

APPENDIX 6.5-B
JURISDICTIONAL WATERS AND WETLAND DELINEATION REPORT

Jurisdictional Waters and Wetland Delineation

Orange Grove Project

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Prepared for:
Orange Grove Energy, L.P.

Prepared by:
The logo for TRC, consisting of a blue circular icon with a white swirl inside, followed by the letters "TRC" in a bold, blue, sans-serif font.

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TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	PROJECT LOCATION.....	1
1.2	PROJECT SETTING	2
2.0	METHODS	3
3.0	RESULTS.....	6
3.1	SOILS	6
3.2	POTENTIAL JURISDICTIONAL WATERS AND WETLANDS	7
3.3	NON-JURISDICTIONAL FEATURES.....	16
4.0	POTENTIAL PROJECT IMPACTS TO JURISDICTIONAL FEATURES.....	17
5.0	REFERENCES.....	18

LIST OF ATTACHMENTS

Attachment A: Figure 1 to Figure 6

- Figure 1: Project Location
- Figure 2: Vicinity Map
- Figure 3: Aerial Overview
- Figure 4: USFWS National Wetland Inventory Map
- Figure 5: Soils Map
- Figure 6 (Sheets 1-4): Jurisdictional Waters and Wetlands Map

Attachment B: Data Forms

Attachment C: Photo Exhibit

1.0 INTRODUCTION

TRC Solutions, Inc. (TRC) conducted a delineation of jurisdictional waters and wetlands for the proposed Orange Grove Project (the “Project”) located in unincorporated San Diego County, California. This Jurisdictional Waters and Wetlands Delineation report was prepared to document the delineation work and the presence and boundaries of identified jurisdictional waters and wetlands regulated by the United States Army Corps of Engineers (Corps) and Regional Water Quality Control Board (RWQCB) pursuant to Section 404 and 401 of the Clean Water Act (“waters of the United States”), and California Department of Fish and Game (CDFG) pursuant to Section 1600 of the California Fish and Game Code (“waters of the State”). The Project consists of construction and operation of the following project facilities:

- 96-megawatt electric generating plant located on an approximately 8.5 acre site (the “Site”);
- approximately 0.3-mile underground electric transmission line that will connect the Site to the existing Pala substation;
- approximately 2.4-mile long natural gas pipeline that will connect the Site to an existing regional natural gas transmission line; and
- fresh water pickup station where water trucks will be filled from an existing Rainbow Water District water main. The pick-up station will be constructed in the southern half of an approximately one-acre parcel.

The Project also includes construction and operation of a reclaim water pickup station located at an existing water reclamation plant about 15 miles from the Site in Fallbrook. The reclaim water pickup station is not further addressed in this report because it will be constructed by the Fallbrook Public Utility District (FPUD) within an existing FPUD water reclamation facility and its construction and operation will not impact any watercourse or wetlands and will not require any permits.

1.1 PROJECT LOCATION

The Site location is shown in Figure 1. A Vicinity Map and the location of Project facilities are provided in Figure 2. An aerial photograph is provided in Figure 3. The Power Plant Site is located approximately 2 miles west of the community of Pala, California, approximately 0.1 mile north of the intersection of State Route (SR) 76 and Pala Del Norte Road. The underground electric transmission line will extend from the Site generally southward to the existing substation located on the north side of SR 76 (Figure 3). The proposed gas pipeline will extend from the Site generally southwest to an existing regional gas transmission line located adjacent to Rice Canyon Road. The fresh water pickup station will be located on Rice Canyon road approximately 1.3 (air) miles west of the Site. Each of the Project facilities has been located and designed to minimize impacts to sensitive environmental resources, and most of the pipeline alignment is located within areas characterized as urban developed.

1.2 PROJECT SETTING

The Site is located north of SR 76 in upland terrain on an ancient alluvial fan on the south-facing slope of the mountains that comprise the north side of the San Luis Rey River valley. The San Luis Rey River occurs to the south of the Project and south of SR 76 on the alluvial floor of the valley. Regionally, the area is rural with agriculture, large residential plots, small communities, open space and large-scale commercial/industrial such as a hotel/casino and mining. Outside of developed areas and agriculture, coastal sage scrub and chaparral dominate the upland terrain with oak woodland and non-native grassland also occurring. Riparian forest occurs in association with the San Luis Rey River and its larger tributaries.

The Project is designed so that facilities will be located almost exclusively in areas that are already developed or disturbed in order to minimize disturbance to natural habitat. The Project is designed to avoid disturbance to the San Luis Rey River and associated wetlands and riparian vegetation. A biological resources assessment, including habitat mapping, has been conducted for the Project and is described in a separate report. The vegetation communities described in this report are taken from the biological resources assessment. The following paragraphs provide a description of the setting of various Project components. To facilitate description of the proposed gas pipeline route, the proposed route is characterized in segments. The location of each of the segments is shown in Figures 2 and 3.

The proposed Site occurs on an abandoned orchard that consists of citrus trees that have not been watered or maintained in several years and are no longer viable. The vegetation adjacent to the Site is Diegan coastal sage scrub to the west and north, additional abandoned orchard area to the east, and abandoned orchard and non-native grassland to the south. Coast live oak woodland occurs in a deeply incised drainage approximately 200 feet east of the Site that will not be disturbed. No wetland or riparian vegetation occurs on or adjacent to the Site.

The proposed underground transmission line will be located primarily within the roadbed or shoulder of Pala Del Norte Road and within a paved driveway that provides access to the existing substation from Pala Del Norte Road. Orchard, non-native grassland, and Diegan coastal sage scrub are the only vegetation types that occur on or adjacent to the underground transmission line route. Transmission line construction will temporarily disturb a small amount of Diegan coastal sage scrub. No wetland or riparian vegetation occurs on or adjacent to the underground transmission line route.

Segment A of the gas line begins at the Site boundary and ends at the southeast corner of the Pala substation. For this segment, the pipeline will be co-located with the underground electric transmission line (either vertically stacked or side by side) between the Site and the south end of Pala Del Norte Road. At the south end of Pala Del Norte Road, the transmission line and gas pipeline routes will split. The underground electric transmission line will be installed within the asphalt driveway to the substation as previously described, while the gas pipeline will be routed along an existing unpaved access road that extends beneath the electric transmission lines along the south side of the substation. The unpaved access road extends to an existing unpaved graded pad at the southeast corner of the substation, where this segment terminates. Segment A will be located entirely within developed areas (i.e., roads and road shoulder) except for a short segment

of Diegan coastal sage scrub that will be temporarily disturbed for construction. No wetland or riparian vegetation occurs on or adjacent to pipeline route Segment A.

Segment B begins at the existing unpaved graded pad at the southeast corner of the Pala substation and traverses generally steep upland terrain comprised of Diegan coastal sage scrub, and ends just south of SR 76 approximately 0.4 (air) mile southwest of the Pala substation in a former dairy farm. This segment follows existing unpaved roads throughout the upland terrain, except for the easternmost approximately 400 feet where the route is cross-country. Within the former dairy farm, the route is within terrain characterized as urban/developed. No wetland or riparian vegetation occurs on or adjacent to pipeline route Segment B.

Segment C begins on the south side of SR 76 approximately 0.4 (air) mile southwest of the Pala substation and generally parallels SR 76, following existing roads through the two former dairy farm areas and through a riparian forest that occurs between the dairy farm areas. The west end of Segment C occurs at a second crossing of SR 76, where the pipeline will cross back over to the north side of the road. This segment of the gas pipeline will not disturb any natural habitat, jurisdictional waters or wetlands. Through the riparian forest, the pipeline construction limits of disturbance will be entirely within an existing 12- to 15-foot wide unpaved road. The vertical and horizontal clearances required for construction equipment have been verified by field reconnaissance, and only a few branches will require trimming through this area to facilitate safe and efficient construction. Outside of the riparian forest area, Segment C traverses terrain that is exclusively urban/developed and agriculture with no natural habitat on or adjacent to the pipeline route.

Segment D is an approximately 0.4 mile long segment that will be constructed within urban developed land within or adjacent to the SR 76 right-of-way. Agricultural land and the highway are adjacent to this segment, with no natural habitat in areas to be disturbed. Oak woodland and riparian habitat occur near the west end of this segment, but on the opposite side of Rice Canyon Road and SR 76 from where pipeline construction will occur. Diegan coastal sage scrub occurs near the east end of this segment, but well beyond the planned limits of pipeline construction disturbances.

The fresh water pickup station will be located on disturbed land. Active orchard and agriculture occur adjacent to the pickup station to the south and east, and disturbed land occurs to the north. Rice Canyon Road abuts the fresh water pickup station location to the west.

2.0 METHODS

Prior to conducting field delineation of jurisdictional waters and wetlands, TRC examined maps and databases to identify potential jurisdictional “waters of the U.S.,” “waters of the State” or wetlands as follows:

- aerial photographs of the Project area to determine the potential locations of Corps, RWQCB, and CDFG jurisdictional waters or wetlands (Attachment A, Figure 3);

- United States Geological Survey (USGS) map (Attachment A, Figure 2) to determine the presence of any blueline drainages or other mapped water features;
- United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) to identify areas mapped as wetland features (Attachment A, Figure 4); and
- United States Department of Agriculture (USDA) Natural Resources Conservation Service soil mapping data (Attachment A, Figure 5).

Fieldwork for the delineation was conducted on February 7, 12, and 22 and April 9, 2008 by TRC biologists Dr. Ceri Williams-Dodd and Ms. Leslie Goff. The survey occurred after several recent rainstorms. Rainfall data from a location near Fallbrook approximately six miles west of the Site and at a similar elevation (450 feet) indicates that rainfall events occurred on January 5 and 6 (2.6 inches), January 27 and 28 (2.2 inches), February 3 (1.3 inches) and February 7 (1.3 inches). The delineation involved surveying the locations of the Project facilities and the area within a minimum 250-foot radius around each of the Project facilities (the "Survey Area") to physically identify hydrologic, vegetative, and geomorphic characteristics and to map the extent of drainages, wetlands, or features such as roadside ditches. The presence of mapped USGS blueline drainages/ponds and USFWS NWI features within the Survey Area were also confirmed.

The Survey Area extends beyond the areas proposed for disturbance by the Project facility construction and operations. All areas within the proposed Project disturbance area were accessible to survey. Three areas outside the proposed Project disturbance area were not accessible because access permission was not obtained from private landowners. Therefore, best efforts were made to survey these areas by other means including observation from outside the fence lines and aerial photo analysis. The three areas where access was not permitted are described below:

- Agricultural fields north and south of SR 76 at the westernmost end of the gas pipeline ("Segment D") were not open to access. For this portion of the Survey Area, observations beyond the accessible area were conducted from existing road corridors including SR 76, Rice Canyon Road, and Courser Canyon Road. Due to the flat topography and low growing vegetation on the agriculture land, visibility of this area from accessible locations was good.
- South of the Site, the south side of SR 76 is only open to access up to a fence line surrounding former sand and gravel mine. Direct observations of the area beyond the fence line were limited to the immediate margin of the mine site at some locations due to dense vegetation, so drainage pathways substantially beyond the fence line could not be clearly observed in some areas.
- Portions of lands surrounding the fresh water pickup station were observed from existing roads and from within the fresh water pickup location parcel. Due to the gentle topography and low growing vegetation on the agriculture land, visibility of these areas from accessible locations was good.

The three areas with access limitations are noted in the maps in Figure 6.

Once physical signs were identified representing potential jurisdictional features, further field observations and measurements were conducted at selected locations (data points). Data points were selected to represent typical conditions observed at a particular feature. Multiple data points were taken as needed to capture the diversity of physical characteristics associated with a particular feature, for example within each tributary of a main drainage. The following observations and measurements were taken at each data point as follows:

- “Waters of the U.S.” were identified pursuant to criteria outlined in Section 401 and Section 404 of the Clean Water Act, including but not limited to the presence of an Ordinary High Water Mark (OHWM) and connection to a downstream jurisdictional water body. The OHWM was determined by observing signs of flow including but not limited to shelving, drift lines, and disturbed vegetation. Photographs and measurements in feet (‘) and inches (“) were taken of the OHWM at each data point. Drainages that appeared to meet the criteria for “waters of the U.S.” were considered potentially jurisdictional as any determination is subject to verification by the regulatory agencies.
- “Waters of the State” were identified pursuant to criteria outlined in Section 1600 of the California Fish and Game Code, including the presence of a defined bed and bank and any associated vegetation. Photographs and measurements in feet (‘) and inches (“) were taken of the banks at each data point. Drainages that appeared to meet the criteria for “waters of the State” were considered potentially jurisdictional as any determination is subject to verification by the regulatory agencies.
- Wetlands were identified by the “three-factor” approach, in which criteria for wetland hydrology, hydrophytic vegetation, and hydric soils must all be met to conclude that an area is a wetland, as described in the 1987 Corps Wetland Delineation Manual and summarized below. Wetlands that appeared to meet the Corps criteria were considered potentially jurisdictional as any determination is subject to verification by the regulatory agencies.

Vegetation: Plant species were identified in the field and the indicator status of dominant plants was determined using The National List of Plant Species that Occur in Wetlands: Region 0–California (USFWS 1988 and Draft Version from 1996). Plant species were classified as obligate wetland (OBL) with greater than 99% probability of occurring in wetlands; facultative wetland (FACW) with 67% to 99% probability of occurring in wetlands; facultative (FAC) with 33% to 67% probability of occurring in wetlands; facultative upland (FACU) with 1% to 33% probability of occurring in wetlands; or upland (UPL) with less than 1% probability of occurring in wetlands. Positive (+) and negative (-) modifiers subdivide the three facultative categories. The positive sign indicates that the species is more frequently found in wetlands, and a negative sign indicates that the species is less frequently found in wetlands.

