Appendix 4.2 Jurisdictional Delineation Report

FINAL
Jurisdictional Delineation for the Southern California Edison El Casco System Project in the Cities of Beaumont and Banning, Riverside County, California

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Acronyms and Abbreviations

CFR	Code of Federal Regulations
CMP	corrugated metal pipe
CPUC	California Public Utilities Commission
CWA	Clean Water Act
DBESP	Determination of Biologically Equivalent or Superior Preservation
DFG	California Department of Fish and Game
EPA	Environmental Protection Agency
FAC	facultative
FACW	facultative wetland
HDD	Horizontal Directional Drilling
I-10	Interstate 10
JD	jurisdictional determination
kV	kilovolt
MBTA	Migratory Bird Treaty Act
MSHCP	Multiple Species Habitat Conservation Plan
OBL	obligate
OHWM	ordinary high water mark
RPW	relatively permanent waters
RSS	Riversidian sage scrub
RWQCB	Regional Water Quality Control Board
SCE	Southern California Edison Company
SWANCC	Solid Waste Agency of North Cook County
TNW	traditional navigable waters
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USGS	United States Geologic Survey
USSC	United States Supreme Court

Chapter 1
Introduction

This report provides regulatory information, methods, and results for routine-level delineation of jurisdictional waters and wetlands potentially impacted by the Southern California Edison El Casco System Project. The purpose of the delineation is to assess the limits of state and federal jurisdiction within and adjacent to the project site to support the resource-agency permitting process. This wetland delineation report describes the resources subject to regulation by the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), California Department of Fish and Game (DFG), and the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

1.1 Site Location

The proposed project is located in northwestern Riverside County south of Interstate 10 (I-10), from the Norton Younglove County Reserve, located west of the City of Beaumont, to just east of San Gorgonio Avenue in the City of Banning (refer to Figure 1).

Figure 2 shows the proposed project site overlaid on U.S. Geologic Survey 7.5-minute topographic maps. The proposed project site is located within Township 2 South, Range 2 West, unnamed sections (bordering Sections 35, 1 and 2) and Township 3 South, Range 2 West, Sections 1, 2, 6, 7, and 8 in the El Casco quadrangle (USGS 1979); Township 3 South, Range 1 East, Sections 16, 17, and 18 and Township 3 South, Range 1 West, Sections 8, 9, 13, 14, and 15 in the Beaumont quadrangle (USGS 1996); and Township 3 South, Range 1 East, and Section 15 in the Cabazon quadrangle (USGS).

1.2 Project Description

Southern California Edison Company (SCE) is proposing to construct the El Casco Substation and a 115 kilovolt (kV) transmission line between the existing Banning Substation and the proposed El Casco Substation (Site 33).

The proposed El Casco Substation will be constructed on approximately 28 acres of land within the Norton Younglove County Reserve adjacent to San Timoteo Canyon Road. The proposed site is currently accessible via a dirt access road off

San Timoteo Canyon Road. SCE also proposes to pave the access road with asphalt. A 20-foot wide duct bank will also be constructed under San Timoteo Creek joining the proposed substation. This duct will house 8 5-inch ducts (2 telecommunication lines and six 12kV lines).

The proposed transmission line includes approximately 16 miles of new 115kV electric transmission line (SCE 2007). The proposed project will replace approximately 13 miles of existing single-circuit 115 kV subtransmission lines with new, higher capacity double circuit 115 kV subtransmission lines and replace support structures within existing SCE rights-of-way in the Cities of Banning, Beaumont, and unincorporated areas of Riverside County. The proposed El Casco Substation will also connect to an existing 220 kV transmission line (SCE 2006).

1.3 Purpose and Need for the Project

Electrical demand in northwest Riverside County will soon exceed the capacity of SCE's electrical system serving this area. To address the increasing electrical demand and to improve electric reliability in the area, the California Public Utilities Commission (CPUC) has ordered SCE to construct the El Casco Substation and transmission line in order to supply electricity to areas where it is needed (SCE 2006).

Chapter 2
Environmental Setting

The following paragraphs describe, in general, the topography, land use, climate, vegetation characteristics, soils, and wildlife resources associated with the project site and the surrounding region.

2.1 Topography and Land Use

The project site is generally located in San Timoteo Canyon and the Gorgonio Pass, north of the San Jacinto Mountains and south of the San Bernardino National Forest, west of the San Gorgonio River and east of The Badlands.

A mosaic of land uses exist within the proposed project site including portions of the Riverside County Norton Younglove Reserve, Southern Pacific Railroad, I-10 and the 60 Freeway, open space, rural development, urban development, and agriculture (grazing).

The western portion of the project site, including the proposed El Casco Substation is located in the Riverside County Norton Younglove Reserve. This area is also referred to as San Timoteo Canyon. The proposed transmission line parallels San Timoteo Canyon Road, the Southern Pacific Railroad, and San Timoteo Creek to the south side of these landmarks. The transmission line crosses over San Timoteo Creek at the SR 60 road bridge over San Timoteo Creek. This area consists mostly of open space with scattered rural development. San Timoteo Creek is a perennial stream dominated by riparian vegetation (predominantly willow trees). Adjacent to San Timoteo Creek, on the proposed substation site are relatively flat plains characterized as grassland dominated by ruderal herbaceous plant species. Along the 60 Freeway and I-10, the landscape flattens with rolling hills and sloping mesas. Continuing to the easternmost portion of the project, the topography transitions to flat to rolling hills predominantly used for grazing. Several ephemeral washes traverse this area. Within the Cities of Beaumont and Banning, the proposed project is spans over residential, commercial, industrial, and agricultural lands (i.e., grazing activities).

Major waterways that cross the project site include San Timoteo Creek, Potrero Creek, Smith Creek, Montgomery Creek, and various unnamed blue line streams and ephemeral drainages. Drainage features located within 50-feet of the proposed El Casco Substation site or within 50 feet of a proposed transmission line pole are described in detail in Sections 5.1 through 5.9 of this report.

2.2 Climate and Hydrology

The proposed project is located in the Arid West Region. This region is characterized by long, hot, and dry summers. Average annual precipitation is 15 inches and mostly occurs between October and April. Table 1 summarizes the precipitation record preceding the delineation fieldwork. Based on a comparison with normal rainfall data, this delineation took place during a severe drought year (also refer to Section 4.3 Drought Considerations).

Table 1. Summary of Regional Rainfall Data (in inches)

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
Normal[1]	0.60	1.65	2.09	3.76	3.44	3.12	1.36	0.63	0.16	0.23	17.76[2]
2006/2007[3]	0.01	0.01	0.07	0.01	0.11	0.00	0.08	0.00	0.00	0.00	0.31[4]

[1] Average precipitation data per month 7/1/1948 to 12/31/2005; Beaumont, CA

[2] Includes average precipitation from August and September dry season.

[3] 2006/2007 rainy season = October 2006–July 2007; Santa Rosa Plateau

[4] Includes 0.02 inch of precipitation in August 2007 and 0.00 inch of rain in September 2007.

Sources: Western Regional Climate Center http://www.wrcc.dri.edu

Ephemeral streams and temporary ponds predominate in this region. Most major rivers flowing through the Arid West have headwaters located outside the Arid West. Many drainage basins within this region generally lack outlets and water tables are often perched (USACE 2006).

