valleys. The relatively flat areas located on the south side of Bundy Canyon Road are the result of agricultural land uses that have taken place for decades. All natural topographic irregularities have long been eliminated by seasonal plowing and discing. Elevation through the majority of the central portion of the site is between the 1720- and 1740-foot contours. Elevations along the base of the foothills is between 1740 and 1760 feet, and is also the result of past agricultural land uses. The highest elevation is present in the rugged northwest corner of the site, 1940 feet. There is a 190-foot change in elevation along the west property line (1940 to 1750). The southern portion of the site slopes downward to the north, and includes three areas with elevations above 1800 feet.

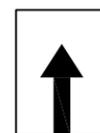
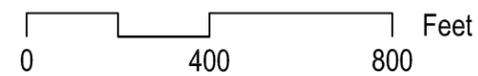
Three reaches of intermittent blueline streams designated on the USGS Romoland Quadrangle are present on the site. These streams are ephemeral in nature. Two of them originate in the relatively undeveloped Sedco Hills located west and northwest of the site. The other, Cottonwood Canyon Creek, originates on the Menifee Hills located south of the site, and passes through a small portion of The Farm. Water was flowing in an approximately 240-foot-long reach of the creek during the November surveys, with urban runoff as its source. Eight more ephemeral watercourses are present on the site. Five originate on the Sedco Hills, and have confluences with the two blueline streams. Two originate on the Menifee Hills, and have confluences with one of the blueline streams. The upstream reaches of these watercourses have been significantly altered by existing development at The Farm. The last one appears to have developed from storm water runoff along Bundy Canyon Road. The channel is not incised through the middle reach of this watercourse, but it does have a confluence with one of the blueline streams.

Due to continuous agricultural uses over decades, other kinds of permanent and/or semi-permanent aquatic features are not present on the site (i.e., wetlands, vernal pools and swales, vernal pool-like ephemeral ponds, stock ponds, etc.).

Review of the "Soil Survey of Western Riverside Area, California" revealed that the surficial soils at the site are included in the Cajalco-Temescal-Las Posas Association (Soils of the Southern California Coastal Plain). Within this association, 12 soil types have been mapped on the site (**Soils Map**):



Base Map Source: Soil Survey - Western
Riverside Area, California



SOILS MAP

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AyF – Auld cobbly clay, 8 to 50 percent slopes.
CaD2 – Cajalco fine sandy loam, 8 to 15 percent slopes, eroded.
CbF2 – Cajalco rocky fine sandy loam, 15 to 50 percent slopes, eroded.
LaC – Las Posas loam, 2 to 8 percent slopes.
LaC2 – Las Posas loam, 5 to 8 percent slopes, eroded.
LaD2 – Las Posas loam, 8 to 15 percent slopes, eroded.
LaE3 – Las Posas loam, 8 to 25 percent slopes, severely eroded.
PoC – Poterville clay, 0 to 8 percent slopes.
TeG – Terrace escarpments.
WyC2 – Wyman loam, 2 to 8 percent slopes, eroded.
YbC – Yokohl loam, 2 to 8 percent slopes.
YbE3 – Yokohl loam, 8 to 25 percent slopes, severely eroded.

The jurisdictional areas on the site are found within a variety of soil types, including Auld cobbly clay, Cajalco fine sandy loam, Cajalco rocky fine sandy loam, Las Posas loam, Las Posas loam, Las Posas loam, and Terrace escarpments. Generally, the soils observed in the onsite watercourses were sandy loams, brown in color, with or without gravel and/or cobbles. Typical Riverwash soils were not mapped on this site.

2.3 Project Description

No information available

3. METHODOLOGY

Prior to conducting delineation fieldwork, all available relevant literature and materials were reviewed, including 2010 Eagle Aerial Photographs, 2006 Rancho California Water District 2-foot interval topographic maps, USGS Romoland Quadrangle, and the Soil Survey of Western Riverside County, California. A basemap was produced prior to the site visit showing the site boundaries and topographic contours overlaid on an aerial photograph. In this case, the locations of the onsite watercourses were previously mapped during the preparation of a Nesting Season Survey for the Burrowing Owl (Principe and Associates; September 1, 2010). Data was then collected on the vegetation association occurring within the watercourses and its overall species composition. The watercourses were determined to be jurisdictional at that time.

New field surveys of the onsite watercourses were conducted on November 10 and 19, and December 10, 2010 by Paul Principe and Jack Munroe to detail the jurisdictional characteristics of the watercourses. Surveys consisted of walking through the watercourses and measuring the widths of the channels based on identifiable jurisdictional features. Photographs were taken along the watercourses to show the reader the variability in the onsite jurisdictional features. Point location and attribute data were collected using a 2002 Garmin GPSmap 76S receiver to determine the lengths of the watercourses on the site. Upon completion of the fieldwork, all data collected in the field was incorporated into a Geographic Information System (GIS) and

transferred onto a basemap. The GIS was then used to quantify the extent of jurisdictional areas on the site.

In areas where wetlands were suspected, data on hydrophytic vegetation, hydric soils and wetland hydrology was assessed. According to the U.S. Army Corps of Engineers 1987 Wetland Manual (Environmental Laboratory, 1971), in order for an area to be considered a wetland, it must meet the following three criteria:

1. Hydrophytic Vegetation - For the hydrophytic vegetation criteria to be met, more than 50 percent (50%) of the dominant plant species must be typical of wetlands. Vegetation was sampled by estimating coverage in circular plots for each vegetation stratum. A wetland indicator category was assigned to each species using the National List of Plants Species that Occur in Wetlands: California (Reed, 1988, 1996). The following wetland indicator categories were used:

- Obligate Wetland (OBL). Occur almost always (estimated probability >99%) in wetlands under natural conditions.
- Facultative Wetland (FACW). Usually occur in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands.
- Facultative (FAC). Equally likely to occur in wetlands or non-wetlands (estimated probability 33%-67%).
- Facultative Upland (FACU). Occur most often in non-wetlands (estimated probability 67%-99%), but occasionally found in wetlands (estimated probability 1%-33%).
- Obligate Upland (UPL). Occur rarely in wetlands, but occur almost always (estimated probability >99%) under natural conditions in non-wetlands.