Hydrology: The presence of primary wetland hydrology indicators was determined by observing inundation, saturation, water marks, sediment deposits, drainage patterns,

and/or drift lines. Soil pits were dug to a depth of 14 inches, or until refusal, using a sharpshooter shovel, and allowed to stand undisturbed for at least 10 minutes. Observations were then recorded as to depth of free water in the pit, and depth of saturated soil.

Soil: Soil profiles were examined for color and texture. Soil color was determined using a Munsell Soil Color Chart and hydric soil characteristics were identified (i.e., sulfidic odor, low chroma colors, mottling, etc.).

The results were recorded on Wetland Delineation Forms and each data point was mapped using a Trimble Geo XT Global Positioning System (GPS) receiver and data collector. The GPS unit was operated following manufacturer's recommendations for obtaining sub-meter accuracy. Post-processing of the data was carried out using Pathfinder Office software and electronic Geographic Information Systems (GIS) shape files were created. GIS data was geo-referenced to aerial photography to produce figures mapping the data points.

3.0 RESULTS

3.1 SOILS

Eight dominant soils were identified mapped by USDA within the Survey Area (Attachment A, Figure 5), including Cieneba very rocky coarse sandy loam (CmrG), Las Posas stony fine sandy loam (LrE), Las Posas stony fine sandy loam (LrG), Tujunga sand (TuB), Visalia sandy loam (VaA), Steep gullied land (StG), Riverwash (Rm), and Wyman loam (WmC) (USDA and UC Davis online resources). A summary of the soil map units, drainage class and hydric conditions as reported by USDA and UC Davis are provided in Table 1.

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Table 1: Dominant Soil Map Units within the Survey Area

Map Unit Symbol	Map Unit Name	Drainage Class	Hydric Conditions
CmrG	Cieneba very rocky coarse sandy loam, 30 to 75% slopes	Somewhat excessively drained	Not hydric
LrE	Las Posas stony fine sandy loam, 9 to 30% slopes	Well drained	Not hydric
LrG	Las Posas stony fine sandy loam, 30 to 65% slopes	Well drained	Not hydric
TuB	Tujung sand, 0 to 5% slopes	Somewhat excessively drained/partially hydric	Partially hydric
VaA	Visalia sandy loam, 0 to 2% slopes	Well drained	Partially hydric
StG	Steep gullied land	N/A	Partially hydric
Rm	Riverwash	Excessively drained	All hydric
WmC	Wyman loam, 5 to 9% slopes	Well drained	Not hydric

3.2 POTENTIAL JURISDICTIONAL WATERS AND WETLANDS

This section describes potential jurisdictional waters and wetlands identified in the Survey Area. The drainages and wetlands are mapped on Attachment A, Figure 6 (Sheets 1-4) and data sheets are provided as Attachment B. A summary of the widths of “waters of the U.S.” and “waters of the State” are provided in Table 2, and representative photographs are provided as Attachment C. This section also describes USFWS NWI mapped wetlands and a USGS mapped pond that are potentially jurisdictional for which data was not collected due to limited accessibility.

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Table 2: Summary of Widths of “Waters of the U.S.” and “Waters of the State”

Date	Drainage	Tributary or General Location	“Waters of the U.S.” (feet/inches)	“Waters of the State” (feet/inches)	Wetland (Y/N)
2/7/2008	1	North of SR 76	2’5”	38’4”	N
2/12/2008	1	South of SR 76	2’0”	7’0”	N
2/7/2008	1	Tributary 1.1	2’2”	13’5”	N
2/7/2008	1	Tributary 1.2	1’9”	2’8”	N
2/7/2008	1	Tributary 1.3	2’6”	19’5”	N
2/12/2008	2	North of SR 76	1’8”	59’0”	N
2/12/2008	3	Tributary 3.1	3’8”	12’3”	N
2/12/2008	3	Tributary 3.2	3’7”	16’10”	N
2/12/2008	4	Upstream	1’8”	13’5”	N
2/12/2008	4	Downstream	1’8”	13’6”	N
2/12/2008	5	Adjacent to SR 76	4’0”	11’5”	N
2/12/2008	6	Adjacent to SR 76	3’8”	13’11”	N
4/9/2008	6	Tributary 6.1	2’ 8”	16’	N
2/12/2008	San Luis Rey	Riparian Area	*	*	N
2/12/2008	San Luis Rey	Wetland Area	+	+	Y

* This area totals 0.4 acres. No OHWM or wetland indicators were observed and surface hydrology connection to the San Luis Rey River has been cut off by an existing dirt access road. This area was not considered potential jurisdictional “waters of the U.S.” However, this area appears to have been associated with the San Luis Rey River banks in the past and still supports riparian vegetation and was therefore considered potential jurisdictional “waters of the State.”

+ No measurements were taken due to inaccessible conditions.

DRAINAGE 1

This unnamed ephemeral drainage with three tributaries traverses areas mapped as Diegan Coastal Sage Scrub (Holland Classification 32500) and Non-native Grassland (Holland Classification 42200) and appears to receive runoff from a roadside ditch further north on Pala Del Norte Road (Attachment A, Figure 6, Sheet 2). The natural headwater of the drainage was likely altered during construction of the road. Drainage 1 is not mapped as a blue line drainage on the USGS map. This drainage has a defined bed and bank and OHWM in the upper reaches. The bed and bank and OHWM become less defined in the lower reaches due to past alterations from orchard operations and SR 76. The drainage flows just west of the Site boundary heading southwest, and then turns heading southeast until it crosses under SR 76 via a culvert after which it flows adjacent to SR 76 within a sparsely vegetated ditch heading southwest. The ditch becomes less defined until no physical signs of channelized flow are evident. At this point a few stands of mulefat (*Baccharis salicifolia*) were observed. The ground slope in this area is toward the former mine site on the south side of SR 76. Observation beyond the mine site fence line is limited in the area of this drainage due to access restrictions and dense vegetation. The pathway for this drainage within the mine site could not be ascertained with certainty, but based on review of aerial photographs water in this drainage likely either flows to the San Luis Rey River when enough flow is present or to the former mine pit ponds which are considered jurisdictional

“waters of the U.S.” and “waters of the State” based on connection to the San Luis Rey River. Therefore this drainage is considered potential jurisdictional “waters of the U.S.” and “waters of the State.” The portion of this drainage north of SR 76 is mapped on the USDA web soil survey map (Attachment A, Figure 5) as predominantly StG and classified as partially hydric. A small portion of the drainage just north of SR 76 is mapped as LrE and classified as well drained and not hydric. On the south side of SR 76 the drainage is mapped as TuB and classified as somewhat excessively drained and partially hydric. Two data points were collected along Drainage 1 (Attachment A, Figure 6, Sheet 2) as follows:

Data Point north of SR 76: This data point was taken upstream of a dirt road crossing that provides access to an existing SDG&E storage facility from Pala Del Norte Road. The area is mapped as non-native grassland. The dominant species was recorded as wild mustard (*Brassica nigra/hirschfeldia*) (non-native, no wetland indicator status), in addition to a few native species including phacelia (*Phacelia* sp.) (native, UPL or not wetland indicator status¹), popcorn flower (*Plagiobothrys* sp., likely *P. trachycarpus*) (native, FACW) and common fiddleneck (*Amsinckia menziesii*) (native, no wetland indicator status). The channel is clearly defined with the width measured as 2 feet 5 inches. Drift lines and sediment deposits were noted, but no hydric soils or hydrophytic vegetation was found in the channel. Based on these observations, the drainage was not characterized as a wetland. The banks of the drainage at this location, measured as 38 feet 4 inches in width, appear to have been altered during construction of Pala Del Norte Road to the west and a disturbed area to the east.

Data Point south of SR 76: This data point was taken just south of the culvert under SR 76. Dominant species were noted as storksbill filaree (*Erodium cicutarium*) (non-native, no wetland indicator status) in the herb stratum and California buckwheat (*Eriogonum fasciculatum*) (native, no wetland indicator status) in the shrub stratum. Sediment deposits were observed, but no hydric soils or hydrophytic vegetation were found at the data point. Based on these observations, the drainage was not characterized as a wetland. The width of “waters of the U.S.” was measured as 2 feet and “waters of the State” as 7 feet.

Three unnamed tributaries to Drainage 1 were identified (tributaries 1.1, 1.2 and 1.3). Each of these tributaries was characterized as ephemeral and is located within an area mapped as Diegan Coastal Sage Scrub. These tributaries are considered jurisdictional due to their ultimate connection to the San Luis Rey River (see above). Data points were taken within each tributary (Attachment A, Figure 6, Sheet 2) as follows:

Data Point within tributary 1.1: Dominant vegetation consisted of wild mustard, storksbill filaree, common fiddleneck and scarlet pimpernel (*Anagallis arvensis*) (non-native, FAC) within coastal sage scrub habitat. Free water was noted in a pit at 6 inches deep and soil saturation was noted within 1.5 inches of the surface, but no hydric soils or hydrophytic

¹ The plant was not flowering and could not be identified to species. However, from the *Phacelia* sp. listed on the National List of Plant Species that Occur in Wetlands for California, only one occurs in San Diego County, *Phacelia visida*. This species has a UPL wetland indicator status. The *Phacelia* sp. observed is therefore determined to have either no wetland status indicator or a UPL indicator and therefore is not hydrophytic.

vegetation were found at this data point. Based on these observations, the drainage was not characterized as a wetland. The width of “waters of the U.S.” was measured at 2 feet 2 inches and “waters of the State” as 13 feet 5 inches. This tributary flows through a culvert beneath Pala Del Norte Road upstream of the confluence with Drainage 1.

Data Point within tributary 1.2: Dominant vegetation consisted of non-hydrophytic vegetation including storksbill filaree and thistle (*Cirsium* sp., likely *C. vulgare*) (native, no wetland indicator status) within coastal sage scrub habitat. Surface inundation, sediment deposits, and saturated soils in the upper 12 inches (at 0 inches) were observed, but no hydric soils or hydrophytic vegetation were found at this data point. Based on these observations, the drainage was not characterized as a wetland. The width of “waters of the U.S.” was measured at 1 foot 9 inches and “waters of the State” as 2 feet 8 inches. This tributary flows through a culvert beneath Pala Del Norte Road upstream of the confluence with Drainage 1.

Data Point within tributary 1.3: Dominant vegetation consisted of non-hydrophytic vegetation including wild mustard and storksbill filaree within coastal sage scrub habitat. Saturated conditions were observed in the upper 12 inches of soil (within 2 inches), but no hydric soils or hydrophytic vegetation were found at this data point. Based on these observations, the drainage was not characterized as a wetland. The width of “waters of the U.S.” was measured at 2 feet 6 inches and “waters of the State” as 19 feet 5 inches. This tributary flows through a culvert beneath Pala Del Norte Road upstream of the confluence with Drainage 1. An additional topographic low point was also investigated approximately parallel to tributary 1.1 to the southwest. This low point was determined to lack signs of hydrology or a defined bed and bank, and therefore was not considered a jurisdictional water or wetland.

DRAINAGE 2

This unnamed ephemeral drainage is mapped as Open Coast Live Oak Woodland (Holland Classification 71161) and originates from natural headwaters to the northwest (Attachment A, Figure 6, Sheet 2). Drainage 2 is mapped as a blue-line drainage on the USGS map (Attachment A, Figure 2). This drainage has a defined bed and bank and OHWM in the upstream portion which becomes less defined adjacent to SR 76 due to past anthropogenic alterations. This drainage occurs about 200 feet to the east of the Site and flows southeast and crosses under SR 76 via a culvert. A coast live oak (*Quercus agrifolia*) tree is associated with the drainage where it enters the culvert under SR 76. Based on observations from SR 76, the drainage appears to connect to the former mine pits to the southeast which are considered jurisdictional “waters of the U.S.” and “waters of the State” as previously described. Therefore this drainage is considered potential jurisdictional “waters of the U.S.” and “waters of the State” based on its direct connection to the jurisdictional former mine pits. The portion of this drainage north of SR 76 is mapped on the USDA web soil survey map (Attachment A, Figure 5) as LrE and classified as well drained. On the south side of SR 76 the drainage is mapped as TuB and classified as somewhat excessively drained. One data point was collected along Drainage 2 (Attachment A, Figure 6, Sheet 2) as follows:

Data Point north of SR 76: The dominant species were coast live oak (native, no wetland indicator status), black sage (*Salvia mellifera*) (native, no wetland indicator status), pincushion (*Chaenactis* sp.) (native, no wetland indicator status) and wild cucumber (*Marah macrocarpus*) (native, no wetland indicator status). Drift lines and sediment deposits were observed, but no hydric soils or hydrophytic vegetation. Based on these observations, the drainage was not characterized as a wetland. The width of “waters of the U.S.” was measured at 1 foot 8 inches and “waters of the State” as 59 feet.