2.3 Vegetation Communities

According to the "El Casco Substation System Project Biotechnical Report," (URS 2007) 11 major vegetation communities occur within the proposed project site. Table 2 presents a description of these vegetation communities mapped to within 500 feet of the proposed project.

Table 2. Vegetation Communities within 500 feet of the Project Site

Vegetation Community Type*	**Community Identifier****	**General Plant Species****
Developed	No native vegetation; only ruderal and ornamental plants. Land developed by the presence of buildings, roads, and landscape.	Ruderal/ disturbance, ornamental/ landscape species.
Disturbed/ Ruderal	Native vegetation significantly altered (i.e. through road construction, site disturbance, clearing activities, etc.).	Russian thistle (*Salsola tragus*), sweet fennel (*Foeniculum vulgare*), mustards (*Brassica* spp.), thistles (*Carduus pycnocophalus, Silybum marianum*).
Chamise Chaparral	Characterized by nearly monotypic stands of chamise (*Adenostoma fasciculatum*), occurring on zeric slopes and ridges along with lower elevations consisting of shallower, drier soils.	Chamise (*Adenostoma fasciculatum*), mission Manzanita (*Xylococcus bicolor*), our Lord's candle (*Hesperoyucca whipplei*).
Southern Mixed Chaparral	Southern mixed chaparral occurs on steep relief, north-facing slopes. Soils tend to be more mesic, and are characterized by high diversity of upland plant species.	Chamise (*Adenostoma fasciculatum*), Eastwood Manzanita (*Arctostaphylos glanulosa spp. Gladulosa*), Scrub Oak (*Quercus dumosa*), Holly-leaf Cherry (*Prunus ilicifolia*), Toyon (*Heteromeles arbutifolia*), Winter Currant (*Ribes indecorum*)
Coastal Sage Chaparral	This community is characterized by a mixed community of both drought-deciduous sage scrub species and woody chaparral species. Total vegetation cover includes roughly equal amounts of both scrub and chaparral species.	California Sagebrush (*Artemisia californica*), ceanothus (*Ceanothus* spp.), Black Sage (*Salvia mellifera*), Poison Oak (*Toxicodendron diversilobum*)
Scrub Oak Chaparral	Characterized by dense, evergreen chaparral, associated with scrub oak stands; this community occurs on more mesic sites within higher elevations.	Scrub Oak (*Quercus dumosa*), Eastwood Manzanita (*Arctostaphylos glanulosa spp. Gladulosa*), Toyon (*Heteromeles arbutifolia*), Mountain Mahogany (*Cercocarpus betuloides*), Holly-leaf Redberry (*Rhamnus ilicifolia*)
Riversidian Sage Scrub	Riversidian sage scrub (RSS) is found mostly in xeric habitats mainly in Riverside County, California.	California Buckwheat (*Eriogonum fasiculatum*), California Sage (*Artemisa californica*), non-native Brome grasses (*Brome* spp; *B. diandrus*, *B. madritensis* spp. *rubens*)
Riversidian Alluvial Fan Sage Scrub	Riversidian alluvial fan sage scrub is a form of RSS that is found along ephemeral washes and on alluvial fans. It is mainly characterized by monotypic stands of buckwheat.	California Buckwheat (*Eriogonum fasiculatum*)

Vegetation Community Type*	Community Identifier**	General Plant Species**
Non-native Grassland	Non-native grasslands are characterized by fine-textured loam or clay soils, which are moist or even waterlogged during the winter season, and very dry during summer. Furthermore, it tends to occur within dense to spare cover of exotic annual grass, often associated with native and non-native annual forbs.	Wild Oat (*Avena barbata*), Ripgut Brome (*Bromus diandrus*), perennial Ryegrass (*Lolium perenne*), cheat grass (*Bromus tectorum*)
Southern Riparian Forest	This vegetation community is characterized by an open or closed canopy forest that is generally greater than 6m (20 ft) high and occupies relatively broad drainages and floodplains supporting perennial wet streams.	Willows (*Salix* spp.), Western Sycamore (*Platanus racemosa*), cottonwoods (*Populus* spp.; *Populus fremontii*), Mexican elderberry (*Sambucus mexicanus*), ash (*Fraxinus* spp.), bulrush (*Scirpus* spp.), rush (*Juncus* spp.), cattails (*Typha* spp.), spike rush (*Eleocharis* spp.)
Southern Willow Scrub	Southern Willow scrub communities vary from dense, broad-leafed, winter-deciduous complex; dominated by willow and Mulefat. Loose, sandy or fine gravelly alluvium characterized the soils of this community.	Mulefat (*Baccharis salicifolia*), Black Willow (*Salix gooddingii*), Arroyo Willow (*Salix lasiolepis*), Sandbar Willow (*Salix exigua*).

*Vegetation community descriptions are according to Holland, Preliminary Description of the Terrestrial Natural Communities of California, (1986).

** Vegetation communities identified within the Proposed Project are according to the "El Casco Substation System Project Biotechnical Report" (URS March 6, 2007)."

2.4 Soils

Due to the large number of mapped soil types occurring within the project site, only soils occurring at potential impact locations are discussed in this report. Refer to Section 5.1 through 5.9.

Chapter 3
Regulatory Background

3.1 USACE Section 404 Regulations

The discharge (temporary or permanent) of dredged or fill material into Waters of the United States, including wetlands, typically requires prior authorization from the USACE, pursuant to Section 404 of the Clean Water Act (CWA).

3.1.1 Waters of the United States

Waters of the United States, as defined in the Code of Federal Regulations (CFR) 328.3, include all waters or tributaries to waters such as lakes, rivers, intermittent and perennial streams, mudflats, sandflats, natural ponds, wetlands, wet meadows, and other aquatic habitats. Frequently, a Water of the United States (with at least intermittently flowing water or tidal influences) is demarcated by the *ordinary high water mark* (OHWM), defined in CFR 328.3 [e] as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." Typically, in this region, the OHWM is indicated by the presence of an incised streambed with defined bank shelving. If adjacent wetlands are present, the jurisdiction extends to the limit of wetlands (defined by presence of hydrophyte vegetation, hydric soils, and hydrology). Finally, note that where an OHWM is present, ephemeral waters are also explicitly defined in USACE regulations as Waters of the United States.

3.1.2 Wetlands

According to the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (Environmental Laboratory 1987) and the recently published *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement* (Arid West Manual, USACE 2006), three criteria must be satisfied to classify an area as a jurisdictional wetland. These are:

1) a predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation),
2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils), and
3) permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology).

Wetland vegetation is characterized by vegetation in which more than 50% of the cover of dominant plant species is composed of obligate wetland, facultative wetland, or facultative species that occur in wetlands.

3.1.3 Solid Waste Agency of Northern Cook County (SWANCC) v United States Army Corps of Engineers

In 1986, in an attempt to clarify the reach of its jurisdiction, the USACE stated that Section 404(a) extends to intrastate waters:

> (a) Which are or would be used as habitat by birds protected by Migratory Bird Treaties; or (b) Which are or would be used as habitat by other migratory birds which cross state lines; or (c) Which are or would be used as habitat for endangered species; or (d) Used to irrigate crops sold in interstate commerce" (51 Fed. Reg. 41217).