In order to determine if 50% of the plant species are typical of wetlands, the “50/20 rule” was utilized. 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% of the total dominance measure for the stratum, plus any additional species that individually comprise 20% or more of the total dominance measure for the stratum. The list of dominant species is then combined across strata. If greater than 50% of the dominant species from all strata were Obligate Wetland, Facultative wetland, or Facultative (excluding Fac-), then the criteria for hydrophytic vegetation is met.

2. Hydric Soils - The presence of hydric soils is first investigated by comparing the soil series mapped on the site to the list of approximately 2,000 soils found in the United States that may occur in wetlands. In the field, hydric soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation to indicate a wetland. These characteristics include thick layers of decomposed plant materials (peats or mucks), bluish gray or gray color below the surface, dull brownish black or black color below the surface, sandy with a layer of decomposing plant material at the surface, sandy with dark stains or streaks of organic material in the upper layer beneath the surface, sulfidic odor, and gleyed or low-chroma soils.

3. Wetland Hydrology - The presence of water at or near the soil surface for a long enough period of time to influence the plant types and soils that occur in an area is indicative of wetland hydrology. Hydrologic indicators easily observed in the field include standing or flowing water during the growing season, waterlogged soils during the growing season, watermarks, drift lines, rack, debris, and sediment deposits.

4. RESULTS

Three reaches of intermittent blueline streams designated on the USGS Romoland Quadrangle are present on the site. These streams are ephemeral in nature. Two of them originate in the relatively undeveloped Sedco Hills located west and northwest of the site. The other, Cottonwood Canyon Creek, originates on the Menifee Hills located south of the site, and passes through a small portion of The Farm. Water was flowing in an approximately 240-foot-long reach of the creek during the November surveys, with urban runoff as its source. Eight more ephemeral watercourses are present on the site. Five originate on the Sedco Hills, and have confluences with the two blueline streams. Two originate on the Menifee Hills, and have confluences with one of the blueline streams. The upstream reaches of these watercourses have been significantly altered by existing development at The Farm. The last one appears to have developed from storm water runoff along Bundy Canyon Road. The channel is not incised through the middle reach of this watercourse, but it does have a confluence with one of the blueline streams.

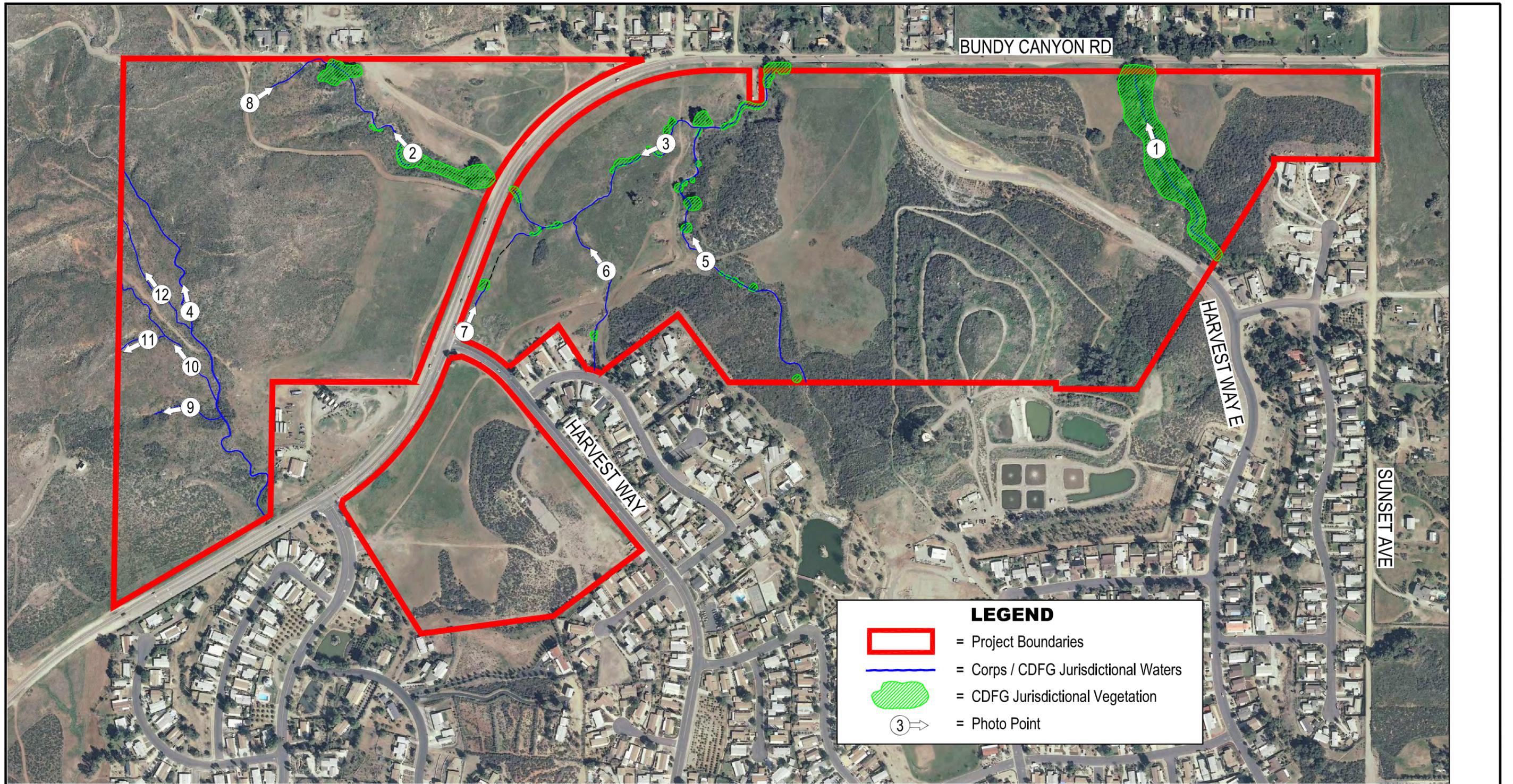
All the onsite watercourses exhibit Corps and CDFG jurisdictional features. Their locations are shown on the **Hydrography Map**. 'Photo Points' for all of the Site Photographs are also shown on the Hydrography Map.