DRAINAGE 3

This unnamed ephemeral drainage with two tributaries is mapped as Diegan Coastal Sage Scrub (Holland classification 32500) and originates from natural headwaters to the northwest (Attachment A, Figure 6, Sheet 2). Drainage 3 is not mapped as a blue-line drainage on the USGS map. This drainage has a defined bed and bank and OHWM in the upstream portion which becomes less defined adjacent to SR 76 due to past anthropogenic alterations. The drainage flows south of the existing Pala substation heading southeast and crosses under SR 76 via a culvert. A dirt/rock berm exists immediately upstream of the culvert that appears to be a man-made feature functioning as a flow dissipater. After crossing under SR 76 the drainage flows into the former mine site. Observation beyond the mine site fence line is limited in the area of this drainage due to access restrictions and dense vegetation. The pathway for this drainage within the mine site could not be ascertained with certainty, but based on review of aerial photographs water in this drainage likely flows to the San Luis Rey River when enough flow is present or to the former mine pit ponds which are considered jurisdictional “waters of the U.S.” and “waters of the State” as previously described. Therefore this drainage is considered potential jurisdictional “waters of the U.S.” and “waters of the State.” The drainage is mapped on the USDA web soil survey map (Attachment A, Figure 5) as LrE and LrG. Both soil types are classified as well drained and not hydric. Two data points were collected along Drainage 3 (Attachment A, Figure 6, Sheet 2) as follows:

Data Point within tributary 3.1: The dominant vegetation was California sagebrush (*Artemisia californica*) and *Phacelia* sp. Shelving was noted at this area, but this was not clearly defined and no hydric soils or hydrophytic vegetation were observed at this data point. Based on these observations, the drainage was not characterized as a wetland. The width of “waters of the U.S.” was measured at 3 feet 8 inches and “waters of the State” as 12 feet 3 inches. This data point is representative of the downstream channel.

Data Point within tributary 3.2: This site was dominated by non-hydrophytic vegetation including California sagebrush (native, no wetland indicator status) and *Phacelia* sp. Shelving was noted at this area, but this was not clearly defined and no hydric soils or hydrophytic vegetation were observed at this data point. Based on these observations, the drainage was not characterized as a wetland. The width of “waters of the U.S.” was measured at 3 feet 7 inches and “waters of the State” as 16 feet 10 inches.

DRAINAGE 4

This unnamed ephemeral drainage is mapped as Diegan Coastal Sage Scrub (Holland classification 32500) and originates from natural headwaters to the northwest (Attachment A, Figure 6, Sheet 2). Drainage 4 is not mapped as a blue-line drainage on the USGS map. This

drainage has a defined bed and bank and OHWM which becomes less defined in the vicinity of an existing unpaved road that it crosses near the upstream boundary of the Survey Area (Attachment A, Figure 6, Sheet 2), and again near the downstream end of the Survey Area near a second unpaved road crossing and SR 76. The drainage flows approximately east. As the drainage reaches the unpaved road near the upstream end of the Survey Area, it appears that flows pool before crossing the road via sheet flow either to the defined channel on the other side of the road or down the road heading south. Flow within the defined channel heads in an approximately east direction as it flows toward SR 76. This drainage crosses under a second dirt access road just upstream of SR 76 via a culvert and then surfaces for a short distance before crossing under SR 76 via another culvert. Based on observations from SR 76, the drainage appears to connect to either the former mine pits to the east which are considered jurisdictional “waters of the U.S.” and “waters of the State” as previously described, or directly to the San Luis Rey River. Therefore this drainage is considered potential jurisdictional “waters of the U.S.” and “waters of the State.” The drainage is mapped on the USDA web soil survey map (Attachment A, Figure 5) as CmrG and classified as somewhat excessively drained and not hydric, with the upper reaches mapped as LrG and classified as well drained and not hydric. Two data points were collected along Drainage 4 (Attachment A, Figure 6, Sheet 2) as follows:

Data Point upstream: This data point was taken upstream of an unpaved road within a representative channelized reach of the drainage (Attachment A, Figure 6, Sheet 2). This area was dominated by non-hydrophytic vegetation including pincushion and wishbone bush (*Mirabilis californica*) (native, no wetland indicator status). Shelving was noted at this location, but no hydric soils or hydrophytic vegetation was found at this data point. Based on these observations, the drainage was not characterized as a wetland. The width of “waters of the U.S.” was measured at 1 foot 8 inches and “waters of the State” as 13 feet 5 inches.

Data Point downstream: This data point was taken in a disturbed portion of the drainage just upstream of the unpaved road near SR 76 (a more representative upstream reach was not accessible due to steep topography and dense vegetation). The dominant vegetation was pincushion. Some debris collection was noted around the culvert, but no hydric soils or hydrophytic vegetation was present at this data point. Based on these observations, the drainage was not characterized as a wetland. The width of “waters of the U.S.” was measured at 1 foot 8 inches and “waters of the State” as 13 feet 6 inches.

DRAINAGE 5

This ephemeral drainage ditch is mapped as Agriculture (Holland classification 18000) and appears to have been artificially channelized (Attachment A, Figure 6, Sheet 3). Based on a 1947 USGS 15-minute series topographic map (Temecula Quadrangle), this drainage previously connected to a USGS mapped blue-line drainage that now terminates at a stock pond approximately 3,000 feet north of the Survey Area (Attachment A, Figure 2) and may still have a connection through an outlet and/or pond overflows. The ditch flows south, crosses SR 76 via a culvert, and follows adjacent to Couser Canyon Road before connecting to the San Luis Rey River. Based on the source and connection to the San Luis Rey River, this ditch is considered potential jurisdictional “waters of the U.S.” and “waters of the State.” No wetland delineation data points were taken at this drainage since permission for access was not granted by the landowner to the surrounding private property. However, channel measurements were taken

adjacent to SR 76. The ditch has a defined bed and bank and OHWM measurements were taken on the downstream side of SR 76. The width of “waters of the U.S.” was measured at 4 feet and “waters of the State” as 11 feet 5 inches. The ditch was mostly unvegetated with only scattered weedy species and riprap on the channel bed (upstream of SR 76) and banks (upstream and downstream of SR 76). A debris grid exists within a fence just upstream of SR 76. The drainage is mapped on the USDA web soil survey map (Attachment A, Figure 5) as VaA and classified as well drained and partially hydric.

Drainage 5 was subsequently observed following the plant blooming period. Vegetation within and adjacent to the channel upstream of SR 76 between the fence and the road had recently been cut and was therefore sparse. However, based on a few remaining plants and the uncleared area north of the fence, the vegetation consists of grasses including barley (*Hordeum murinum*) (non-native, no wetland indicator status), bromes (*Bromus madritensis* and *Bromus diandrus*) (non-native, no wetland indicator status), and wild mustard. The channel downstream of SR 76 did not appear to have been recently cleared, but vegetation was sparse and consisted of the same species as observed upstream. The species observed lack a wetland indicator status and are not considered hydrophytic vegetation. Based on the absence of hydrophytic vegetation, the drainage is not considered likely to be a Corps jurisdictional wetland.

DRAINAGE 6 (RICE CANYON CREEK)

This ephemeral drainage is mapped as Agriculture (Holland classification 18000) north of SR 76 and Southern Cottonwood Willow Riparian Forest (Holland classification 61330) south of SR 76 (Attachment A, Figure 6, Sheet 3). The drainage is a USGS blue line drainage (Attachment A, Figure 2) known as Rice Canyon Creek and flows adjacent to Rice Canyon Road, crosses under SR 76 via a culvert, and connects to the San Luis Rey River. No wetland delineation data points were taken at this drainage since permission for access was not granted by the landowner to the surrounding private property. However, channel measurements were taken. The ditch has a defined bed and bank and OHWM measurements were taken from SR 76 at the downstream side. The width of “waters of the U.S.” was measured at 3 feet 8 inches and “waters of the State” as 13 feet 11 inches. The ditch was mostly vegetated with grasses north of SR 76. The drainage is mapped on the USDA web soil survey map (Attachment A, Figure 5) as VaA and classified as well drained and partially hydric.

Drainage 6 was subsequently observed following the plant blooming period. Vegetation within and adjacent to the channel upstream of SR 76 had recently been cut. However, based on the remaining and regenerating plants, the vegetation consists of grasses including barley and ripgut brome (*Bromus diandrus*), in addition to wild mustard. The channel downstream of SR 76 did not appear to have been recently cleared, but vegetation was sparse and included one saltcedar (*Tamarix ramosissima*) (non-native, FAC). Just outside the Survey Area the channel becomes vegetated with riparian forest species. The species observed upstream lack a wetland indicator status and are not considered hydrophytic vegetation. Based on the absence of hydrophytic vegetation, the drainage is not considered to be a Corps jurisdictional wetland north of SR 76. Although one plant with a wetland indicator status was observed downstream, based on the lack of vegetation and similarity with the immediate upstream area, the portion of the drainage

between SR 76 and the drip line of the riparian forest is not considered likely to be a Corps jurisdictional wetland.

An unnamed ephemeral tributary to Drainage 6/Rice Canyon Creek (Tributary 6.1) was observed just north of the proposed fresh water pickup station traversing in a northwest to southeast direction (Attachment A, Figure 6, Sheet 4). The drainage marginally traverses the northeast corner of the fresh water pickup station parcel, outside of the area planned for Project construction. The drainage flows through an area mapped as Disturbed (Holland classification 11300) with a few remnant oak trees and coastal sage scrub species, before crossing under Rice Canyon Road via a culvert and flowing through an area with three coast live oak trees along the banks that is also mapped as Disturbed. The tributary then flows across Agriculture (Holland classification 18000) before joining Open Coast Live Oak Woodland (Holland classification 71161) associated with Rice Canyon Creek. The drainage has a modified bed and bank with signs of an OHWM in the upstream reach that become less defined downstream due to established anthropogenic activities. This tributary is considered jurisdictional “waters of the U.S.” and “waters of the State.” The drainage is mapped on the USDA web soil survey map (Attachment A, Figure 5) as WmC and classified as well drained and not hydric. One data point was collected in the upstream portion of Tributary 6.1 within the Survey Area (Attachment A, Figure 6, Sheet 4) as follows:

Data Point within Tributary 6.1: This data point was taken upstream of a small stand of dense, inaccessible oaks and one Mexican elderberry (*Sambucus mexicana*) (native, FAC) located adjacent to Rice Canyon Road. The vegetation at the data point is characteristic of the disturbed habitat observed in the drainage within the Survey Area and includes wild mustard, *Phacelia* sp., and bromes, none of which have a wetland indicator status. Shelving, drift lines, and sediment deposits were noted at this location, but no hydric soils or hydrophytic vegetation were found at this data point. Based on these observations, the drainage was not characterized as a wetland. The width of “waters of the U.S.” was measured at 2 foot 8 inches and “waters of the State” as 16 feet.

SAN LUIS REY RIVER AND ASSOCIATED WETLANDS

The San Luis Rey River generally parallels the Survey Area and lies to the south and southeast of the Survey Area. The map symbol used by USGS corresponds with an intermittent river (Attachment A, Figure 2). The USFWS NWI has a number of mapped wetland features along the San Luis Rey River, but mostly outside of the Survey Area. The NWI map shows a freshwater emergent wetland associated with the San Luis Rey River extending into the Survey Area to within approximately 100 feet south of the pipeline route along Segment C between the two dairy farm areas (Attachment A, Figure 4). The delineation work included observations throughout accessible portions of this area and collection of two data points from the vicinity. One data point is located approximately 100 feet north of the NWI-mapped wetland in an area that appears to be wetland based on vegetation and proximity to the NWI-mapped wetland. The second data point was taken in a riparian area approximately 150 feet north of the NWI-mapped wetland on the opposite side of the unpaved road that the proposed gas pipeline route follows between the two dairy farm areas. These data points are described below.

Data Point in riparian area: Based on the presence of riparian vegetation, proximity, and topographic setting, this riparian area appears to have been part of the San Luis Rey River bank, but is now separated from the river channel by a prism of fill that the unpaved road between the two former dairy farm areas is constructed on (Attachment A, Figure 6, Sheet 3). Dominant vegetation consists of California sycamore (*Platanus racemosa*) (native, FACW), Fremont's cottonwood (*Populus fremontii*) (native, FACW) and phacelia (*Phacelia* sp.) (native, UPL or no wetland indicator status¹). Since an estimated 67 percent of the species observed have a wetland indicator status above FAC-, the vegetation is considered hydrophytic. However, no wetland hydrology, hydric soils, or OHWM were noted. Therefore, this area is not considered a jurisdictional wetland or "waters of the U.S." Because this area appears to have at one time been associated with the San Luis Rey River bank and still supports riparian vegetation in proximity to the river, it is considered potential jurisdictional "waters of the State." This area totals 0.4 acre.

Data Point in wetland area: This area was identified as a potential wetland area based on the presence of known wetland plants and an adjacent NWI-mapped wetland. Several locations within this area were observed from the road, but the steep slope of the road fill, dense vegetation, soft soils, and/or standing water resulted in limited access for data collection. One data point was collected at an accessible location. The dominant vegetation consisted of mulefat (*Baccharis salicifolia*) (native, FACW), broad-leafed cattail (*Typha latifolia*) (native, OBL) and sandbar willow (*Salix exigua*) (native, FACW). Since 100 percent of the species observed had a wetland indicator status above FAC-, the vegetation is considered hydrophytic. The area also displayed several wetland hydrology indicators including inundation, saturation in the upper 12 inches (at 0 inches), water marks, sediment deposits, and drift lines, in addition to gleyed hydric soils. This area is therefore considered a jurisdictional wetland. The exact boundary of the wetland could not be determined due to limited access, but based on field observations and the data point collected the wetland area was conservatively mapped to encompass the entire area identified by NWI mapping plus the entire area to the southeast edge of the road fill prism (Attachment A, Figure 6, Sheet 3). This entire area should be considered potential jurisdictional wetland unless additional evaluations show otherwise. The Project currently does not plan to disturb this feature, so no further delineation is needed for the Project as proposed.