In 2001, the U.S. Supreme Court (USSC), in its judgment on the *SWANCC* case, held that 33 CFR Section 328.3(a)(3) (1999), as clarified and applied to the *SWANCC* site pursuant to the "Migratory Bird Rule" 51 Fed. Reg. 41217 (1986), exceeded the authority granted to the USACE under Section 404(a) of the CWA. Therefore, the USACE may not rely on the Migratory Bird Rule to establish a *significant nexus* to interstate or foreign commerce. In additional language, the USSC majority opinion reasoned that these types of waters required some nexus to navigable waters. Although no formal guidance was issued by the USACE interpreting the extent to which the *SWANCC* decision would limit jurisdictional determinations, in practice, the USACE considers intrastate waters as Waters of the United States where there is an appropriate connection to a navigable water or other clear interstate commerce connection.

3.1.4 Rapanos v United States and Carabell v United States Army Corps of Engineers

In 2006, the USSC again issued an opinion as to what extent the USACE had jurisdiction over certain waters under Section 404 of the CWA. The *Rapanos-Carabell* consolidated decisions addressed the question of jurisdiction over attenuated tributaries to Waters of the United States, as well as wetlands adjacent to those tributaries. In a plurality decision, five of the nine justices remanded

both cases to the lower courts for re-evaluation. However, those five justices were not in alignment as to what the test for determining jurisdiction should be.

Justices Scalia, Roberts, Thomas, and Alito filed an opinion that held that "waters of the Unites States" includes only those relatively permanent, standing or continuously flowing bodies of water "forming geographic features" that are described in ordinary phrasing as "streams, oceans, river and lakes," (i.e., with surface water connection to navigable waters). By describing "waters" as "relatively permanent," the court does not exclude streams, rivers, or lakes that might dry up in extraordinary circumstances such as drought or seasonal rivers, which contain continuous flow during some months of the year but no flow during dry months (*Rapanos et ux., et al. v United States*, 547 U.S. 04-1034 2006).

Justice Kennedy, in a separate opinion, concurred with Scalia, Roberts, Thomas, and Alito in their judgment that the USACE had potentially exceeded its authority. However, he concluded that Congress enacted the CWA to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C. Section 1250(a)), and it pursued that objective by restricting dumping and filling in "waters of the United States" (Sections 1311(a), 1362(12)). The rationale for CWA wetlands regulation is that wetlands can perform critical functions related to the integrity of other waters, such as pollutant trapping, flood control, and runoff storage (33 C.F.R. Section 320.4(b)(2)). Accordingly, tributaries and adjacent wetlands possess the requisite nexus and thus come within the statutory phrase "navigable waters," if the tributaries and adjacent wetlands, alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters understood as navigable in the traditional sense. In summary, the CWA's jurisdiction reaches tributaries and other waters and wetlands with a significant nexus to waters that are in fact navigable or could reasonably be made so. In addition, the USACE must establish a significant nexus on a case-by-case basis when seeking to regulate wetlands based on adjacency to nonnavigable tributaries, in order to avoid unreasonable applications of the CWA.

The USACE and Environmental Protection Agency (EPA) issued guidance related to the *Rapanos* decision on June 5, 2007. The guidance identifies those waters over which the agencies (USACE and EPA) will assert jurisdiction categorically and on a case-by-case basis, based on the reasoning of the *Rapanos* opinions. In summary, the USACE will continue to assert jurisdiction over:

1) Traditional navigable waters (TNWs) and their adjacent wetlands.
2) Nonnavigable tributaries of TNWs that are relatively permanent (e.g., tributaries that typically flow year-round or have a continuous flow at least seasonally) and wetlands that directly abut such tributaries (e.g., not separated by uplands, berm, dike, or similar feature).

   Note: Relatively permanent waters (RPWs) do not include ephemeral tributaries, which flow only in response to precipitation, and intermittent

streams, which do not typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).

3) Non-RPWs if determined (on a fact-specific analysis) to have a significant nexus with a TNW, including nonnavigable tributaries that do not typically flow year-round or have continuous flow at least seasonally; wetlands adjacent to such tributaries; and wetlands adjacent to but that do not directly abut a relatively permanent, nonnavigable tributary. Absent a significant nexus, jurisdiction is lacking.

A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a TNW. Principal considerations when evaluating significant nexus include volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus hydrologic, ecologic, and other functions performed by the tributary and all of its adjacent wetlands. Certain ephemeral waters in the arid west are distinguishable from the geographic features described above where such ephemeral waters are tributaries and have a significant nexus to downstream traditional navigable waters. For example, these ephemeral tributaries may serve as a transitional area between the upland environment and the traditional navigable water. These ephemeral tributaries may provide habitat for wildlife and aquatic organisms in downstream traditional navigable waters and support nutrient cycling, sediment retention and transport, pollutant trapping and filtration, and improvement of water quality.

Swales or erosional features (e.g., gullies and small washes characterized by low volume, infrequent, or short duration flow) are generally not Waters of the United States because they are not tributaries or they do not have a significant nexus to downstream traditional navigable waters. In addition, ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are generally not Waters of the United States because they are not tributaries or they do not have a significant nexus to downstream TNWs. Even when not jurisdictional under Section 404 of the CWA, these features may still be jurisdictional at state or local levels, such as under Section 401 of the CWA, the Porter-Cologne Act, and/or Section 1602 of the California Fish and Game Code.

Prior to the *Rapanos* guidance, the USACE required the districts to request concurrence for only those jurisdictional determinations (JDs) where the district was planning to assert jurisdiction over a nonnavigable, intrastate, isolated water and/or wetland. The agencies now require that all determinations for nonnavigable, isolated waters be evaluated for the USACE and EPA headquarters review prior to the district making a final decision on the JD.

3.1.5 USACE-Regulated Activities

USACE-regulated activities under Section 404 involve a discharge of dredged or fill material including, but not limited to, grading, placing of riprap for erosion

control, pouring concrete, laying sod, and stockpiling excavated material into Waters of the United States. Activities that generally do not involve a regulated discharge (if performed specifically in a manner to avoid discharges) include driving pilings, some drainage channel maintenance activities, constructing temporary mining and farm/forest roads, and excavating without stockpiling.

3.2 RWQCB Section 401 and Porter-Cologne Act Regulations

The RWQCB regulates activities within state and federal waters under Section 401 of the federal CWA and the state Porter-Cologne Act.

3.2.1 Section 401 of the Clean Water Act

Section 401 of the CWA requires that "any applicant for a Federal permit for activities that involve a discharge to Waters of the United States, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act." Therefore, in California, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification or waiver from the RWQCB.

3.2.2 Porter-Cologne Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" (Water Code 13260(a)), pursuant to provisions of the state Porter-Cologne Act. *Waters of the State* are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050 (e)).

3.2.3 RWQCB-Regulated Activities

Under Section 401 of the CWA, the RWQCB regulates at the state level all activities that are regulated at the federal level by the USACE. Under the Porter-Cologne Act, the RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by the USACE due to a lack of connectivity with a navigable water body or lack of an OHWM.

3.3 DFG Section 1602 Regulations

The California Fish and Game Code mandates that "it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity." DFG jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of 1) definable bed and banks and 2) existing fish or wildlife resources. Furthermore, DFG jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that function hydrologically as part of the riparian system. Historic court cases have further extended DFG jurisdiction to include watercourses that seemingly disappear, but re-emerge elsewhere. Under the DFG definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdiction.