The boundaries and quantification of Corps Waters of the United States and CDFG Waters of the State and jurisdictional vegetation are shown on the **Jurisdictional Assessment**. **Table 1** summarizes Total Onsite Jurisdictional Waters.

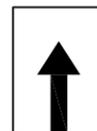
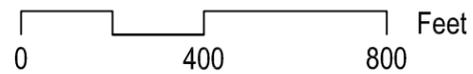
Corps jurisdiction within the site totals 0.719 acres of Waters of the United States.

Wetlands were not delineated on the site. Two of the three blueline streams and the eight watercourses showed no evidences of hydrophytic vegetation, typical hydric soils and wetland hydrology. The presence of flowing water at the soil surface in an approximately 240-foot-long reach of Cottonwood Canyon Creek is an indication of wetland hydrology, but there was an absence of more than 50% hydrophytic vegetation and typical hydric soils.

CDFG jurisdiction totals 3.831 acres of Waters of the State and associated riparian habitat located contiguous to the watercourses.



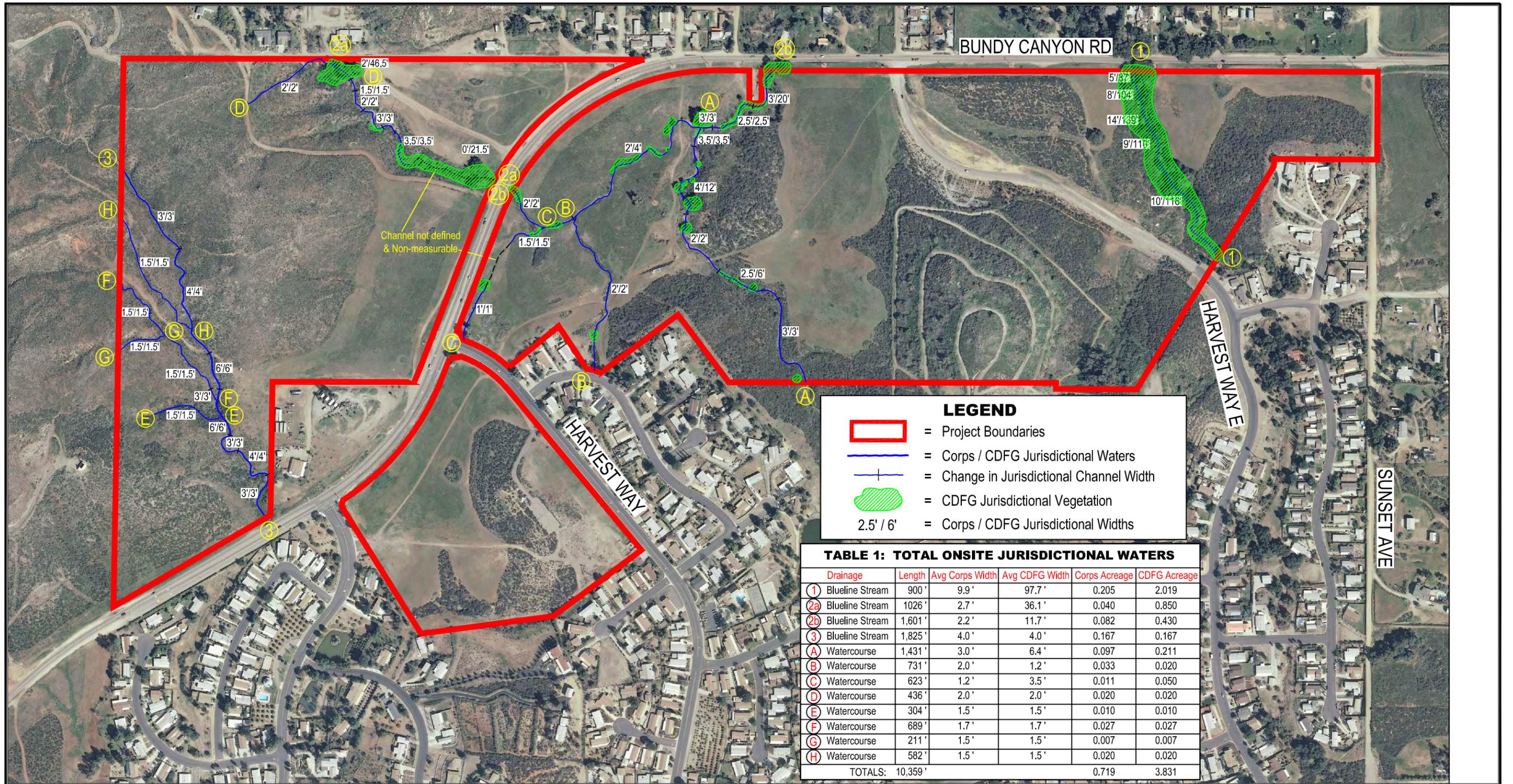
Site area: 163.25 acres



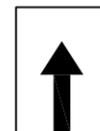
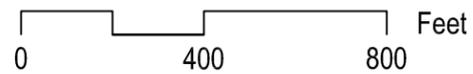
HYDROGRAPHY MAP