NWI-MAPPED "OTHER WETLANDS"

The NWI mapping identifies three areas of "Other Wetland" within the Survey Area along SR 76 adjacent to pipeline Segment D (Attachment A, Figure 6, Sheet 3). These three areas are identified by the NWI as Palustrine wetlands. Landowner permission was not granted to survey these areas. Therefore, observations were made from SR 76, Couser Canyon Road, and Rice Canyon Road. The two areas north of SR 76 are mapped as Agriculture (Holland classification 18000) and were observed as being actively maintained agricultural fields currently utilized for grazing. There were no visible signs of wetland hydrology or vegetation from the roads. Based on the absence of these indicators, the two NWI-mapped wetlands north of SR 76 are not considered likely to be Corps jurisdictional wetlands. The area south of SR 76 is also mapped as Agriculture and appears to be an actively maintained field, but fallowed at the time of field studies. Vegetation observed in this area during the plant blooming period included non-native

grasses (e.g., barley and bromes) with no wetland indicator status. Based on the lack of hydrophytic vegetation, the NWI-mapped wetland south of SR 76 is not considered likely to be a Corps jurisdictional wetland.

In addition, a culvert was observed draining both road runoff from SR 76 and flows from the agriculture land north of SR 76. The culvert extends from the road into the mapped NWI area south of the road. A berm exists adjacent to the San Luis Rey River at the south end of this field. However, a break in the berm and a shallow swale from the culvert to this break suggest flows from the culvert can drain into the river when enough flow is present. Sediment deposits and channel morphology characteristics observed in the small swale suggest low volume flows. No swale or signs of hydrology were observed upstream of SR 76. Therefore, the culvert appears to drain diffuse run-off flows from the agriculture land. As described above, no wetland or riparian vegetation was observed in this area. The flow capture area of the swale appears to be limited to the agriculture area immediately upstream of SR 76 and road runoff and is therefore man-made. There is no blueline mapped by USGS in this area. Since the swale carries low volume and infrequent or short duration flows from a limited upland capture area, the Corps is not likely to assert jurisdiction over this feature as “waters of the U.S.” under the new Rapanos guidelines. The swale is also not considered jurisdictional “waters of the State” based on the lack of a defined bed and bank. However, this determination would require verification from the agencies. In addition, the Project currently does not plan to disturb this feature. So, further delineation is not needed for the Project as proposed.

USGS MAPPED PONDS

The USGS map (Attachment A, Figure 2) shows two small ponds just south of the Survey Area near the west end of pipeline route Segment C. The more eastern of the two ponds has a generally linear configuration while the more western of the ponds is U-shaped. These pond locations were observed to confirm their existence and to delineate their extent within the Survey Area. The delineation maps (Attachment A, Figure 6, Sheet 3) provide more detail than the USGS map and show that the top of the banks of these ponds actually extend marginally inside of the Survey Area. Both ponds appear to be man-made and may be associated with the former dairy farm operation. Both ponds appear to support wetland vegetation such as broad-leafed cattail and mulefat. No signs of wetland hydrology were observed in the eastern pond, but open water exists in the western pond. The eastern pond directly abuts the berm parallel to the San Luis Rey River, while the western pond appears to connect to the San Luis Rey River based on aerials and the USGS map (this was not field-confirmed). Although these areas appear to be former dairy farm stock ponds, they could potentially be jurisdictional features. These features should be considered potentially jurisdictional unless additional evaluations show otherwise. However, since these features only marginally occur within the Survey Area and are well outside of any areas that would be disturbed by Project construction, no further delineation is needed for the Project as proposed.

3.3 NON-JURISDICTIONAL FEATURES

This section describes a roadside ditch and three areas with scattered mulefat that were determined to be non-jurisdictional. These features are mapped on Attachment A, Figure 6, Sheet 3. Photographs of these areas are included in Attachment C.

ROADSIDE DITCH

A roadside ditch exists along the south side of SR 76 between the east and west former dairy farm areas. The ditch originates from a culvert that appears to capture road runoff. Associated with the ditch are several sycamores, a Fremont's cottonwood, and a coast live oak. The ditch is vegetated with tall non-native grasses. No wetland hydrology, OHWM, or connection to the San Luis Rey River was observed. The ditch is not considered jurisdictional "waters of the U.S." or "waters of the State."

TOPOGRAPHIC FEATURE

A topographic feature exists on the north side of SR 76 that originates in an upland area vegetated with coastal sage scrub and terminates once the gradient approaches road level. The feature resembles a swale with no signs of hydrology, OHWM, or defined bed and bank. A stand of large coast live oaks exists directly adjacent to SR 76 in line with the topographic feature, but no connection could be determined between the feature and oaks. An overgrown culvert with no signs of flows is located near the oak stand north of SR 76 and goes under the road. The culvert is believed to emerge on the south side of SR 76 within the roadside ditch described above, but the location of this opening could not be confirmed. Based on the lack of hydrology indicators, defined bed and bank, and connection to a jurisdictional drainage, this isolated topographic feature is not considered a jurisdictional "waters of the U.S." or "waters of the State."

SCATTERED MULEFAT AREAS

Three low lying areas (A.1, A.2 and A.3) with scattered stands of mulefat were observed during the field surveys in an area mapped as Disturbed (Holland classification 11300) within the west former dairy farm (Attachment A, Figure 6, Sheet 3). Although mulefat has a wetland indicator status, this area is dominated by non-native vegetation with no wetland indicator status such as Russian thistle (*Salsola kali*) and tree tobacco (*Nicotiana glauca*). In addition, no signs of wetland hydrology or OHWM were observed and the areas are separated from the San Luis Rey River by open land to the south followed by a tall berm. Based on these observations, the three areas are not considered jurisdictional wetland, "waters of the U.S.," or "waters of the State."

4.0 POTENTIAL PROJECT IMPACTS TO JURISDICTIONAL FEATURES

Based on the Project facility locations and delineation maps shown in Attachment A, Figure 6, the Project will impact potential jurisdictional "waters of the U.S." and potential jurisdictional "waters of the State" in the following drainages and tributaries identified in this delineation: Drainage 1 and Tributaries 1.1 and 1.2; Drainage 3; Drainage 4; and Drainage 5. Regulatory permits from the Corps, RWQCB and CDFG would be required to authorize impacts to these jurisdictional waters pending their verification of the jurisdictional delineation. None of the impacts in these drainages would affect wetlands.

The following features identified in this delineation report are outside the proposed Project construction footprint and will not be impacted: Tributary 1.3; Drainage 2; Tributaries 3.1 and 3.2; Drainage 6 and Tributary 6.1; San Luis Rey River; jurisdictional wetland area associated

with the San Luis Rey River; agricultural fields mapped in the NWI as “Other Wetlands” (i.e., Palustrine wetland locations); USGS-mapped ponds; riparian area, and the roadside ditch.

5.0 REFERENCES

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Attachment A: Figure 1 to Figure 6



G:\Orange_Grove-125158\IMXD\Vicinity Map.mxd

Project Location

Figure 1

Vicinity Map
Orange Grove Project
San Diego County, CA

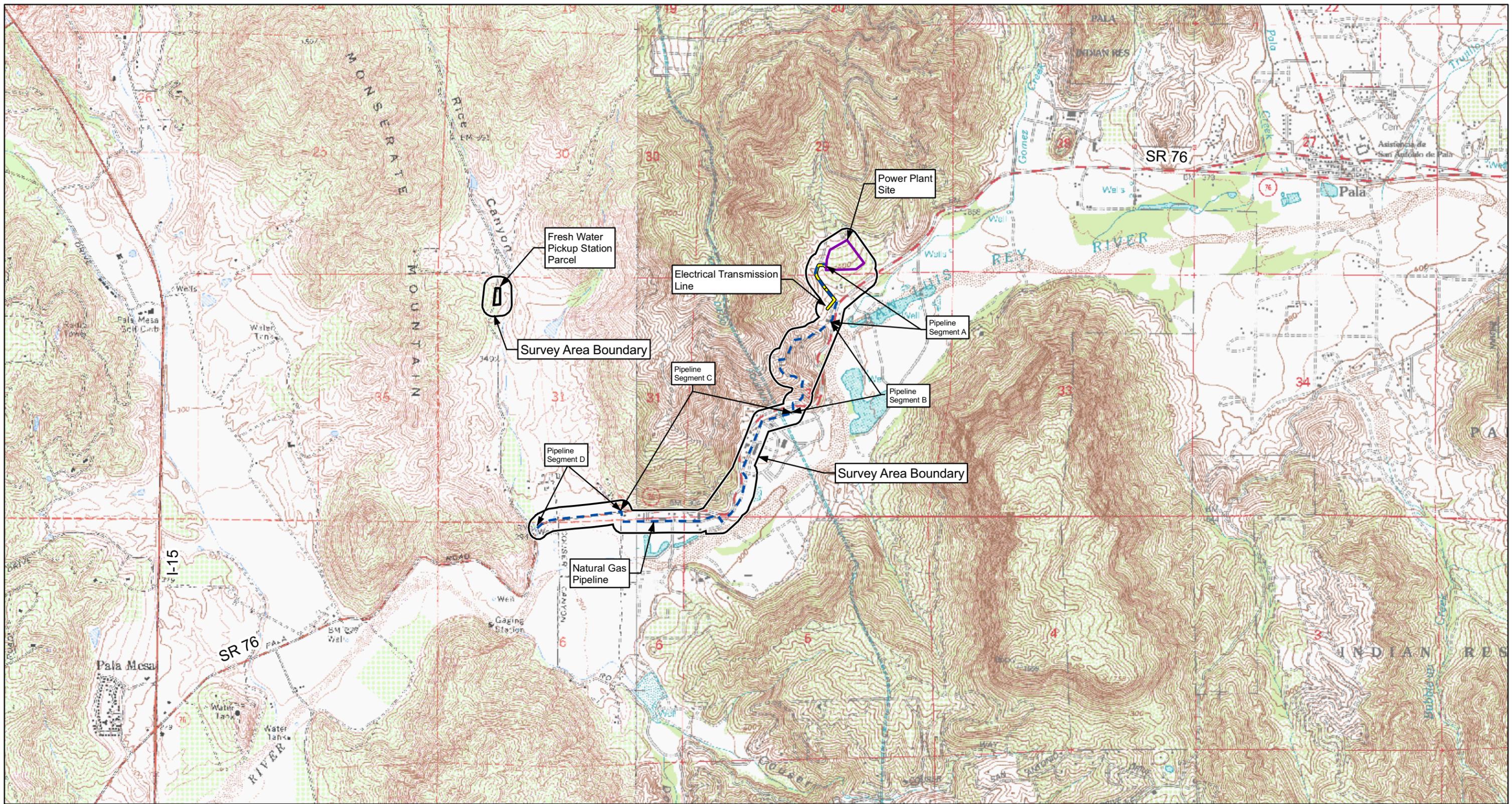


1" = 15 Miles



Source:
Data obtained from ESRI Generic Base
Data included with ArcMap 9.2





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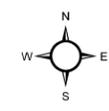


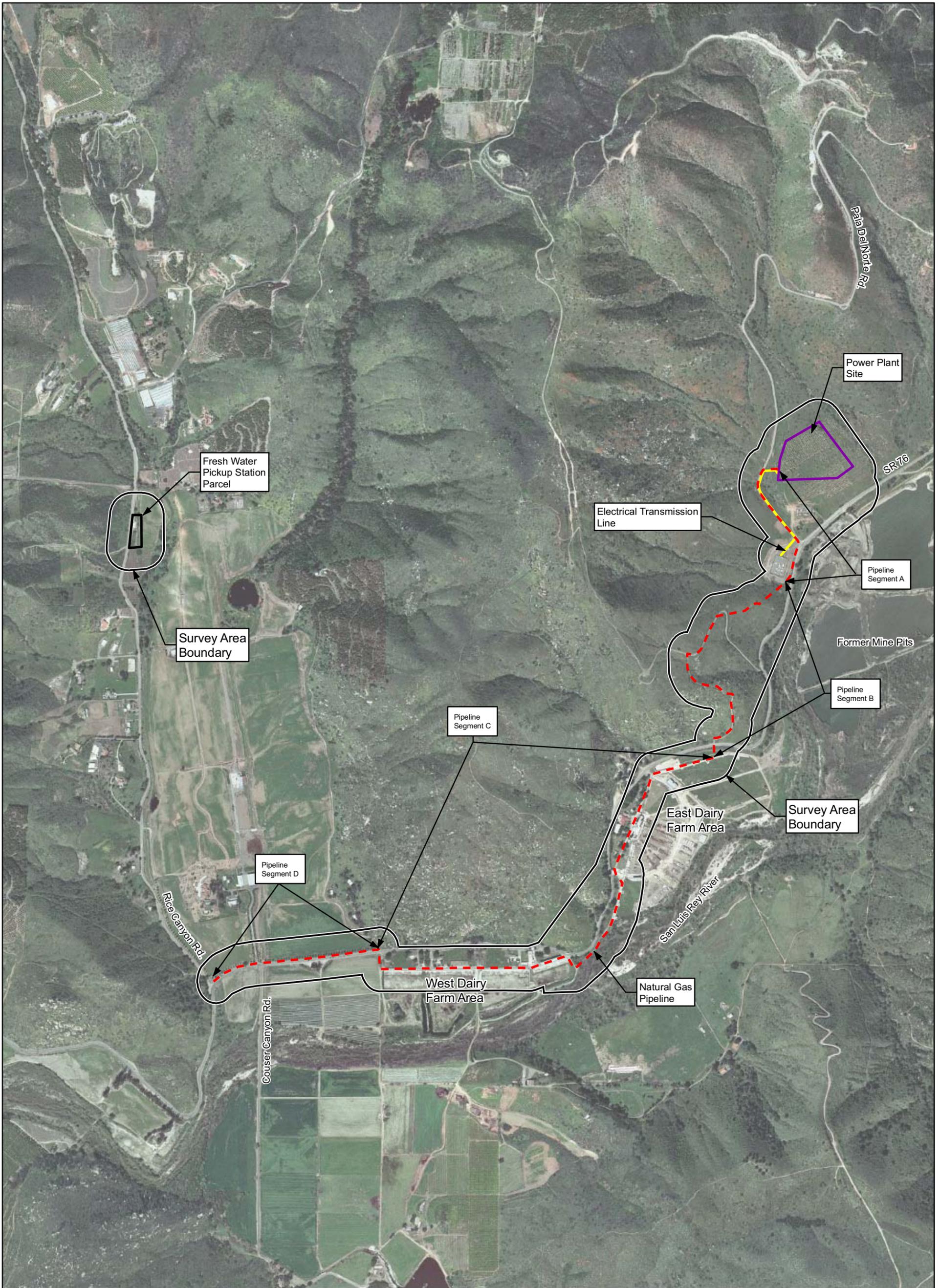
Figure 2
Vicinity Map
Orange Grove Project
San Diego County, CA