Water features such as vernal pools and other seasonal swales, where the defined bed and bank are absent and the feature is not contiguous or closely adjacent to other jurisdictional features, are generally not asserted to fall within state jurisdiction. The state generally does not assert jurisdiction over human-made water bodies, unless they are located where such natural features were previously located or (importantly) where they are contiguous with existing or prior natural jurisdictional areas.

3.3.1 DFG-Regulated Activities

Under current California Fish and Game Code Sections 1600–1616, the DFG has authority to regulate work that will substantially divert or obstruct the natural flow of, change, or use any material from the bed, channel, or bank of any river, stream, or lake. The DFG also has authority to regulate work that will deposit or dispose of debris, waster, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects involving state or local government discretionary approvals.

3.4 Western Riverside County MSHCP Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

Section 6.1.2, "Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools," of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) defines *riparian/riverine* areas as

> lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year. With the exception of wetlands created for the purposes of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

Section 6.1.2 of the MSHCP defines *vernal pools* as "seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season." Vernal pool characteristics may include the presence of obligate hydrophytes and facultative wetlands plant species during the wetter portion of the growing season, which are often replaced by upland species (annuals) during the drier portion of the growing season. Per the MSHCP,

> [the] determination that an area exhibits vernal pool characteristics, and the definition of the watershed supporting vernal pool hydrology, must be made on a case-by-case basis. Such determinations should consider the length of the time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been subjected, and weather and hydrologic records.

Preparation of a Determination Biologically Equivalent or Superior Preservation (DBESP) report is required under the MSHCP for projects that involve impacts to riparian/riverine resources and/or vernal pools. The purpose of the DBESP report is to ensure replacement of any lost functions and values of habitat as it relates to covered species.

Chapter 4
Methodology

4.1 Project Research

Prior to the field visit, a 200'-scale (1" = 200') aerial photograph of the site was obtained and compared with the USGS 7.5-minute topographic quadrangle to identify drainage features within the survey area as indicated from vegetation types, topographic changes, or visible drainage patterns. The United States Department of Agriculture (USDA) soil survey map was reviewed to identify the soil series that occur on the project site. The soil series mapped within the survey area were compared with the Field Office Official List of Hydric Soil Map Units for Western Riverside Area, California (USDA 1978) and the USDA Natural Resources Conservation Service Soil Survey of Western Riverside Area online map to determine the presence or absence and location of designated hydric soils.

4.2 Field Investigation

Jones and Stokes' Senior Biologist, Tricia Campbell performed an initial site survey to identify potentially jurisdictional water features located adjacent to and within the proposed project site. Ms. Campbell identified all water features located within 50 feet of the proposed El Casco Substation footprint and within 50 feet of any proposed transmission line poles. On September 4 and 5, 2007, Regulatory Specialist Amanda Duchardt and Biologist Jonas Winbolt (both of Jones & Stokes) performed a routine-level wetland delineation at the locations previously identified by Ms. Campbell. A total to ten (10) locations or potential impact areas were identified within the proposed project site.

Jones & Stokes' methods for delineating federal wetlands follow the guidelines set forth by the USACE in the Arid West Delineation Manual (USACE 2006). The routine onsite determination method can be used to gather field data at potential wetland areas for most projects. Visual observations of vegetation types and hydrology are used to locate areas for evaluation. At each evaluation area, several parameters are considered to determine whether the sample point is within a wetland. Three criteria normally must be fulfilled in order to classify an area as a jurisdictional USACE wetland: 1) a predominance of hydrophytic vegetation, 2) the presence of hydric soils, and 3) the presence of wetland hydrology. Details of the application of these techniques are described below.

- **Hydrophytic Vegetation.** The hydrophytic vegetation criterion is satisfied at a location if greater than 50% of all the dominant species present within the vegetation unit have a wetland indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) (USACE 1987). An *OBL indicator status* refers to plants that have a 99% probability of occurring in wetlands under natural conditions. A *FACW indicator status* refers to plants that usually occur in wetlands (67 to 99% probability) but are occasionally found elsewhere. A *FAC indicator status* refers to plants that are equally likely to occur in wetlands or elsewhere (estimated probability 34 to 66% for each). The wetland indicator status used for this report follows the *National List of Plant Species that Occur in Wetlands: California (Region 0)* (U.S. Fish And Wildlife Service 1988)
- **Hydric Soils.** The hydric soil criterion is satisfied at a location if soils in the area can be inferred or observed to have a high groundwater table, if there is evidence of prolonged soil saturation, or if there are any indicators suggesting a long-term reducing environment in the upper 18 inches of the soil profile. Reducing conditions are most easily assessed using soil color. Soil colors were evaluated using the *Munsell Soil Color Charts* (Kollmorgen Corporation 1975).
- **Wetland Hydrology.** The wetland hydrology criterion is satisfied at a location based upon conclusions inferred from field observations that indicate an area has a high probability of being inundated or saturated (flooded, ponded, or tidally influenced) long enough during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (USACE 1987).

Areas meeting all three of these parameters are generally designated as USACE wetlands. If the delineator cannot confirm the presence of all three parameters, but nevertheless strongly believes the area to be a wetland, supporting arguments can be added to the delineation data sheet or report. Wetland delineation data sheets and site photographs are located in Appendix A and Appendix B, respectively, of this delineation report.

The delineation of nonwetland Waters of the United States was based on indicators for the OHWM, following established criteria (33 CFR 328.3[e]). Specifically, we measured 1) average OHWM width accurate to at least 0.5 feet at points wherever clear changes in width occurred, and 2) OHWM length using drainage mapping that was confirmed in the field. The OHWM is defined in Section 4.1.1, "Waters of the United States," of this report.

Evaluation of state jurisdiction followed guidance in the Fish and Game Code, related DFG materials, and standard practices by DFG personnel. Briefly, state jurisdiction was delineated by measuring outer width and length boundaries of state jurisdiction (*lakes* or *streambeds*), consisting of the greater of either the *top of bank* measurement (*bankfull* width) or the extent of associated riparian or wetland vegetation.

Riparian/riverine areas jurisdictional under the MSHCP were mapped similar to DFG jurisdiction except where the water feature was artificially created for purposes other than mitigation or enhancement of wildlife habitat.

4.3 Drought Considerations

Wetlands are areas that are flooded or ponded or have soils that are saturated with water for long periods of time during the growing season in most years. However, during the dry season or in periods of drought, many wetlands in the arid west do not become saturated. Table 1 summarizes the regional rainfall data for the project site during the 2006/2007 site surveys and lists the "normal" rainfall data for comparison. The 2006/2007 rainy season appears to be a drought year, and indicators of wetland hydrology may be absent in areas that, in normal years, would contain wetland hydrology. A lack of observed wetland hydrology indicators during this timeframe is not necessarily evidence for the absence of wetland hydrology; the site was also evaluated using problematic wetland hydrology procedures described in the Arid West Manual, as appropriate.

Chapter 5
Jurisdictional Delineation Results and Conclusions

The following section describes the jurisdictional delineation area and impacts, including findings related to vegetation communities, topography and soils, hydrology, and wetlands for each of the drainage features within the survey area. As discussed in Chapter 4, the areas described below correspond to jurisdictional waters and wetlands located within 50 feet of the proposed El Casco Substation footprint and within 50 feet of any proposed transmission line poles (refer to Figure 3). These areas would potentially be impacted by the proposed project. Photos of each impact area and arid wet data forms are located in Appendices A and B, respectively.