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Site area: 163.25 acres



JURISDICTIONAL ASSESSMENT

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TABLE 1: TOTAL ONSITE JURISDICTIONAL WATERS

Drainage	Length	Avg Corps Width	Avg CDFG Width	Corps Acreage	CDFG Acreage
① Blueline Stream	900'	9.9'	97.7'	0.205	2.019
②a Blueline Stream	1026'	2.7'	36.1'	0.040	0.850
②b Blueline Stream	1,601'	2.2'	11.7'	0.082	0.430
③ Blueline Stream	1,825'	4.0'	4.0'	0.167	0.167
④A Watercourse	1,431'	3.0'	6.4'	0.097	0.211
④B Watercourse	731'	2.0'	1.2'	0.033	0.020
④C Watercourse	623'	1.2'	3.5'	0.011	0.050
④D Watercourse	436'	2.0'	2.0'	0.020	0.020
④E Watercourse	304'	1.5'	1.5'	0.010	0.010
④F Watercourse	689'	1.7'	1.7'	0.027	0.027
④G Watercourse	211'	1.5'	1.5'	0.007	0.007
④H Watercourse	582'	1.5'	1.5'	0.020	0.020
TOTALS:	10,359'			0.719	3.831

The following are detailed descriptions of the onsite watercourses. Species nomenclature follows Roberts, Jr., Fred M., Scott D. White, Andrew C. Sanders, David E. Bramlet, and Steve Boyd (2004). * denotes non-native species.

4.1 Blueline Stream 1 - Cottonwood Canyon Creek

Cottonwood Canyon Creek (Blueline Stream 1 on the exhibit) is an intermittent blueline stream that originates on the Meniffee Hills located south of Bundy Canyon Road. It trends through a rural residential area and The Farm (in a drainage easement) for over a mile before entering the site north of Deep Well Road. It then trends southeast-to-northwest through the eastern portion of the site through a relatively steep-sloped V-shaped valley to Bundy Canyon Road. It shows signs of human disturbances. The channel is shallow-incised and composed of sandy loam, gray in color, with or without gravels, cobbles and boulders (**Site Photograph 1**). The channel is overgrown in the southern half, and unvegetated in the northern half. Its total length on the site is 900 feet. Water was flowing in an approximately 240-foot-long reach of the creek during the November surveys, with urban runoff as its source. Corps jurisdictional widths averaged 9.9 feet, and the total jurisdiction was calculated to be 0.205 acres.

The Riparian Forest vegetation growing along this reach of Cottonwood Canyon Creek is dominated by coast live oak trees (*Quercus agrifolia* var. *agrifolia*) which form a dense shaded canopy over the channel. Other associated riparian species include western ragweed (*Ambrosia psilostachya* var. *californica*), mule fat (*Baccharis salicifolia*), giant wildrye (*Elymus condensatus*), California flowering ash (*Fraxinus dipetala*), western sunflower (*Helianthus annuus*), toyon (*Heteromeles arbutifolia*), *sourclover (*Melilotus indicus*), *tree tobacco (*Nicotiana glauca*), western cottonwood (*Populus fremontii* subsp. *fremontii*), California scrub oak (*Quercus berberidifolia*), narrow-leaved willow (*Salix exigua*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis* var. *lasiolepis*), Mexican elderberry (*Sambucus mexicana*), *Mediterranean tamarisk (*Tamarix ramosissima*), poison oak (*Toxicodendron diversilobum*), hoary nettle (*Urtica dioica* subsp. *holosericea*), and cocklebur (*Xanthium strumarium* var. *canadense*). CDFG jurisdictional widths averaged 97.7 feet due to dense Riparian Forest vegetation, and the total jurisdiction was calculated to be 2.019 acres.

4.1 Blueline Stream 2 (a and b)

Blueline Stream 2 is an intermittent blueline stream that originates on the Sedco Hills north of Bundy Canyon Road. It enters the site via a culvert placed beneath Beverly Street, trends to the southeast crossing beneath Bundy Canyon Road via a culvert, then trends northeast before crossing beneath Bundy Canyon Road via a culvert for a second time. Total length on the site is 2,627 feet; 1,026 feet long north of Bundy Canyon Road and 1,601 feet long south of Bundy Canyon Road. The total Corps jurisdiction was calculated to be 0.122 acres. The total CDFG jurisdiction was calculated to be 1.280 acres.



View of a portion of the channel of Cottonwood Canyon Creek. It is shallow-incised and composed of sandy loam, gray in color, with or without gravels, cobbles and boulders. Riparian Forest vegetation growing along Cottonwood Canyon Creek is dominated by coast live oak trees which form a dense shaded canopy over the channel.

SITE PHOTOGRAPH 1

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North of Bundy Canyon Road (2a on the exhibit), the blueline stream trends through a V-shaped valley. It is relatively undisturbed, with an unvegetated channel composed of sandy loam, brown in color, with or without gravel (**Site Photograph 2**). The channel is mostly shallow-incised. It is braided in one downstream reach, and cannot be detected beneath the dense riparian vegetation growing just north of Bundy Canyon Road. Corps jurisdictional widths averaged 2.7 feet, and the total Corps jurisdiction was calculated to be 0.040 acres.

Dense Riparian Forest vegetation is present where the blueline stream enters and exits the reach located north of Bundy Canyon Road. It is dominated by coast live oak trees (*Quercus agrifolia* var. *agrifolia*), with lesser amounts of chamise (*Adenostoma fasciculatum* var. *fasciculatum*) mule fat (*Baccharis salicifolia*), coyote brush (*Baccharis pilularis* subsp. *consanguinea*), giant wildrye (*Elymus condensatus*), California flowering ash (*Fraxinus dipetala*), western sunflower (*Helianthus annuus*), toyon (*Heteromeles arbutifolia*), western cottonwood (*Populus fremontii* subsp. *fremontii*), narrow-leaved willow (*Salix exigua*), red willow (*Salix laevigata*), and arroyo willow (*Salix lasiolepis* var. *lasiolepis*). CDFG jurisdictional widths averaged 36.1 feet, and the total CDFG jurisdiction was calculated to be 0.850 acres.

South of Bundy Canyon Road (2b on the exhibit), the blueline stream trends through gentle rolling terrain that slopes downward to the north. It is highly disturbed, with a shallow-incised and unvegetated channel composed of sandy loam, brown in color, with or without gravels and cobbles (**Site Photograph 3**). The channel is buried beneath green waste adjacent to an old pump station. Corps jurisdictional widths averaged 2.2 feet, and the total Corps jurisdiction was calculated to be 0.082 acres.