1" = 2,000'



Source:
USGS Topographical Quadrangles:
Pala, Bonsall



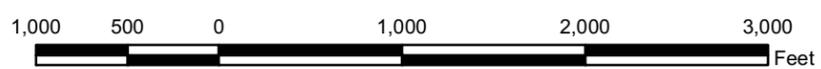


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Figure 3
 Aerial Overview
 Orange Grove Project
 San Diego County, CA

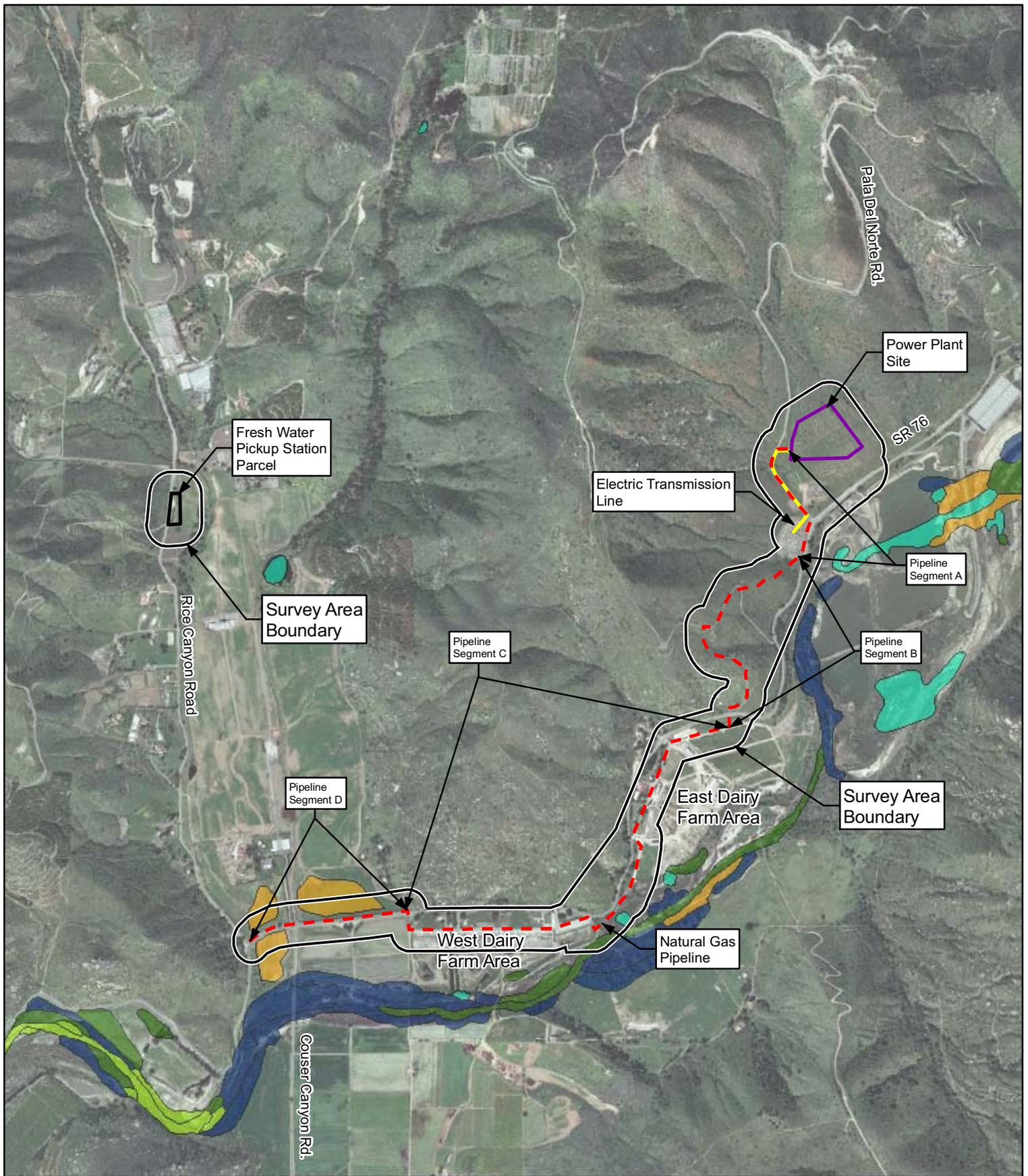


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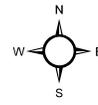
Source:
 USGS Topographical Quadrangles: Pala, Bonsall
 Aerial Photographs from ESRI_Imagery_World_2D





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- | | | | |
|---|-----------------------------------|---|------------------|
|  | Freshwater Emergent Wetland |  | Riverine Wetland |
|  | Freshwater Forested/Shrub Wetland |  | Other Wetland |
|  | Freshwater Pond | | |



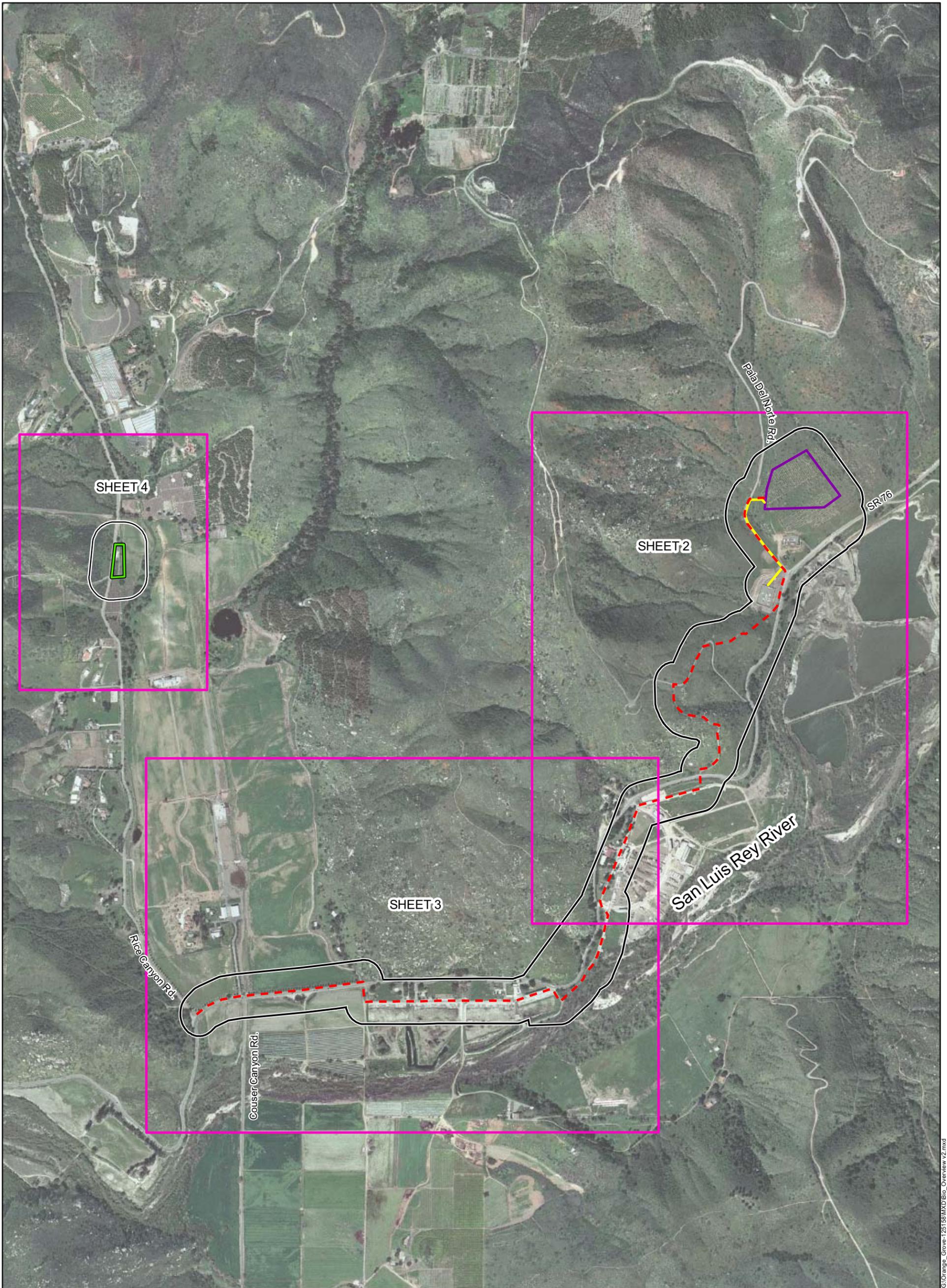
1" = 1,500'



Figure 4
National Wetland
Inventory map
Orange Grove Project
San Diego County, CA



Source:
Aerial Photography from ESRI Imagery_World_2D
Wetlands data from National Wetlands Inventory (<http://www.fws.gov/nwi/>)
USGS Topographical Quadrangles: Pala, Bonsall



Legend

- - - Proposed Gas Line
- Survey Boundary
- Proposed Underground Electrical Transmission Line
- Water Truck Loading Station
- Site Location
- Map Sheets

Source:
USGS Topographical Quadangles: Pala, Bonsall.
Aerial Photography from ESRI Imagery_World_2D
Library-Remote Sensing 2005

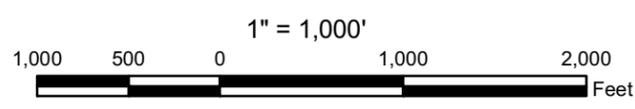
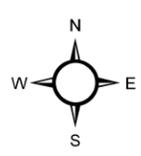
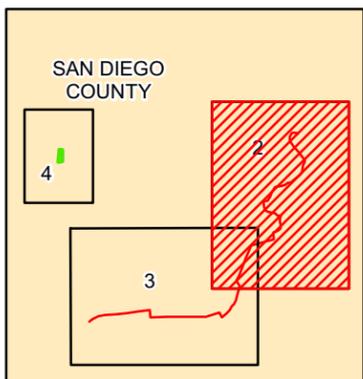
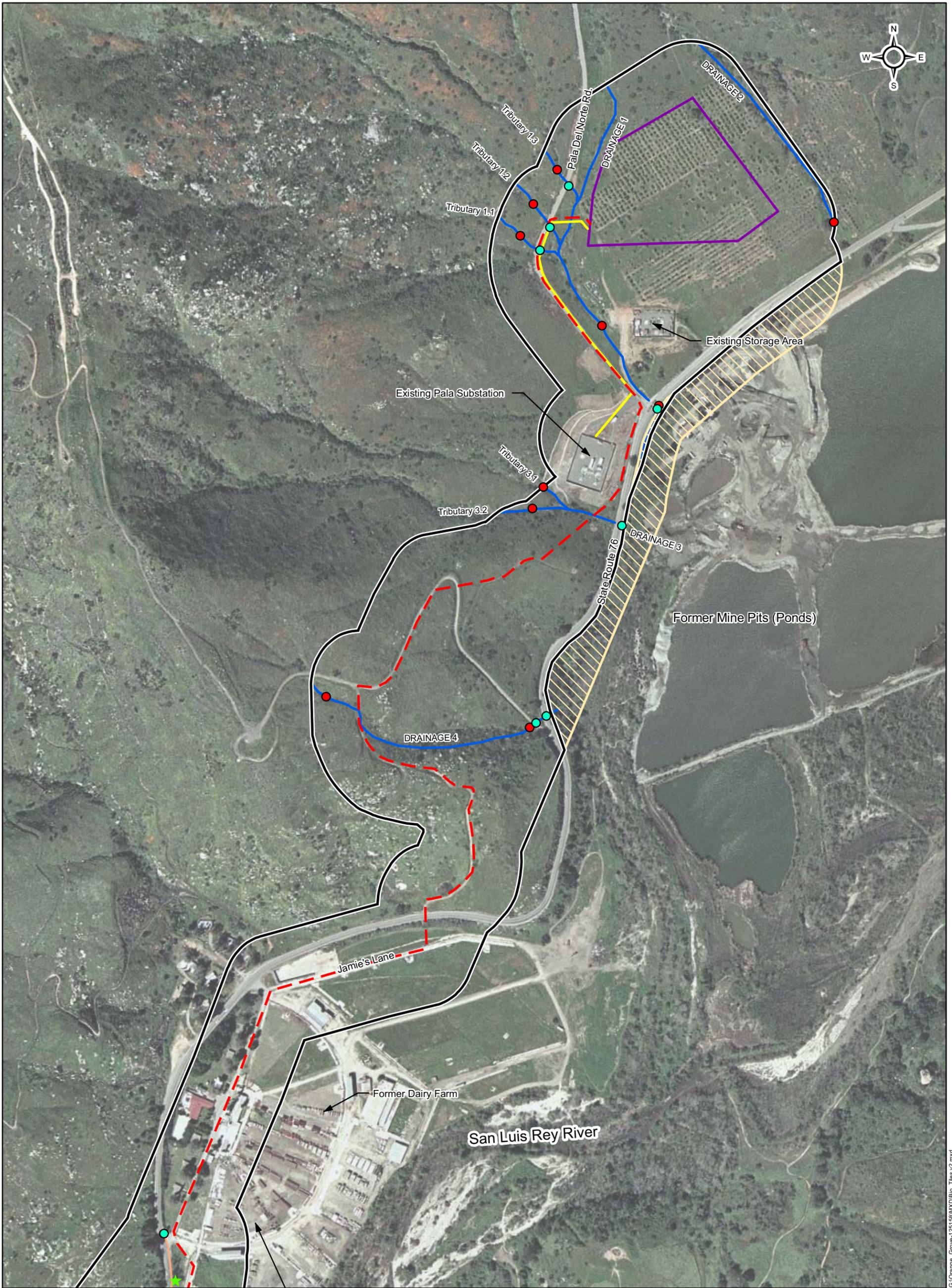