5.1 Impact Area 1: Access Road Culvert Replacement

Impact Area 1 is located in the western most portion of the project site at the existing dirt access road to the proposed El Casco Substation location. At Impact Area 1, the dirt road will be paved with asphalt and a 36-inch culvert under the road will be replaced.

Impact Area 1 encompasses a north-flowing ephemeral drainage ditch, which crosses under the existing dirt access road through a 36-inch corrugated metal pipe (CMP) into San Timoteo Creek. The ephemeral ditch appears to have been constructed or modified by human activity, especially in the area nearest the access road and culvert. The drainage is approximately 9 feet wide and three feet deep with an OHWM 3.5 feet wide. San Timoteo Creek does not appear significantly altered or disturbed in this area. The banks of San Timoteo Creek at the culvert crossing are vertically aligned at an approximate depth of 6 feet. The creek bed is broad and generally flat (refer to Figure 4).

Vegetation within the ephemeral drainage ditch is dominated by ruderal upland species including prickly Russian thistle (*Salsola tragus*), ripgut brome (*Bromus diandrus*), and calabazilla (*Cucurbita foetidissima*). Hydrophytic vegetation is not present within this drainage. Conversely, San Timoteo Creek is dominated by hyrdophytic vegetation including red willow (*Salix leavigata*) and Fremont's cottonwood (*Populus fremontii*). The understory vegetation within San Timoteo

Creek is considered unvegetated because it makes up less than 5% of the absolute vegetation cover.

The ephemeral drainage ditch did not contain evidence of wetland hydrology; however, San Timoteo Creek is a perennial water body. San Timoteo Creek contained several hydrologic indicators of wetland hydrology including surface water, water marks (riverine), drift deposits (riverine), and the FAC-neutral test.

The mapped soil type for Impact Area 1 is listed as Chino silt loam. This soil series is classified as poorly drained and is not listed as a hydric soil. Immediately adjacent to this soil type, within San Timoteo Creek, the mapped soil type is Metz loamy sand. Where this soil series occurs within drainage ways, it is listed as a hydric soil on the hydric soils list for western Riverside County (USDA 1992). No soil pit was dug within San Timoteo Creek at this location because the creek bed was inaccessible; however, based on the mapped soil type and the strong evidence of wetland vegetation and hydrology, hydric soils are also concluded to be present.

In summary, the presence of hydrophytic vegetation, wetland hydrology, and hydric soils within the OHWM of San Timoteo Creek indicate that this area is an USACE jurisdictional wetland. The jurisdictional determination form in Appendix C classifies San Timoteo Creek as a RPW and/or a wetland contiguous with a RPW. The RWQCB jurisdictional boundary is the same as the USACE. DFG and MSHCP jurisdiction associated with San Timoteo Creek extends to the edge of the riparian canopy (refer to Figure 4).

The ephemeral drainage ditch is a tributary to San Timoteo Creek and is classified as a tributary to a RPW. USACE and RWQCB jurisdiction extend to the OHWM (approximately 3.5 feet wide). DFG and MSHCP jurisdiction extend from bank to bank (approximately 9 feet wide) (refer to Figure 4).

5.2 Impact Area 2: Duct Bank Installation

Impact Area 2 is located at the northeastern corner of the proposed El Casco Substation site. At this location, SCE proposes to install a 20-foot wide duct bank under San Timoteo Creek joining the proposed substation. This duct will house 8 5-inch ducts (2 telecommunication lines and 6 12kV lines). The proposed method of installation is Horizontal Directional Drilling (HDD), where drilling will occur approximately 8 feet below the flow line of the creek (URS 2007) (refer to Figure 5).

The vegetation community associated with San Timoteo Creek within Impact Area 2 is southern riparian forest. The dominant vegetation species within this community are hydrophytic and include red willow and arroyo willow (*Salix lasiolepis*), cattail (*Typha* sp.), giant reed (*Arundo donax*), mule fat (*Baccharis salicifolia*), giant creek nettle (*Urtica diocia*), and desert grape (*Vitus girdiana*). Additionally, within the impact area, a portion of the existing dirt access road adjacent to the creek has eroded and slumped into the creek bed. Ruderal upland

herbaceous species from the roadway including ripgut brome, mustard (*Brassica* sp.), and California sagebrush (*Artemisia californica*) seedlings occur on the slumped bank.

San Timoteo Creek contained several hydrologic indicators of wetland hydrology including surface water, high water table, saturation, drift deposits (riverine), drainage patterns, and the FAC-neutral test. Wetland hydrology is present within the OHWM.

The mapped soil types within Impact Area 2 are Metz loamy sand and San Emigdio fine sandy loam. As previously described, Metz loamy sand is listed as a hydric soil. San Emigdio fine sandy loam is classified as a well-drained soil subject to rare flooding and no ponding. This soil is not listed as a hydric soil (USDA 1992). Two soil pits were dug in the bed and banks of San Timoteo Creek. The observed soil type was predominantly sandy loam with coarse sand and sandy clay. Although no indicators of hydric soils were observed in the pits, the pits were dug in a dynamic stream adjacent to an eroded road cut. Therefore, hydric soil indicators may not have had enough time to form. Based on the mapped soil type and the strong evidence of wetland vegetation and hydrology, hydric soils are also concluded to be present.

In summary, the presence of hydrophytic vegetation, wetland hydrology, and hydric soils within the OHWM of San Timoteo Creek indicate that this area is an USACE jurisdictional wetland. The jurisdictional determination form in Appendix C classifies San Timoteo Creek as a RPW and/or a wetland contiguous with a RPW. The RWQCB jurisdictional boundary is the same as the USACE. DFG and MSHCP jurisdiction associated with San Timoteo Creek extends to the edge of the riparian canopy (refer to Figure 5).

5.3 Impact Area 3: Pole Upgrade #1

Impact Area 3 is located on the south side of the 60 Freeway road bridge over San Timoteo Creek. The proposed project calls to upgrade existing single-circuit 115 kV subtransmission lines with new, higher capacity double-circuit 115 kV subtransmission lines. Included in this upgrade are the removal of the existing wood structure poles and the placement of a new tower.

The vegetation community associated with San Timoteo Creek within Impact Area 3 is southern riparian forest with a sparse under story component near the road bridge that is characteristic of a freshwater marsh. The dominant vegetation species within these communities are hydrophytic and include black willow (*Salix gooddingii*), red willow, giant creek nettle, true water cress (*Rorippa nasturtium aquaticum*), cattail (*Typha* sp,) and flatsedge (*Cyperus* sp.).

San Timoteo Creek contained several hydrologic indicators of wetland hydrology including surface water, high water table, saturation, drift deposits (riverine), water marks (riverine; on the bridge footings), aquatic invertebrates (crayfish), and the FAC-neutral test. Wetland hydrology is present within the OHWM.

The mapped soil types for Impact Area 3 are listed as Riverwash, Hanford coarse sandy loam, and Greenfield sandy loam. Riverwash is characterized as an excessively drained, frequently flooded soil that is listed as a hydric soil (USDA 1992). Hanford coarse sandy loam and Greenfield sandy loam are well-drained soil with no flooding or ponding frequency and are not listed as hydric soils. Two soil pits were dug in the bed of San Timoteo Creek near the road bridge. The observed soil types were coarse sand and sandy loam. Within 2-5 inches of the ground surface sandy redox features (gleyed soil colors) were noted. Based on this indicator of hydric soils, the mapped soil type, and the strong evidence of wetland vegetation and hydrology, hydric soils are also concluded to be present.