The channel is unvegetated, except adjacent to Bundy Canyon Road. Otherwise, patches of riparian Forest vegetation are growing along its banks, and are separated by hundreds of feet of typical Grasslands vegetation. Coast live oak trees dominate the vegetation adjacent to Bundy Canyon Road (downstream), while the patches were dominated by mule fat (*Baccharis salicifolia*), western sunflower (*Helianthus annuus*), narrow-leaved willow (*Salix exigua*), arroyo willow (*Salix lasiolepis* var. *lasiolepis*), and an occasional red willow (*Salix laevigata*). The Grasslands vegetation growing alongside of the channel includes western ragweed (*Ambrosia psilostachya* var. *californica*), *cultivated oats (*Avena sativa*), *shortpod mustard (*Brassica geniculata*), *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*), fascicled tarplant (*Deinandra fasciculata*), leafy daisy (*Erigeron foliosus* var. *foliosus*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), California matchweed (*Gutierrezia californica*), slender sunflower (*Helianthus gracilentus*), valley lessingia (*Lessingia glandulifera* var. *glandulifera*), Granny's hairnet (*Pterostegia drymarioides*), and virgate wreath-plant (*Stephanomeria virgata* subsp. *virgata*). CDFG jurisdictional widths averaged 11.7 feet, and the total CDFG jurisdiction was calculated to be 0.430 acres.



View of the upstream portion of Blueline Stream 2 located north of Bundy Canyon Road. It has an unvegetated channel composed of sandy loam, brown in color, with or without gravel. It is mostly shallow-incised, braided in one downstream reach, and cannot be detected adjacent to Bundy Canyon Road.

SITE PHOTOGRAPH 2

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View of a portion of the channel of the unnamed Blueline Stream 2 located south of Bundy Canyon Road. It is shallow-incised and composed of sandy loam, brown in color, with or without gravels and cobbles. It trends through Grasslands, with isolated patches of riparian vegetation scattered alongside its banks.

SITE PHOTOGRAPH 3

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Blueline Stream 3

Blueline Stream 3 is an intermittent blueline stream that originates on the Sedco Hills located north of Bundy Canyon Road. It enters the site at an elevation of 1860 feet, about 1,300 feet from its origin on the Sedco Hills. It trends northwest-to-southeast through a steep-sloped V-shaped valley to Bundy Canyon Road, then continues through The Farm in a drainage easement. It is undisturbed, with a shallow-incised and unvegetated channel composed of sandy loam, gray in color, with or without gravels, cobbles and boulders (**Site Photograph 4**). Its total length on the site is 1,826 feet. Corps jurisdictional widths averaged 4.0 feet, and the total jurisdiction was calculated to be 0.167 acres. Without the presence of riparian vegetation, the total CDFG jurisdiction was also calculated to be 0.167 acres.

The banks of this blueline stream are vegetated with typical Chaparral species, including chamise (*Adenostoma fasciculatum* var. *fasciculatum*), thick-leaved lilac (*Ceanothus crassifolius* var. *crassifolius*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), and black sage (*Salvia mellifera*). Understory species include *shortpod mustard (*Brassica geniculata*), *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*), California everlasting (*Gnaphalium californicum*), and slender sunflower (*Helianthus gracilentus*).

4.4 Watercourse A

Watercourse A is ephemeral, and appears to originate downstream of a pond that was previously built on The Farm. On the site, it trends south for 1,431 feet before its confluence with Blueline Stream 2. Its steep-sloping upper-half is relatively undisturbed, and trends north through a V-shaped valley. The lower-half opens onto gentle rolling terrain. A culvert crossing has been constructed through the lower-half, and much of the reach is covered by green waste. The channel is unvegetated, and composed of sandy loam, brown in color, with or without gravels and cobbles (**Site Photograph 5**). Corps jurisdictional widths averaged 3.0 feet, and the total jurisdictional area was calculated to be 0.097 acres.

The upper-half channel is shallow-incised and its banks are vegetated with typical Chaparral species and three isolated riparian plants. The Chaparral species include chamise (*Adenostoma fasciculatum* var. *fasciculatum*), coastal sagebrush (*Artemisia californica*), thick-leaved lilac (*Ceanothus crassifolius* var. *crassifolius*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), yellow bush-penstemon (*Keckiella antirrhinoides* subsp. *antirrhinoides*), spiny redberry (*Rhamnus crocea*), and black sage (*Salvia mellifera*), while the riparian species include coast live oak (*Quercus agrifolia* var. *agrifolia*), mule fat (*Baccharis salicifolia*), and arroyo willow (*Salix lasiolepis*).

The lower-half channel is also shallow-incised, but its banks are vegetated with typical Grasslands species and patches of riparian vegetation. The Grasslands vegetation growing alongside of the channel includes *cultivated oats (*Avena sativa*), *shortpod



View of a portion of the channel of unnamed Blueline Stream 3. It is shallow-incised, unvegetated and composed of sandy loam, gray in color, with or without gravels, cobbles and boulders. The banks are vegetated with typical Chaparral species (no riparian component).

SITE PHOTOGRAPH 4

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View of a portion of the channel of Watercourse A. It is unvegetated, and composed of sandy loam, brown in color, with or without gravels and cobbles. The upper-half is shallow-incised and vegetated with Chaparral species, while the lower-half is vegetated with Grasslands species and patches of riparian vegetation.

SITE PHOTOGRAPH 5

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mustard (*Brassica geniculata*), *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*), fascicled tarplant (*Deinandra fasciculata*), giant wildrye (*Elymus condensatus*), leafy daisy (*Erigeron foliosus* var. *foliosus*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), slender sunflower (*Helianthus gracilentus*), valley lessingia (*Lessingia glandulifera* var. *glandulifera*), Granny's hairnet (*Pterostegia drymarioides*), Mexican elderberry (*Sambucus mexicana*), and virgate wreath-plant (*Stephanomeria virgata* subsp. *virgata*). The patches of Riparian Forest vegetation are dominated by coast live oak trees (*Quercus agrifolia* var. *agrifolia*), with lesser amounts of mule fat (*Baccharis salicifolia*), western cottonwood (*Populus fremontii* subsp. *fremontii*), narrow-leaved willow (*Salix exigua*), red willow (*Salix laevigata*), and arroyo willow (*Salix lasiolepis* var. *lasiolepis*). CDFG jurisdictional widths averaged 6.4 feet, and the total CDFG jurisdiction was calculated to be 0.211 acres.