Figure 6
Sheet: 1
Overview Map of the
Survey Area for
Jurisdictional & Wetlands
Waters
Orange Grove Project
San Diego County



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- | | | |
|------------------|---|---|
| ★ Cottonwood | —•— Proposed Gas Line | — Jurisdictional Drainage |
| ★ Sycamore | — Topographic Feature | — Site Boundary |
| ★ Coast Live Oak | — Water Truck Loading Station | — San Luis Rey River With Wetland Areas |
| ● Culverts | — Survey Area Boundary | — Non-Jurisdictional feature |
| ● Data Points | — Survey Area: Limited Access* | — USFWS NWI mapped wetlands/ponds |
| | — Survey Boundary: Mapped From Aerials | — USGS mapped ponds |
| | — Proposed Underground Electrical Transmission Line | — Riparian Area |

Source:
 USGS Topographical Quadrangles: Pala, Bonsall.
 Wetlands data from National Wetlands Inventory (<http://www.fws.gov/nwi/>)
 Aerial Photography from California Spatial Information Library-Remote Sensing 2005

*Surveyed by observation from public roads

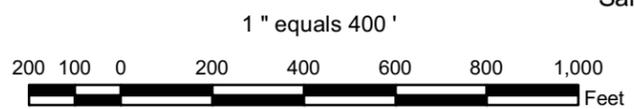
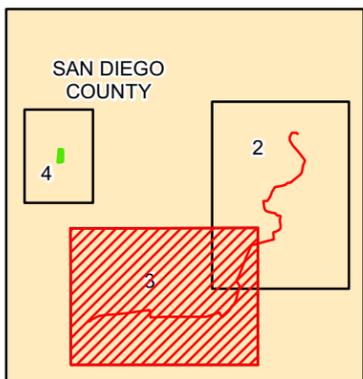
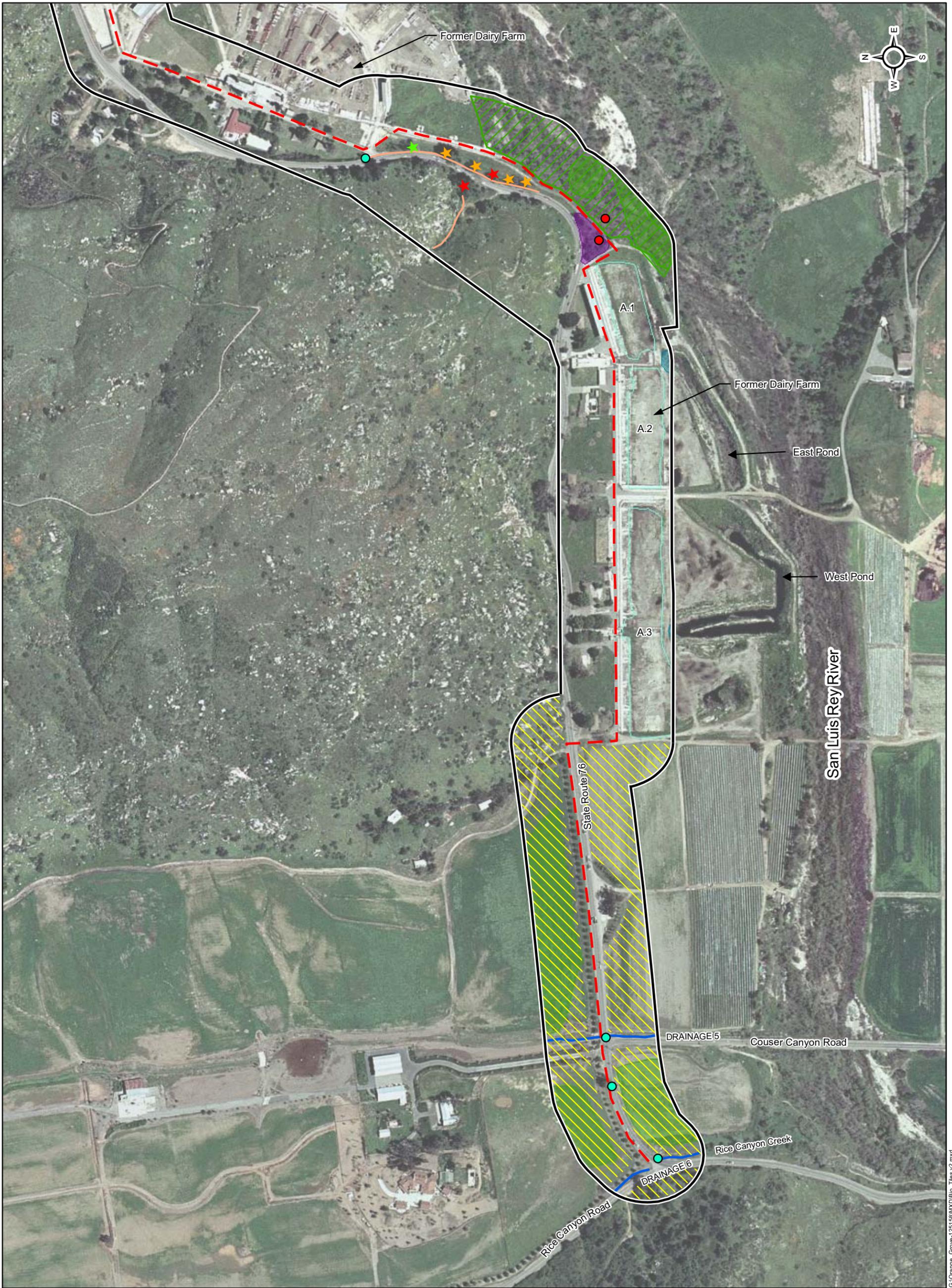


Figure 6
Sheet: 2

Survey area for
 Jurisdictional Wetlands
 and Waters

Orange Grove Project
 San Diego County





- | | | |
|------------------|---|---|
| ★ Cottonwood | —•— Proposed Gas Line | — Jurisdictional Drainage |
| ★ Sycamore | — Topographic Feature | □ Site Boundary |
| ★ Coast Live Oak | □ Water Truck Loading Station | ▨ San Luis Rey River With Wetland Areas |
| ● Culverts | — Survey Area Boundary | □ Non-Jurisdictional feature |
| ● Data Points | ▨ Survey Area: Limited Access* | ▨ USFWS NWI mapped wetlands/ponds |
| | ▨ Survey Boundary: Mapped From Aerials | ▨ USGS mapped ponds |
| | — Proposed Underground Electrical Transmission Line | ▨ Riparian Area |

Source:
 USGS Topographical Quadrangles: Pala, Bonsall.
 Wetlands data from National Wetlands Inventory (<http://www.fws.gov/nwi/>)
 Aerial Photography from California Spatial Information Library-Remote Sensing 2005

*Surveyed by observation from public roads

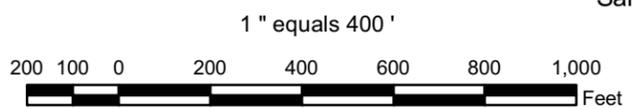


Figure 6

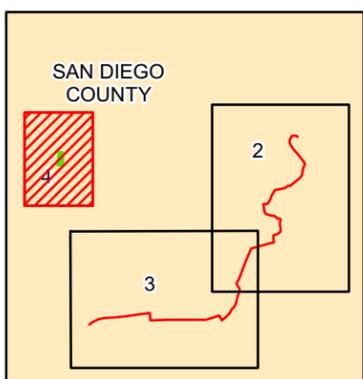
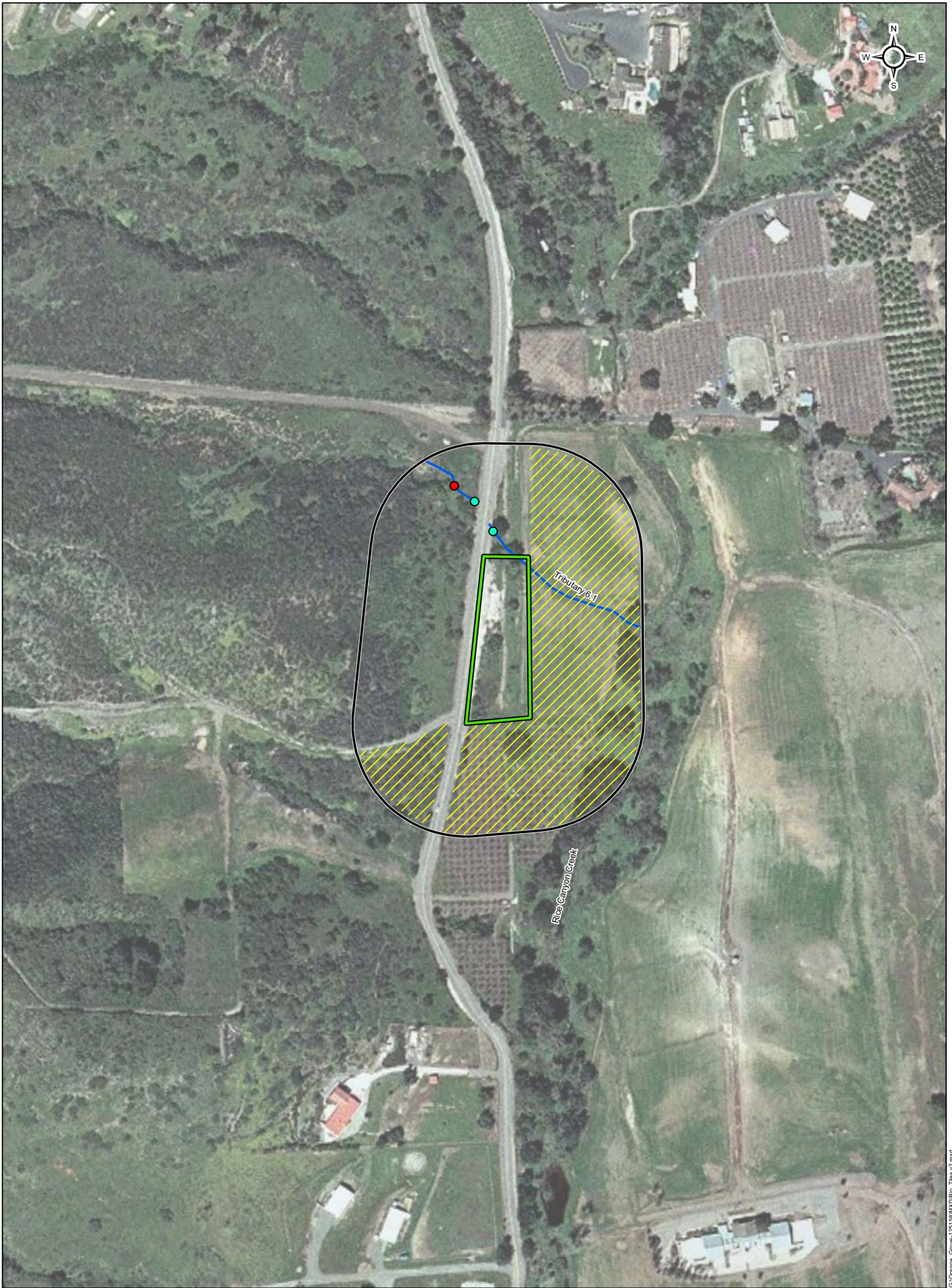
Sheet: 3

Survey area for
 Jurisdictional Wetlands
 and Waters

Orange Grove Project
 San Diego County



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- | | | |
|------------------|---|---|
| ★ Cottonwood | —•— Proposed Gas Line | — Jurisdictional Drainage |
| ★ Sycamore | — Topographic Feature | □ Site Boundary |
| ★ Coast Live Oak | □ Water Truck Loading Station | ▨ San Luis Rey River With Wetland Areas |
| ● Culverts | — Survey Area Boundary | □ Non-Jurisdictional feature |
| ● Data Points | ▨ Survey Area: Limited Access* | ■ USFWS NWI mapped wetlands/ponds |
| | ▨ Survey Boundary: Mapped From Aerials | ■ USGS mapped ponds |
| | — Proposed Underground Electrical Transmission Line | ■ Riparian Area |

Source:
 USGS Topographical Quadrangles: Pala, Bonsall.
 Wetlands data from National Wetlands Inventory (<http://www.fws.gov/nwi/>)
 Aerial Photography from California Spatial Information Library-Remote Sensing 2005
 *Surveyed by observation from public roads