In summary, the presence of hydrophytic vegetation, wetland hydrology, and hydric soils within the OHWM of San Timoteo Creek indicate that this area is an USACE jurisdictional wetland. The jurisdictional determination form in Appendix C classifies San Timoteo Creek as a RPW and/or a wetland contiguous with a RPW. The RWQCB jurisdictional boundary is the same as the USACE. DFG and MSHCP jurisdiction associated with San Timoteo Creek extends to the edge of the riparian canopy (refer to Figure 6).

5.4 Impact Area 4: Pole Upgrade #2

Impact Area 4 is at San Timoteo Creek approximately 300 feet upstream from a poultry farm and adjacent to an unimproved roadway. Access to the site is gained beyond the terminus of 4th Street in the City of Banning and via a private roadway through the poultry farm.

The proposed project calls to upgrade existing single-circuit 115 kV subtransmission lines with new, higher capacity double-circuit 115 kV subtransmission lines. Included in this upgrade are the removal of the existing wood structure pole and the placement of a new tower.

The vegetation community associated with San Timoteo Creek within Impact Area 3 is southern riparian forest with a sparse understory component near the road bridge that is characteristic of a freshwater marsh. The dominant vegetation species within these communities are hydrophytic and include red willow, arroyo willow, true water cress, flatsedge, and blackberry (*Rubus parviflorus*). Vegetation species located on the banks and access road were predominantly upland species including jimson weed (*Datura* sp.), wild oats (*Avena* sp.), and prickly Russian thistle.

San Timoteo Creek contained several hydrologic indicators of wetland hydrology including surface water, high water table, saturation, sediment deposits (riverine), and the FAC-neutral test. Wetland hydrology is present within the OHWM.

The mapped soil types for Impact Area 4 are listed as San Timoteo loam and terrace escarpments. San Timoteo loam is classified as a well-drained soil with no flooding or ponding frequency. Neither San Timoteo loam nor terrace escarpments are listed as hydric soils (USDA 1992). Based on the mapped soil

type and the strong evidence of wetland vegetation and hydrology, hydric soils are also concluded to be present.

In summary, the presence of hydrophytic vegetation, wetland hydrology, and hydric soils within the OHWM of San Timoteo Creek indicate that this area is an USACE jurisdictional wetland. The jurisdictional determination form in Appendix C classifies San Timoteo Creek as a RPW and/or a wetland contiguous with a RPW. The RWQCB jurisdictional boundary is the same as the USACE. DFG and MSHCP jurisdiction associated with San Timoteo Creek extends to the edge of the riparian canopy (refer to Figure 7).

5.5 Impact Area 5: Pole Upgrade #3

Impact Area 5 is at San Timoteo Creek approximately 600 feet upstream from upstream from Impact Area 4 and adjacent to an unimproved roadway. Access to the site is gained beyond the terminus of 4th Street in the City of Banning and via a private roadway through the poultry farm.

The proposed project calls to upgrade existing single-circuit 115 kV subtransmission lines with new, higher capacity double-circuit 115 kV subtransmission lines. Included in this upgrade are the removal of the existing wood structure pole and the placement of a new tower.

The vegetation community within Impact Area 5 is classified as non-native grassland and southern riparian forest. The existing pole is located entirely within non-native grassland adjacent to San Timoteo Creek. The riparian canopy associated with San Timoteo Creek at this location is dominated by red willow with a dense herbaceous layer composed primarily of blackberry (*Rubus parviflorus*).

Wetland hydrology is not present within the 50 feet of the impact area.

The mapped soil types for Impact Area 5 are listed as San Emigdio fine sandy loam and terrace escarpments. As previously described, San Emigdio fine sandy loam is classified as a well-drained soil subject to rare flooding and no ponding. This soil is not listed as a hydric soil (USDA 1992). Terrace escarpment is mot listed as a hydric soil. No hydric soils or associated indicators were present within the impact area.

In summary, Impact Area 5 is located outside the OHWM and near the edge of the riparian canopy associated with San Timoteo Creek. The lack of wetland hydrology and hydric soils within the impact area indicate that an USACE jurisdictional wetland is not present. The jurisdictional determination form in Appendix C classifies San Timoteo Creek as a RPW and/or a wetland contiguous with a RPW. The RWQCB jurisdictional boundary is the same as the USACE. DFG and MSHCP jurisdiction associated with San Timoteo Creek extends to the edge of the riparian canopy (refer to Figure 7).

5.6 Impact Area 6: Pole Upgrade #4

Impact Area 6 is at a concrete V-ditch located north of 4th Street in the City of Beaumont (refer to Figure 8). The V-ditch is approximately 4 feet wide with an OHWM of 2 feet wide. The V-ditch passes under several asphalt driveways via a 24-inch concrete metal pipe (CMP). The concrete V-ditch appears to have been constructed upland of a waterway to contain roadside storm water runoff and likely connects to the City of Beaumont's storm drain system.

The proposed project calls to upgrade existing single-circuit 115 kV subtransmission lines with new, higher capacity double-circuit 115 kV subtransmission lines. Included in this upgrade are the removal of the existing wood structure pole and the placement of a new tower.

The V-ditch contains less than 5 percent vegetation cover and is therefore considered unvegetated. Those species occurring with the V-ditch are upland ruderal species.

Evidence of wetland hydrology is limited to one secondary indicator: sediment deposits (riverine). This is not a sufficient indicator of wetland hydrology.

The mapped soil types for Impact Area 5 are listed as Ramona sandy loam and Placentia sandy loam. These are well drained and moderately well drained soils, respectively. Neither soil is listed as a hydric soil (USDA 1992). No hydric soils or associated indicators were present within the impact area; the V-ditch is concrete.

In summary, the lack of hydrophytic vegetation, wetland hydrology, and hydric soils within the OHWM of the V-ditch indicate that this area is not an USACE jurisdictional wetland.

The USACE has traditionally taken jurisdiction over features that have connectivity to storm drains as these drains typically lead to a navigable water, particularly near the coastal areas. However, under the new Rapanos guidelines, this feature may be exempt from USACE jurisdiction as a roadside ditch (refer to the jurisdictional determination form in Appendix C).

The RWQCB may require a permit for impacts to this feature, however, due to the lack of beneficial uses associated with the V-ditch, mitigation would generally not be required.

The CDFG may take jurisdiction over this feature based on the presence of a bed and bank. However, the CDFG may not require a permit of mitigation for impacts to this feature based on a lack of habitat.

This feature is non-jurisdictional under the MSHCP because it is an artificially created structure for purposes unrelated to the providing wetland habitat or alterations of a natural stream (refer to Section 3.4.)

5.7 Impact Area 7: Pole Upgrade #5

Impact Area 7 is at an unnamed ephemeral stream located approximately 400 feet east of the intersection of Bobcat Road and Turtle Dove Lane in unincorporated Riverside County south of the City of Banning.

The proposed project calls to upgrade existing single-circuit 115 kV subtransmission lines with new, higher capacity double-circuit 115 kV subtransmission lines. Included in this upgrade are the removal of the existing wood structure pole and the placement of a new tower.