4.5 Watercourse B

Watercourse B is ephemeral, and originates in a developed portion of The Farm. On the site, it trends south for 731 feet before its confluence with Blueline Stream 2. It enters the site via a culvert beneath Homestead Lane. Its upper portion is relatively steep-sloping, while its lower portion opens onto gentle rolling terrain. The channel is unvegetated, and composed of sandy loam, brown in color, with or without gravels and cobbles (**Site Photograph 6**). Below the culvert, boulder rip-rap has been placed in the channel. Corps jurisdictional widths averaged 2.0 feet, and the total jurisdictional area was calculated to be 0.033 acres.

The channel is shallow-incised, except where erosion has cut approximately one foot into the soil at a seldom used dirt road crossing. The banks are vegetated with typical Grasslands species and one small patch of riparian vegetation. The Grasslands vegetation includes *shortpod mustard (*Brassica geniculata*), *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*), leafy daisy (*Erigeron foliosus* var. *foliosus*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), valley lessingia (*Lessingia glandulifera* var. *glandulifera*), *common horehound (*Marrubium vulgare*), and *tree tobacco (*Nicotiana glauca*). The small patch of riparian vegetation includes a few mule fat (*Baccharis salicifolia*) and arroyo willow (*Salix lasiolepis* var. *lasiolepis*). CDFG jurisdictional widths averaged 1.2 feet, and the total jurisdictional area was calculated to be 0.020 acres.

4.6 Watercourse C

Watercourse C is ephemeral, and enters the site via a culvert placed beneath the intersection of Bundy Canyon Road and Harvest Way. It parallels Bundy Canyon Road through agricultural land for approximately 250 feet before signs of jurisdiction end. It continues as sheet flow for approximately 150 feet through the agricultural land until the channel reappears. It then trends for approximately 250 feet before its confluence with Blueline Stream 2. The channel is sparsely vegetated, and composed of sandy loam, brown in color, with or without gravels and cobbles (**Site Photograph 7**). Corps



View of a portion of the channel of Watercourse B. It enters the site via a culvert beneath Homestead Lane. It is unvegetated, and composed of sandy loam, brown in color, with or without gravels and cobbles. It is shallow-incised with banks vegetated with Grasslands species and one small patch of riparian vegetation.

SITE PHOTOGRAPH 6

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View of a portion of the channel of Watercourse. It enters the site via a culvert placed beneath the intersection of Bundy Canyon Rd. and Harvest Way. The channel disappears in active agricultural land, and continues as sheet flow until a channel reappears before its confluence with Blueline Stream 2.

SITE PHOTOGRAPH 7

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jurisdictional widths averaged 1.2 feet, and the total jurisdictional area was calculated to be 0.011 acres.

The channel is shallow-incised, and is vegetated with typical Grasslands vegetation and two small patches of riparian vegetation. The Grasslands vegetation includes *shortpod mustard (*Brassica geniculata*), *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*), leafy daisy (*Erigeron foliosus* var. *foliosus*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), valley lessingia (*Lessingia glandulifera* var. *glandulifera*), *common horehound (*Marrubium vulgare*), and *tree tobacco (*Nicotiana glauca*). The riparian vegetation includes mule fat (*Baccharis salicifolia*) and arroyo willow (*Salix lasiolepis* var. *lasiolepis*). CDFG jurisdictional widths averaged 3.5 feet, and the total CDFG jurisdiction was calculated to be 0.050 acres.

4.7 Watercourse D

Watercourse D is ephemeral, and originates on the Sedco Hills located north of Bundy Canyon Road. It is a tributary of Blueline Stream 2. It begins downstream of a dirt road where a metal trough has been placed in the channel to prevent or reduce erosion from storm water runoff. It trends for 436 feet southwest-to-northeast through a narrow valley to its confluence with Blueline Stream 2. The channel is unvegetated, and composed of sandy loam, brown in color, with or without gravels and cobbles (**Site Photograph 8**). Corps jurisdictional widths averaged 2.0 feet, and the total jurisdictional area was calculated to be 0.020 acres.

The channel is shallow-incised, except where erosion has cut deeply into the soil. Upstream, it is vegetated with typical Chaparral vegetation, while downstream it merges with the large patch of Riparian Forest vegetation growing in a depression where Blueline Stream 2 enters the site. The sparse Chaparral vegetation includes chamise (*Adenostoma fasciculatum* var. *fasciculatum*), thick-leaved lilac (*Ceanothus crassifolius* var. *crassifolius*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), and black sage (*Salvia mellifera*). Understory species include *shortpod mustard (*Brassica geniculata*) and *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*). The Riparian Forest vegetation includes mule fat (*Baccharis salicifolia*), California flowering ash (*Fraxinus dipetala*), western cottonwood (*Populus fremontii* subsp. *fremontii*), coast live oak (*Quercus agrifolia* var. *agrifolia*), narrow-leaved willow (*Salix exigua*), red willow (*Salix laevigata*), and arroyo willow (*Salix lasiolepis* var. *lasiolepis*). CDFG jurisdictional widths averaged 2.0 feet, and the total CDFG jurisdiction area was calculated to be 0.020 acres. Note that the CDFG jurisdictional vegetation acreage for Watercourse D is included with the total CDFG jurisdiction calculated for Blueline Stream 2 (2a).

4.8 Watercourse E

Watercourse E is ephemeral, and originates on the Sedco Hills located north of Bundy Canyon Road and off the site. It is a tributary of Blueline Stream 2. It trends west-to-



View of a portion of the channel of Watercourse D. A metal trough has been placed in the channel. It is unvegetated, and composed of sandy loam, brown in color, with or without gravels and cobbles. It is mostly vegetated with Chaparral vegetation, but downstream it merges with Riparian Forest vegetation.