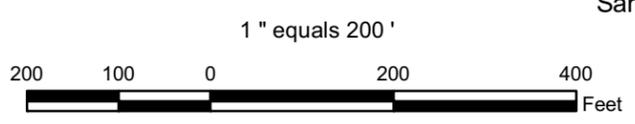


Figure 6
Sheet: 4
 Survey area for
 Jurisdictional Wetlands
 and Waters
 Orange Grove Project
 San Diego County



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Attachment B: Wetland Delineation Data Forms

SOILS

Map Unit Name (Series and Phase):		Tujunga sand (TuB)		Drainage Class:	somewhat excessively drained
Taxonomy (Subgroup):		unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
Top layer	w/in	1 inch			sandy loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: Too rocky to dig soil pit					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks: Signs of hydrology typical of ephemeral, upland drainage	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/7/2008
Applicant/Owner:	Orange Grove Energy L.P.	County:	San Diego
Investigator:	Ceri Williams - Rdd + Leslie Goff	State:	CA
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID:	
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID: Tributary 1.1	
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Plot ID: 5	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Brassica nigra</i> / <i>Hirschfeldia incana</i>	H	None	7.		
2. <i>Erodium cicutarium</i>	H	None	8.		
3. <i>Amsinckia menziesii</i>	H	None	9.		
4. <i>Argemone arvensis</i>	H	FAC	10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 25%

Remarks: Adjacent vegetation is CSS. Need ≥ 50% dominant species therefore vegetation not considered hydrophytic in this drainage

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>none</u> inches Depth to Free Water in Pit: <u>6</u> inches Depth to Saturated Soil: <u>1.5</u> inches	

Remarks: hydrology signs typical of ephemeral drainage (upland)
OHWM width - 2'2"
Banks width - 13'5"

SOILS

Map Unit Name (Series and Phase):		Las Posas Stoney fine sandy loam (LrE)		Drainage Class:	well drained												
Taxonomy (Subgroup):		unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No													
Profile Description:																	
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.												
6	A	7.5YR 3/2	N/A	N/A	sandy clay												
too rocky to dig further																	
<p>Hydric Soil Indicators:</p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"><input type="checkbox"/> Histosol</td> <td style="width:50%; border:none;"><input type="checkbox"/> Concretions</td> </tr> <tr> <td style="border:none;"><input type="checkbox"/> Histic Epipedon</td> <td style="border:none;"><input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils</td> </tr> <tr> <td style="border:none;"><input type="checkbox"/> Sulfidic Odor</td> <td style="border:none;"><input type="checkbox"/> Organic Streaking in Sandy Soils</td> </tr> <tr> <td style="border:none;"><input type="checkbox"/> Aquic Moisture Regime</td> <td style="border:none;"><input type="checkbox"/> Listed on Local Hydric Soils List</td> </tr> <tr> <td style="border:none;"><input type="checkbox"/> Reducing Conditions (test required)</td> <td style="border:none;"><input type="checkbox"/> Listed on National Hydric Soils List</td> </tr> <tr> <td style="border:none;"><input type="checkbox"/> Gleyed or Low-Chroma Colors</td> <td style="border:none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> </table>						<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions	<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils	<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List	<input type="checkbox"/> Reducing Conditions (test required)	<input type="checkbox"/> Listed on National Hydric Soils List	<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions																
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils																
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils																
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List																
<input type="checkbox"/> Reducing Conditions (test required)	<input type="checkbox"/> Listed on National Hydric Soils List																
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)																
Remarks: very rocky - 6 inches limit for digging soil pit.																	

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Ephemeral drainage.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/7/2008
Applicant/Owner:	Orange Grove Energy L.P.	County:	San Diego
Investigator:	Ceri Williams-Dodd & Leslie Goff	State:	CA
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID:	
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID: Tributary 1.2	
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Plot ID: 4	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Erodium cicutarium</i>	H	None	7.		
2. <i>Cirsium</i> sp. (probably <i>vulgare</i>)	H	FACU	8.		
3.			9.		
4.			10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 0%
(FACU = lower wetland rating than FAC, therefore not considered)

Remarks: surrounding vegetation = CSS dominated by
Artemisia californica
Eriogonum fasciculatum

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: 1.5 inches Depth to Free Water in Pit: 1.5 inches Depth to Saturated Soil: 0 inches	

Remarks: Ephemeral drainage - hydrology present including flowing water (due to recent rains and/or potentially a spring)
OHWM width - 1'9" Bank width - 2'8"

SOILS

Map Unit Name (Series and Phase):		Las Posas Stony Fine sandy loam (LrE)		Drainage Class:	well drained
Taxonomy (Subgroup):		unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
3	A	7.5 YR 3/2	N/A	N/A	sandy loam - gritty
6	A	"	"	"	sandy
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Hydrology signs typical of ephemeral drainage (upland)	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/7/2008
Applicant/Owner:	Orange Grove Energy L.P.	County:	San Diego
Investigator:	Ceri Williams-Dodd + Leslie Goff	State:	CA
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID:	
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID: <u>Tributary 1.3</u>	
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Plot ID: <u>3</u>	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Brassica nigra</i> <i>Hirschteldia incana</i>	H	None	7.		
2. <i>Erodium cicutarium</i>	H	None	8.		
3. <i>Bromus</i> sp.	H	None	9.		
4. Unidentified sp.	H	None N/A	10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 0%

Remarks: Surrounding vegetation = CSS dominated by
Artemisia californica
Eriogonum fasciculatum

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>none</u> inches Depth to Free Water in Pit: <u>10</u> inches Depth to Saturated Soil: <u>2</u> inches	
Remarks: Hydrology present- ephemeral drainage. OHWM ^{with} - 2'6" Banks width - 19'6"	

SOILS

Map Unit Name (Series and Phase):		Las Posas stoney fine sandy loam (LrE)		Drainage Class:	well drained
Taxonomy (Subgroup):		unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
10	A	7.5YR 2 ⁵ / ₂	N/A	N/A	sandy loam clay
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: uniform horizon 0-10 inches					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Hydrology signs typical of ephemeral drainage (upland)	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/12/2008
Applicant/Owner:	Orange Grove Energy L.P.	County:	San Diego
Investigator:	Ceri Williams-Dodd + Leslie Goff	State:	CA
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: Drainage 4	
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID: upstream	
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Plot ID: 9	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Mirabilis californica</i>	H	None	7.		
2. <i>Chaenactis</i> sp.	H	None	8.		
3. <i>Rhamnus</i> sp.	S	None	9.		
4.			10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC-species). 0%

Remarks: CSS upland vegetation

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>None</u> inches Depth to Free Water in Pit: <u>N/A</u> inches Depth to Saturated Soil: <u>N/A</u> inches	

Remarks: Braiding within defined channel upstream - becomes one gully and then becomes less steep and braids into a wide area due to low gradient and diffused by a rock. Downstream - dirt road existing; sheet flows to defined channel on other side or down road

O/HWM width - 1'8
Banks width - 13'5

Downstream (widened area)
O/HWM width - 13'7
Banks width - 27'1

SOILS

Map Unit Name (Series and Phase):		Cieneba very rocky coarse sandy loam (Cmr6)		Drainage Class:	slightly excessively well drained
Taxonomy (Subgroup):		undetermined		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
6 rocky	A	7.5YR 3/3	None	None	Sandy Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: moist upper layer due to rains Too rocky to dig soil pit below 6" depth					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks: Hydrology signs characteristic of ephemeral upland drainage.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/12/2008
Applicant/Owner:	Orange Grove Energy L.P.	County:	San Diego
Investigator:	Ceri Williams-Dodd + Leslie Goff	State:	CA
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID:	Drainage 3
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID:	Tributary 3.1
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Plot ID:	11

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Artemisia californica</i>	S	None	7.		
2. <i>Phacelia</i> sp.	H	None/UPL	8.		
3.			9.		
4.			10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 0%

Remarks: Not flowering, therefore could not be identified. ^{no species} Only species with an indicator is *P. visida* (UPL) for San Diego Co. Upland CSS vegetation

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>none</u> inches Depth to Free Water in Pit: <u>N/A</u> inches Depth to Saturated Soil: <u>N/A</u> inches	
Remarks: Ephemeral drainage Signs of shelving - not clearly defined Erosion and blow out areas evident <div style="float: right; text-align: right;"> OHWM width - 3'8" bank width - 12' 3" </div>	

SOILS

Map Unit Name (Series and Phase):		Las Asas stony fine sandy loam (LrE)		Drainage Class:	well drained
Taxonomy (Subgroup):		unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
12	A	7.5YR 3/2	N/A	N/A	sandy stony clay
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: slight moisture from recent rains					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/12/2008
Applicant/Owner:	Orange Grove Energy L.P.	County:	San Diego
Investigator:	Ceri Williams-Dodd + Leslie Goff	State:	CA
Do Normal Circumstances exist on the site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:	Drainage 1
Is the site significantly disturbed (Atypical Situation)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:	north of SR-76
Is the area a potential Problem Area?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID:	12

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Brassica nbro/ Hirschteldia incona	H	None	7.		
2. Phacelia sp. (A)	H	None/up (A)	8.		
3. Plagiobothrys sp. (A)	H	FACW (A)	9.		
4. Amsinckia menziesii	H	None	10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 25%
(not hydrophytic unless ≥ 50%)

Remarks: CSS vegetation upstream. Non-native grassland at data point.
(A) not flowering therefore could not be identified to species. Only species with an indicator is P. visida for San Diego county (UPL)
(A) In San Diego County probably P. trachycarpus = FACW. Not flowering at time to positively identify

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>None</u> inches Depth to Free Water in Pit: <u>N/A</u> inches Depth to Saturated Soil: <u>N/A</u> inches	

Remarks: Clearly defined flow channel - bare soil and drift lines
OHWM width - 2'S Banks width - 38'4

SOILS

Map Unit Name (Series and Phase):		Las Posas Stony fine sandy loam (LrE)		Drainage Class:	well drained
Taxonomy (Subgroup):		Unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
7	A	7.5YR ^{2.5} / ₂	N/A	N/A	sandy loam
rocky	—				
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: Too rocky to dig soil pit below 7 inches					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Hydrology signs characteristic of ephemeral upland drainage.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/12/2008
Applicant/Owner:	Orange Grove Energy L.P.	County:	San Diego
Investigator:	Ceri Williams-Rodd + Leslie Goff	State:	CA
Do Normal Circumstances exist on the site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:	San Luis Rey River
Is the site significantly disturbed (Atypical Situation)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:	Wetland Area
Is the area a potential Problem Area?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID:	16

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Baccharis salicifolia</i>	T	FACW	7.		
2. <i>Typha latifolia</i>	S	OBL	8.		
3. <i>Salix exigua</i>	T	OBL	9.		
4.			10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 100%

Remarks: All wetland vegetation.

HYDROLOGY

<p><input type="checkbox"/> Recorded Data (Describe in Remarks)</p> <p><input type="checkbox"/> Stream, Lake, or Tide Gauge</p> <p><input checked="" type="checkbox"/> Aerial Photographs</p> <p><input checked="" type="checkbox"/> Other - Topographic and NWI Maps</p> <p><input type="checkbox"/> No Known Recorded Data</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p><input checked="" type="checkbox"/> Water Marks</p> <p><input checked="" type="checkbox"/> Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p><input type="checkbox"/> Water-stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> inches</p> <p>Depth to Free Water in Pit: <u>0</u> inches</p> <p>Depth to Saturated Soil: <u>0</u> inches</p>	<p>Remarks:</p>

SOILS

Map Unit Name (Series and Phase):		Tujunga Sand (TuB)		Drainage Class:	slightly excessively drained		
Taxonomy (Subgroup):		unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Profile Description:							
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.		
12	A	2.5/10Y Gley1	N/A	N/A	Sandy clay		
<p>Hydric Soil Indicators:</p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input checked="" type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors </td> <td style="width:50%; border:none;"> <input type="checkbox"/> Concretions <input checked="" type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks) </td> </tr> </table>						<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input checked="" type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input checked="" type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input checked="" type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input checked="" type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)						
Remarks:							

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/12/2008
Applicant/Owner:	Orange Grove Energy L.P.	County:	San Diego
Investigator:	Ceri Williams-Dodd + Leslie Goff	State:	CA
Do Normal Circumstances exist on the site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:	San Luis Rey River
Is the site significantly disturbed (Atypical Situation)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:	Riparian Area
Is the area a potential Problem Area?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID:	5

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Platanus racemosa</i>	T	FACW	7.		
2. <i>Populus fremontii</i>	T	FACW	8.		
3. <i>Phacelia</i> sp. (A)	H	None/uPL	9.		
4.			10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 66.6%

Remarks: Rip-rap road and rock berm appear to have cut off a corner of the riparian forest from the San Luis Rey River - historical alteration. Potential habitat for riparian species.

~~(A)~~ Not flowering therefore positive identification to species not possible. Only species with an indicator on San Diego Co. list is *P. viscida* (UPL)

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>None</u> inches Depth to Free Water in Pit: <u>N/A</u> inches Depth to Saturated Soil: <u>N/A</u> inches	

Remarks: ~~water ponding~~ No signs of flow or water ponding. Depressional area.
 OH WM width - none Banks width - N/A

Calculate acreage. Likely jurisdictional due to proximity to river, historical connection and riparian habitat. TRC Companies, Inc.

SOILS

Map Unit Name (Series and Phase):		Tujunga Sand (TuB)		Drainage Class:	somewhat excessively drained		
Taxonomy (Subgroup):		UNKNOWN		Field Observations Confirm Map Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Profile Description:							
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.		
11	A	7.5YR 3/2	N/A	N/A	silty clay		
<p>Hydric Soil Indicators:</p> <table style="width:100%;"> <tr> <td style="width:50%; vertical-align: top;"> <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors </td> <td style="width:50%; vertical-align: top;"> <input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks) </td> </tr> </table>						<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)						
Remarks: Moist from recent rains.							