The vegetation community within Impact Area 7 is classified as Riversidian alluvial fan sage scrub. No vegetation occurs within the OHWM due to scouring, however, a majority of the wash contains California buckwheat (*Eriogonum fasciculatum*) with a small component of scale-broom (*Lepidospartum squamatum*) and saltcedar (*Tamarix* sp.). The dominant California buckwheat is not characterized as hydrophytic vegetation.

Impact Area 7 appears to be an ephemeral wash and does not contain evidence of wetland hydrology.

The mapped soil associations for Impact Area 7 are listed as Ramona sandy loam and Riverwash. Ramona sandy loam is a well-drained soil and is not listed as a hydric soil. Riverwash is listed as a hydric soil. No hydric soil or associated indicators were present within the impact area.

In summary, the existing pole is located outside the OHWM, but within the banks of an unnamed ephemeral drainage. The lack of hydrophytic vegetation, wetland hydrology, and hydric soils within the impact area indicate that an USACE jurisdictional wetland is not present. The jurisdictional determination form in Appendix C classifies the ephemeral drainage as an ephemeral stream with connectivity to a TNW (the Salton Sea). The RWQCB jurisdictional boundary is the same as the USACE. DFG and MSHCP jurisdiction associated with the unnamed ephemeral drainage extends to the top of each bank (refer to Figure 9).

5.8 Impact Area 8: Pole Upgrade #6

Impact Area 7 is at Montgomery Creek 0.68 miles southeast of the intersection of San Gorgonio Avenue (243) and Westward Avenue in the City of Banning. Access to the site is available via a dirt access road (Water Canal) located immediately west of Banning High School.

The proposed project calls to upgrade existing single-circuit 115 kV subtransmission lines with new, higher capacity double-circuit 115 kV subtransmission lines. Included in this upgrade are the removal of the existing wood structure pole and the placement of a new tower.

The vegetation communities within Impact Area 8 are Riversidian Alluvial Fan sage scrub and Riversidian sage scrub, both of which are dominated by California buckwheat. Scale-broom, calabazilla, doveweed (*Eremocarpus setigerus*), and ripgut brome are also present. The dominant vegetation within the impact area is not hydrophytic.

Impact Area 8 appears to be an ephemeral wash and does not contain evidence of wetland hydrology.

The mapped soil type for Impact Area 8 is listed as Hanford coarse sandy loam. Hanford coarse sandy loam is a well-drained soil and is not listed as a hydric soil (USDA 1992). No hydric soil or associated indicators were present within the impact area.

In summary, the existing pole is located outside the OHWM but within the banks of Montgomery Creek. The lack of hydrophytic vegetation, wetland hydrology, and hydric soils within the impact area indicate that an USACE jurisdictional wetland is not present. The jurisdictional determination form in Appendix C classifies the ephemeral drainage as an ephemeral stream with connectivity to a TNW (the Salton Sea). The RWQCB jurisdictional boundary is the same as the USACE. DFG and MSHCP jurisdiction associated with the unnamed ephemeral drainage extends to the top of each bank (refer to Figure 10).

5.9 Jurisdictional Impacts

Impact Area 1 will be temporarily impacted during replacement of a culvert under an existing access road. Impact Area 2 will be temporarily and permanently impacted as a result of the installation of a telecommunications duct bank. Impact Areas 3 through 8 will be temporarily impacted by utility pole replacement/upgrade activities. At the pole replacement and upgrade locations temporary impacts are based on a 50-foot buffer around the existing poles that will be replaced. Permanent impacts are calculated using a 10-foot buffer around the existing poles.

Table 3. Summary of Temporary Impacts by the Proposed Project

	USACE				
Feature	Non-Wetland Waters	Wetlands	DFG	RWQCB	MSHCP
Impact Area 1	212 sq ft (0.005 acre) 60 linear feet	0.03 acres 75 linear feet	0.07 acre 150 linear feet	0.04 acres 135 linear feet	0.07 acre 150 linear feet
Impact Area 2[1]	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.00 acre 0 linear feet	0.0 acres 0 linear feet	0.00 acre 0 linear feet
Impact Area 3	0.0 acre 0 linear feet	0.01 acre 50 linear feet	0.15 acre 200 linear feet	0.01 acre 50 linear feet	0.15 acre 200 linear feet

Impact Area 4	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.13 acre 100 linear feet	0.0 acres 0 linear feet	0.13 acre 100 linear feet
Impact Area 5	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.03 acre 25 linear feet	0.0 acres 0 linear feet	0.03 acre 25 linear feet
Impact Area 6	178 sq ft (0.004 acre) 100 linear feet	0.0 acre 0 linear feet	356 sq ft (0.008 acre) 100 linear feet	178 sq ft (0.004 acres) 100 linear feet	356 sq ft (0.008 acre) 100 linear feet
Impact Area 7	0.06 acre 100 linear feet	0.0 acre 0 linear feet	0.18 acres 100 linear feet	0.06 acres 100 linear feet	0.18 acres 100 linear feet
Impact Area 8	0.01 acre 80 linear feet	0.0 acre 0 linear feet	0.18 acres 100 linear feet	0.0 acres 0 linear feet	0.18 acres 100 linear feet
Total Jurisdiction	0.08 acre 340 linear feet	0.04 acre 125 linear feet	0.75 acres 775 linear feet	0.11 acres 385 linear feet	0.75 acres 775 linear feet

[1] No temporary impacts associated with horizontal directional drilling under San Timoteo Creek.

Table 4. Summary of Permanent Impacts by the Proposed Project

	USACE				
Feature	Non-Wetland Waters	Wetlands	DFG	RWQCB	MSHCP
Impact Area 1	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.0 acre 0 linear feet
Impact Area 2[1]	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.02 acre 20 linear feet	0.02 acre 20 linear feet	0.0 acre 0 linear feet
Impact Area 3	0.0 acre 0 linear feet	0.0 acre 0 linear feet	90 sq ft (0.002 acre) 20 linear feet	0.0 acre 0 linear feet	90 sq ft (0.002 acre) 20 linear feet
Impact Area 4	0.0 acre 0 linear feet	0.0 acre 0 linear feet	314 sq ft (0.007 acre) 20 linear feet	0.0 acre 0 linear feet	314 sq ft (0.007 acre) 20 linear feet
Impact Area 5	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.0 acre 0 linear feet
Impact Area 6	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.0 acre 0 linear feet	0.0 acre 0 linear feet
Impact Area 7	79 sq ft (0.001 acre) 20 linear feet	0.0 acre 0 linear feet	314 sq ft (0.007 acre) 20 linear feet	79 sq ft (0.001 acre) 20 linear feet	314 sq ft (0.007 acre) 20 linear feet
Impact Area 8	0.0 acre 0 linear feet	0.0 acre 0 linear feet	314 sq ft (0.007 acre) 20 linear feet	0.0 acre 0 linear feet	314 sq ft (0.007 acre) 20 linear feet
Total Jurisdiction	79 sq ft (0.001 acre) 20 linear feet	0.0 acre 0 linear feet	0.043 acres 100 linear feet	0.02 acre 40 linear feet	0.043 acres 100 linear feet

[1] Impacts associated with horizontal directional drilling under San Timoteo Creek are considered permanent by CDFG and RWQCB.