SITE PHOTOGRAPH 8

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east through a steep-sloped V-shaped valley to its confluence with Blueline Stream 2. It is undisturbed, but the surrounding hillsides have been burned by wildfire. It has a shallow-incised channel composed of sandy loam, brown in color, with or without gravels (**Site Photograph 9**). Its total length on the site is 304 feet. Corps jurisdictional widths averaged 1.5 feet, and the total jurisdiction was calculated to be 0.010 acres. Without the presence of riparian vegetation, the total CDFG jurisdiction was also calculated to be 0.010 acres.

The upper half of this watercourse's channel is carpeted with *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*), while the lower half is unvegetated. Dense Chaparral vegetation is growing along its banks, including chamise (*Adenostoma fasciculatum* var. *fasciculatum*), thick-leaved lilac (*Ceanothus crassifolius* var. *crassifolius*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), and black sage (*Salvia mellifera*). Understory species are mostly limited to *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*).

4.9 Watercourse F

Watercourse F is ephemeral, and originates on the Sedco Hills located north of Bundy Canyon Road and off the site. It is also a tributary of Blueline Stream 2. It trends northwest-to-southeast through a relatively steep-sloped V-shaped valley to its confluence with Blueline Stream 2. It is undisturbed, but the surrounding hillsides have been burned by wildfire. The channel is shallow-incised and unvegetated, and composed of sandy loam, brown in color, with or without gravels, cobbles and boulders (**Site Photograph 10**). Its total length on the site is 689 feet. Corps jurisdictional widths averaged 1.7 feet, and the total jurisdictional area was calculated to be 0.027 acres. Without the presence of riparian vegetation, the total CDFG jurisdiction was also calculated to be 0.027 acres.

The banks of this blueline stream are sparsely vegetated with typical Chaparral species, including chamise (*Adenostoma fasciculatum* var. *fasciculatum*), thick-leaved lilac (*Ceanothus crassifolius* var. *crassifolius*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), and black sage (*Salvia mellifera*). Understory species include *shortpod mustard (*Brassica geniculata*), *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*), California everlasting (*Gnaphalium californicum*), and slender sunflower (*Helianthus gracilentus*).

4.10 Watercourse G

Watercourse G is ephemeral, and originates on the Sedco Hills located north of Bundy Canyon Road and off the site. It is also a tributary of Blueline Stream 2. It trends northwest-to-southeast through a relatively steep-sloped V-shaped valley to its confluence with Blueline Stream 2. It is undisturbed, but the surrounding hillsides have been burned by wildfire. The channel is shallow-incised and unvegetated, and composed of sandy loam, brown in color, with or without gravels, cobbles and boulders



View of a portion of the channel of Watercourse E. It is ephemeral, and originates on the Sedco Hills. It has a shallow-incised channel composed of sandy loam, brown in color, with or without gravels. It is carpeted with Grasslands vegetation upstream and Chaparral vegetation downstream.

SITE PHOTOGRAPH 9

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View of a portion of the channel of Watercourse F. It is also ephemeral, and originates on the Sedco Hills. It is shallow-incised, and composed of sandy loam, brown in color, with or without gravels, cobbles and boulders. The banks are vegetated with Chaparral species.

SITE PHOTOGRAPH 10

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(Site Photograph 11). Its total length on the site is 211 feet. Corps jurisdictional widths averaged 1.5 feet, and the total jurisdictional area was calculated to be 0.007 acres. Without the presence of riparian vegetation, the total CDFG jurisdiction was also calculated to be 0.007 acres.

The banks of this blueline stream are sparsely vegetated with typical Chaparral species, including chamise (*Adenostoma fasciculatum* var. *fasciculatum*), thick-leaved lilac (*Ceanothus crassifolius* var. *crassifolius*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), and black sage (*Salvia mellifera*). Understory species include *shortpod mustard (*Brassica geniculata*), *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*), California everlasting (*Gnaphalium californicum*), and slender sunflower (*Helianthus gracilentus*).

4.11 Watercourse H

Watercourse H is ephemeral, and originates on the Sedco Hills located north of Bundy Canyon Road and off the site. It is also a tributary of Blueline Stream 2. It trends northwest-to-southeast through a relatively steep-sloped V-shaped valley to its confluence with Blueline Stream 2. It is undisturbed, but the surrounding hillsides have been burned by wildfire. The channel is shallow-incised and unvegetated, and composed of sandy loam, brown in color, with or without gravels, cobbles and boulders **(Site Photograph 12)**. Its total length on the site is 582 feet. Corps jurisdictional widths averaged 1.5 feet, and the total jurisdictional area was calculated to be 0.020 acres. Without the presence of riparian vegetation, the total CDFG jurisdiction was also calculated to be 0.020 acres.

The banks of this blueline stream are sparsely vegetated with typical Chaparral species, including chamise (*Adenostoma fasciculatum* var. *fasciculatum*), thick-leaved lilac (*Ceanothus crassifolius* var. *crassifolius*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), and black sage (*Salvia mellifera*). Understory species include *shortpod mustard (*Brassica geniculata*), *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*), California everlasting (*Gnaphalium californicum*), and slender sunflower (*Helianthus gracilentus*).

5. IMPACTS

Information necessary to quantify impacts is not available.

6. CORPS JURISDICTION UNDER RAPANOS

The term “Waters of the United States” is defined in Corps regulations at 33 CFR Part 328.3(a) as all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.



View of a portion of the channel of Watercourse G. It is also ephemeral, and originates on the Sedco Hills. It is shallow-incised, unvegetated and composed of sandy loam, brown with or without gravels, cobbles and boulders. The banks are sparsely vegetated with Chaparral species.

SITE PHOTOGRAPH 11

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View of a portion of the channel of Watercourse H. It is also ephemeral, and originates on the Sedco Hills. It is shallow-incised, and composed of sandy loam, brown in color, with or without gravels, cobbles and boulders. The banks are sparsely vegetated with Chaparral species.