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Likely historically part of San Luis Rey River - dirt access road + rock berm currently separate them	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/12/2008
Applicant/Owner:	Orange Grove Energy L.P.	County:	San Diego
Investigator:	Ceri Williams-Rodd + Leslie Goff	State:	CA
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: Drainage 2	
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID: north of SR-76	
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Plot ID: 13	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Quercus agrifolia	T	None	7.		
2. Salvia mellifera	S	None	8.		
3. Chaenactis sp.	H	None	9.		
4. Morah macrocarpus	vine	None	10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 0%

Remarks: coast live oak woodland - shady, rocky

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>None</u> inches Depth to Free Water in Pit: <u>N/A</u> inches Depth to Saturated Soil: <u>N/A</u> inches	
Remarks: Ephemeral drainage. Rocky bed. Defined flow path OHWM width - 1'8 Bank width - 5'9'	

SOILS

Map Unit Name (Series and Phase):		Steep gullied land (S+G)		Drainage Class:	N/A
Taxonomy (Subgroup):		unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
12 rocky	A	7.5YR 2.5/2	N/A	N/A	Sandy clay loam
Hydric Soil Indicators:		<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors			
		<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks: slightly moist from recent rains					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks: Hydrology signs characteristic of ephemeral upland drainage.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/12/2008
Applicant/Owner:	Orange Grove Energy L.P	County:	San Diego
Investigator:	Ceri Williams-Dodd & Leslie Goff	State:	CA
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID:	Drainage 3
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID:	Tributary 3.2
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Plot ID:	10

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Artemisia californica</i>	S	None	7.		
2. <i>Phacelia</i> sp. ^{see remarks}	H	None/UPL	8.		
3.			9.		
4.			10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 0%

Remarks: Not flowing ^{spring}, therefore could not be identified to species. Only species with an indicator is *P. visida* (UPL) for San Diego Co.
 Upland CSS vegetation adjacent - very rocky.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>None</u> inches Depth to Free Water in Pit: <u>N/A</u> inches Depth to Saturated Soil: <u>N/A</u> inches	

Remarks: Evidence of shelving, not clearly defined.
 Ephemeral Drainage
 O H W M width - 3'7 bank width - 16'10

SOILS

Map Unit Name (Series and Phase):		Las Posas stoney fine sandy loam		Drainage Class:	well drained
Taxonomy (Subgroup):		unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
6	A	7.5YR 3/2	N/A	N/A	sand
rocky	-				
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: Too rocky to dig pit past 6 inches depth. Slightly moist from recent rains					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks:	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	2/12/2008
Applicant/Owner:	Orange Grove Energy L.P	County:	San Diego
Investigator:	Ceri Williams-Dodd + Leslie Goff	State:	CA
Do Normal Circumstances exist on the site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:	Drainage 4
Is the site significantly disturbed (Atypical Situation)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:	Downstream
Is the area a potential Problem Area?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID:	14

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Chaenactis</i> sp.	H	None	7.		
2.			8.		
3.			9.		
4.			10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 0%

Remarks: Upstream is a steep and rocky with CSS vegetation but not accessible to sample. Data taken in a small disturbed portion upstream of first culvert.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>None</u> inches Depth to Free Water in Pit: <u>N/A</u> inches Depth to Saturated Soil: <u>N/A</u> inches	

Remarks: Based on upstream portion was likely CSS-vegetation and hydrology likely altered during construction of dirt access road. Trash + debris. Partially blocked some hydrology. Debris collection near culvert suggests

OHWM - 1'8"
 bank width - 13'6"

SOILS

Map Unit Name (Series and Phase):		Cieneba very rocky coarse sandy loam (Cmr6)		Drainage Class:	slightly excessively drained
Taxonomy (Subgroup):		unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
11	A	7.5YR 3/2	N/A	N/A	sandy clay
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: moist from recent rains					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks: Hydrology signs ^{characteristic} of ephemeral, upland drainage,	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 Corps of Engineers Manual)

Project/Site:	Orange Grove Project	Date:	4/9/2008
Applicant/Owner:	Orange Grove Energy L.P.	County:	San Diego
Investigator:	Cerita Williams-Dodd	State:	CA
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID:	
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID: Drainage 6	
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Plot ID: Tributary 6a1	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Brassica nigra / Mischfeldia incana	H	None	7.		
2. Phacelia viscida	H	UPI	8.		
3. Bromus madritensis	H	None	9.		
4.			10.		
5.			11.		
6.			12.		

Percent of Dominant Species that are OBL, FACW, and/or FAC (exclude FAC- species). 0%

Remarks: Downstream - oak trees (Quercus sp.)
upstream - disturbed / non-native grassland

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other - Topographic and NWI Maps <input type="checkbox"/> No Known Recorded Data	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: None inches Depth to Free Water in Pit: None inches Depth to Saturated Soil: None inches	

Remarks: 2.8 feet OHWM width
16 feet Banks width
OHWM evident not clear upstream of data point

SOILS

Map Unit Name (Series and Phase):		Wyman loam (WmD)		Drainage Class:	well drained
Taxonomy (Subgroup):		unknown		Field Observations Confirm Map Type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
16	A	7.5 YR 3/3	None	None	loamy sand
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions (test required) <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: only slight moisture after recent rains					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks: Ephemeral drainage - upland. Typical ephemeral hydrology signs. Disturbed by agricultural activities (weeds + non-native vegetation, was CSS/chaparral dominant in the past)	

Attachment C: Photo Exhibit

Orange Grove Project Delineation Photo Log

[See attached map for Photo Station (PS) locations]

Drainage 1



PS 1 – Drainage 1 north of SR 76, facing northwest (upstream). Taken on 2/12/08.



PS 2 – Drainage 1 north of SR 76, facing southeast (downstream). Taken on 2/12/08.

Orange Grove Project Delineation Photo Log

Drainage 1



PS 3 - Drainage 1 south of SR 76 (channelized ditch), facing northeast (upstream). Taken on 2/12/08.



PS 4 – Drainage 1 south of SR 76 near terminus, facing northeast (upstream). Taken on 2/12/08.

Orange Grove Project Delineation Photo Log

Tributary 1.1



PS 5 – Tributary 1.1 upstream of Pala Del Norte Road, facing northwest. Taken on 2/7/08.

Tributary 1.2



PS 6 – Tributary 1.2 upstream of Pala Del Norte Road, facing northwest. Taken on 2/7/08.

Orange Grove Project Delineation Photo Log

Tributary 1.3



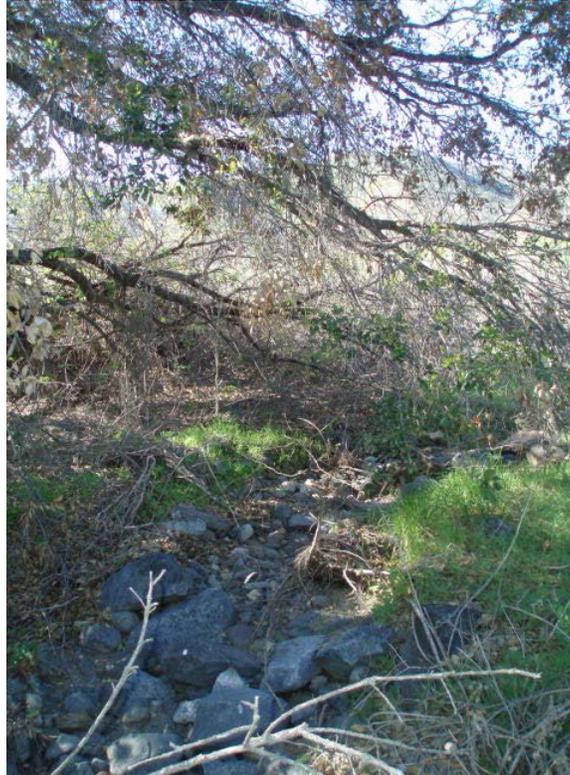
PS 7 – Tributary 1.3 upstream of Pala Del Norte Road, facing northwest. Taken on 2/7/08.



PS 8 – Tributary 1.3 downstream of Pala Del Norte Road (Drainage 1 in background), facing southwest. Taken on 2/7/08.

Orange Grove Project Delineation Photo Log

Drainage 2



PS 9 – Drainage 2 upstream of SR 76, facing northwest (upstream). Taken on 2/12/08.



PS 10 – Drainage 2 upstream of SR 76, facing southeast (downstream). Taken on 2/12/08.

Orange Grove Project Delineation Photo Log

Tributary 3.1



PS 11 – Tributary 3.1, facing northwest (upstream). Taken on 2/12/08.



PS 12 – Tributary 3.1, facing southeast (downstream). Taken on 2/12/08.

Orange Grove Project Delineation Photo Log

Tributary 3.2



PS 13 – Tributary 3.2, facing west (upstream). Taken on 2/12/08.



PS 14 – Tributary 3.2, facing southeast (downstream). Taken on 2/12/08.

Orange Grove Project Delineation Photo Log

Drainage 4



PS 15 – Drainage 4 upstream of dirt road, facing northwest (upstream). Taken on 2/12/08.



PS 16 – Drainage 4 at diffuse flow path portion (channelized portion in background), facing northwest (upstream). Taken on 2/12/08.

Orange Grove Project Delineation Photo Log

Drainage 5



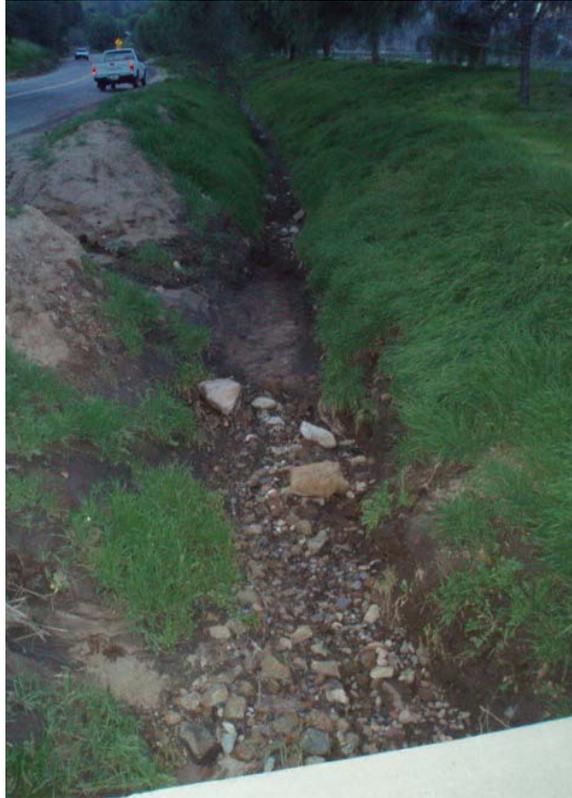
PS 17 – Drainage 5 north of SR 76, facing north (upstream). Taken on 2/12/08.



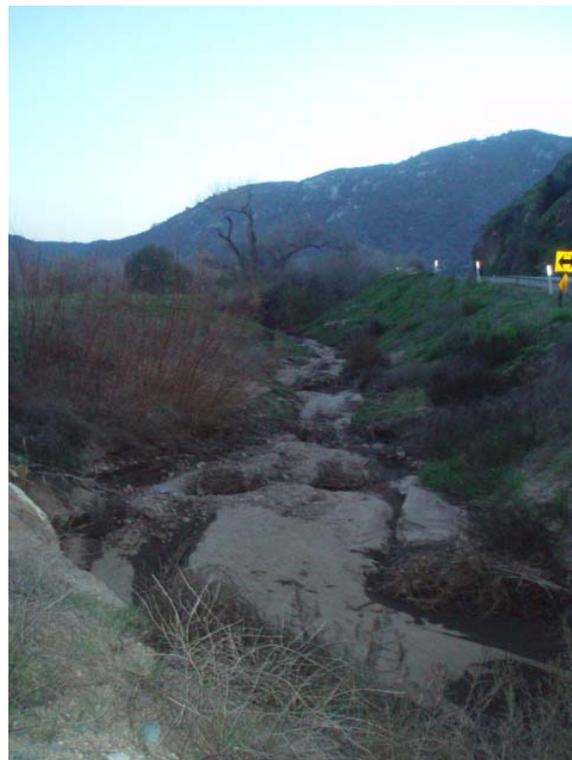
PS 18 – Drainage 5 south of SR 76 and parallel to Couser Canyon Road, facing south (downstream). Taken on 2/12/08.

Orange Grove Project Delineation Photo Log

Drainage 6 (Rice Canyon Creek)



PS 19 – Drainage 6 north of SR 76 and parallel to Rice Canyon Road, facing north (upstream). Taken on 2/12/08.



PS 20 – Drainage 6 south of SR 76, facing south (downstream). Taken on 2/12/08.

Orange Grove Project Delineation Photo Log

Tributary 6.1



PS 21 – Tributary 6.1 at northeast corner of fresh water pickup station parcel east of Rice Canyon Road, facing southwest. Taken on 2/22/08.

Orange Grove Project Delineation Photo Log

San Luis Rey River – Riparian Area



PS 22 – San Luis Rey River riparian area understory, facing west. Taken on 2/12/08.



PS 23 – Berm between riparian area (background) and San Luis Rey River, facing north. Taken on 2/12/08.

Orange Grove Project Delineation Photo Log

San Luis Rey River – Wetland Area



PS 24 – San Luis Rey River with wetland areas, facing south. Taken on 2/12/08.



PS 25 – San Luis Rey River wetland, facing south. Taken on 2/12/08.