SITE PHOTOGRAPH 12

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In recent Supreme Court cases (*Rapanos v. United States* and *Carabell v. United States* herein referred to as *Rapanos*) the court attempted to clarify the extent of Corps jurisdiction under the Clean Water Act. Due to the justices issuing five opinions with no single opinion commanding a majority of the court, the current process for determining Corps jurisdiction is convoluted and somewhat unclear.

Generally the Corps will assert jurisdiction over traditional navigable waters, wetlands adjacent to traditional navigable waters (TNW), non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months), and wetlands that directly abut such tributaries.

The Corps will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water: non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not relatively permanent, and wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters.

Significant nexus includes consideration of hydrologic and ecologic factors. The consideration of hydrological factors includes volume, duration, and frequency of flow, proximity to traditional navigable waters, size of watershed, average annual rainfall, and average annual winter snow pack. The consideration of ecological factors includes the ability for tributaries to carry pollutants and flood waters to a TNW, the ability of a tributary to provide aquatic habitat that supports a TNW, the ability of wetlands to trap and filter pollutants or store flood waters, and maintenance of water quality.

The Corps generally will not assert jurisdiction over swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow) and ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

7. PERMITTING REQUIREMENTS

If the proposed project results in impacts to jurisdictional areas, then prior authorizations from the Corps, CDFG and San Diego Water Board will be required.

United States Army Corps of Engineers

The Corps may issue two types of permits under Section 404 of the Clean Water Act to authorize the discharge of dredged or fill material into Waters of the United States: (1) a Nationwide Permit (NWP) or (2) an Individual Permit. NWPs are general permits

for specific categories of activities that result in minimal impacts to Waters of the United States. It is anticipated that the NWP used for this project would be NWP 29 (Residential Developments).

The Corps, Los Angeles District Regulatory Branch, issued regional conditions effective May 18, 2007 for the new and modified NWPs. The regional conditions are in addition to all other conditions of the re-issued NWPs. According to Regional Condition 8, Individual Permits will be required in the Murrieta Creek and Temecula Creek Watersheds for new permanent fills in perennial and intermittent watercourses otherwise authorized under NWP 29, and in ephemeral watercourses for NWP 29 for projects that impact greater than 0.1 acres of Waters of the United States.

For projects with impacts greater than 0.5 acres, the Corps would require an Individual Permit (IP). IPs require detailed analysis and compliance with the Corps formal review process. This IP process includes preparation of an alternatives analysis as required by Environmental Protection Agency (EPA) Section 404(b)(1) Guidelines and the National Environmental Policy Act (NEPA), and also requires compliance with NEPA's environmental review process, the Federal Endangered Species Act, and Section 106 of the National Historic Preservation Act. The IP process provides opportunities for public notice and comment. Processing time for individual permits typically ranges from 120 to 180 days. Processing a complicated individual permit typically takes more than a year.

California Department of Fish & Game

The State of California regulates water resources under Sections 1600-1616 of the California Fish and Game Code. Section 1602 states:

“An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.”

Section 1602 requires any person, State or local governmental agency, or public utility to notify the CDFG before beginning activities that would result in impacts to Waters of the State (jurisdiction). CDFG jurisdiction includes ephemeral, intermittent and perennial watercourses, desert washes, watercourses with a subsurface flow, lakes, and the limit of the riparian habitats located contiguous to the watercourses. It may also apply to work undertaken within the floodplain of any body of water. To notify the CDFG, a Notification of Lake or Streambed Alteration application must be completed and submitted to the CDFG. In addition to the formal application materials, a copy of the appropriate environmental document required for compliance with CEQA must be included with the application.

California Regional Water Quality Control Board, San Diego Region

The project is within the jurisdiction of the San Diego Water Board. The San Diego Water Board regulates wastewater discharges to both surface water (rivers, ocean, etc.) and to groundwater (via land). It also regulates storm water discharges from construction, industrial, and municipal activities; discharges from irrigated agriculture; dredge and fill activities; the alteration of any federal water body under the 401 certification program; and, several other activities with practices that could degrade water quality. If the proposed activities or discharges from the property could affect California's surface, coastal or ground waters, then an Application for Clean Water Act (CWA) §401 Water Quality Certification is required. Pursuant to Section 401 of the CWA, the San Diego Water Board must certify that the discharge of dredged or fill material into Waters of the United States will comply with applicable effluent limitations and does not violate State water quality standards.

8. MITIGATION REQUIREMENTS

If the proposed project results in impacts to jurisdictional areas, then mitigation will be required to offset adverse effects on the aquatic environment that are more than minimal. The Section 404 (b)(1) guidelines and the "Memorandum of Agreement (MOA) between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation under the Clean Water Act Section 404(b)(1) Guidelines," dated February 7, 1990, require a permit applicant to justify project-related impacts on Waters of the United States and to implement mitigation to avoid, minimize, and compensate for those impacts. Avoidance of impacts is the primary form of mitigation, while minimization of impacts is the secondary form of mitigation required under the MOU. CDFG also requires mitigation of unavoidable impacts to jurisdictional streambeds and associated riparian habitat.

Compensatory mitigation is also used to compensate for unavoidable impacts. Compensatory mitigation can take the form of habitat creation, restoration, enhancement, or preservation. It can occur on the project site or off the site. The agencies typically prefer onsite to offsite mitigation. Some potential onsite mitigation opportunities include the restoration of all preserved drainages on the site. Offsite mitigation can take the form of credits purchased in a mitigation bank. The agencies typically require mitigation at a 2:1 ratio or higher, and only allow offsite mitigation to be located within the same watershed as the project impact area.

CERTIFICATION STATEMENT

Date: December 22, 2010

Principe and Associates hereby certifies that the statements furnished herein and in the attached exhibits present the data and information required for this Jurisdictional Delineation of Waters and Wetlands to the best of our ability, and that the facts, statements and information presented are true and correct to the best of our knowledge and belief.

Paul A. Principe
Principal

Jack Munroe
Associate

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