5.10 Conclusions

The proposed project would result in temporary and permanent impacts to waters of the U.S., waters of the State, and riverine/riparian areas; therefore, USACE, RWQCB, and DFG permit authorization, and compliance with the MSHCP would be required prior to construction.

Permitting and compliance related to the Clean Water Act, Section 1600 of the California Fish and Game Code, and the MSHCP may also trigger the need for compliance with the following regulations:

- Section 106 of the National Historic Preservation Act;
- Federal Endangered Species Act;
- California Endangered Species Act;
- Section 402 of the Clean Water Act;
- Migratory Bird Treaty Act.

Chapter 6
References

Federal Interagency Committee for Wetland Delineation. 1989. *Federal Manual for Identifying and Delineating Jurisdictional Wetlands.* U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Services, and U.S.D.A. Soil Conservation Service. Washington, D.C.: Cooperative Technical Publication.

Kollmorgen Corporation. 1975. *Munsell Soil Color Charts*. Baltimore, MD: Macbeth Division of Kollmorgen Corporation.

Rapanos et ux., et al. v. United States, 547 U.S. 04-1034 (2006).

SCE. 2006. Fact Sheet El Casco System Project, December. Available at: <http://www.sce.com/NR/rdonlyres/48F37034-FC51-42DB-9BB8-89CE1EBA5550/0/ELCASCO_11_28_06.pdf> Accessed on: September 11, 2007.

SCE. 2007. Project Announcement April 2007El Casco Substation and 115kV Transmission Line between Banning Substation and El Casco Substation. April.

U.S. Army Corps of Engineers. 2006. *Interim regional supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.* ed. J.S. Wakeley, R.W. Lichvar, and C.V. Nobel. ERDC/El TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers 1987. Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Waterways Experiment Station.

U.S. Army Corps of Engineers. 2004. Jurisdictional Determination. <http://www.spl.usace.army.mil/regulatory/SWANCC/200300881.pdf> Accessed May 11, 2007

U.S. Department of Agriculture. 2007. 2007 National Hydric Soil List by State: California. Available at: < http://soils.usda.gov/use/hydric/lists/state.html> Accessed: September 11, 2007.

U.S. Department of Agriculture. 1987. *Hydric Soils of the United States*. In cooperation with the National Technical Committee for Hydric Soils. Washington, D.C.: USDA Soil Conservation Service.

USDA, Soil Conservation Service and Forest Service. 1971. Soil Survey of Western Riverside Area, California. November.

USDA, Soil Conservation Service. 1992. Field Office Official List of Hydric Soil Map Units for Western Riverside Area, California. October 30, 2006. Also available at: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

U.S. Fish And Wildlife Service. 1988. National List of Plant Species that Occur in Wetlands: California (Region 0). May. *Biological Report* 88(26.10). Washington, D.C.: USFWS.

USGS (U.S. Geological Survey). 1996. 7.5-minute Beaumont, California, quadrangle. Riverside, CA.

USGS (U.S. Geological Survey). 7.5-minute Cabazon, California, quadrangle. Riverside, CA.

USGS (U.S. Geological Survey). 1979. 7.5-minute El Casco, California, quadrangle. Riverside, CA.

Chapter 7
List of Preparers

7.1 Jones & Stokes

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: El Casco System Project City/County: Riverside County Sampling Date: 9/4/07

Applicant/Owner: Southern California Edison (SCE) State: CA Sampling Point: 1

Investigator(s): AD, JW Section, Township, Range: _____

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

Subregion (LRR): C Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Riverwash NWI classification: _____

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

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

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

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

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

Remarks: Drought year.

Plot not located w/in a wetland. Refer to Impact Area 2 in text and Figure 5 for location.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix leavigata	80	Y	FACW
2.			
3.			
4.			
Total Cover:	80		
Sapling/Shrub Stratum			
1. Baccharis salicifolia	10	Y	FACW
2. Populus fremontii	1	N	FACW
3.			
4.			
5.			
Total Cover:	11		
Herb Stratum			
1. Artemesia californica	5	Y	NI/UPL
2. Bromus diandrus	5	Y	NI/UPL
3. Salsola tragus	5	Y	NI/UPL
4. Brassica sp.	2	N	NI/UPL
5.			
6.			
7.			
8.			
Total Cover:	17		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Upland species in creek due to road slump. Riparian overstory w/ upland understory. Plot considered typical of roadside adjacent to riparian canopy.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 4/3						Sandy loam	
2-18	2.5Y 4/4						Sandy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Hydric soil not present. No organic layers or redox features present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No _____

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

Remarks: Pit located above the OHWM. No wetland hydrology

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: El Casco System Project City/County: Riverside County Sampling Date: 9/4/07

Applicant/Owner: SCE State: CA Sampling Point: 2

Investigator(s): AD, JW Section, Township, Range: _____

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

Subregion (LRR): C Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Riverwash NWI classification: _____

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

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

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

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

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

Remarks: Drought year. Plot is located within a wetland. Refer to Impact Area 2 in the text and Figure 5.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix leavigata	80	Y	FACW
2. Salix lasiolepis	5	N	FACW
3.			
4.			
Total Cover:	85		
Sapling/Shrub Stratum			
1. Baccharis salicifolia	10	Y	FACW
2. Populus fremontii	1	N	FACW
3. Arundo donax	5	N	FACW
4. Urtica dioica	5	N	FACW
5.			
Total Cover:	21		
Herb Stratum			
1. Typha sp	30	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	30		
Woody Vine Stratum			
1. Vitus girdiana	10	Y	NI/FACW
2.			
Total Cover:	10		

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: Hydrophytic vegetation present.

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	no color						sand	
6-18	2.5Y 4/3						sandy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Depositional material in active stream channel. Indicators may not have had time to form or been washed away. Plot contains strong indicators of wetland vegetation and hydrology therefore, soils also assumed present. Also, a perrenial stream lends to the def. of hydric soils being innundated for long to very long duration during the growing season.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- X Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 4

Water Table Present? Yes X No ___ Depth (inches): 18

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 18

Wetland Hydrology Present? Yes X No ___

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

Remarks: Wetland hydrology present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: El Casco System Project City/County: Riverside County Sampling Date: 9/4/07

Applicant/Owner: SCE State: CA Sampling Point: 3

Investigator(s): AD, JW Section, Township, Range:

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

Subregion (LRR): C Lat: Long: Datum:

Soil Map Unit Name: Riverwash NWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

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

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

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

Remarks: Drought year. Plot is located within a wetland. Refer to Impact Area 3 in the text and Figure 6.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	20	Y	OBL
2. Salix lasiolepis	70	Y	FACW
3.			
4.			
Total Cover:	90		
Sapling/Shrub Stratum			
1. Urtica dioica	5	Y	FACW
2.			
3.			
4.			
5.			
Total Cover:	5		
Herb Stratum			
1. Rorippa nasturtium aquaticum	2	Y	OBL
2. Typha sp.	2	Y	OBL
3. Cyperus sp.	2	Y	OBL
4.			
5.			
6.			
7.			
8.			
Total Cover:	6		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: Hydrophytic vegetation present.

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2.5	2.5Y 4/3						sand	
2.5-4	2.5Y 4/3						sandy loam	
4-5	no color						sand	
5-8	10BG 4/0						sand and	organic matter decomposing

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks: Hydric soil present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- X Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 6"

Water Table Present? Yes X No _____ Depth (inches): 8"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 7"

Wetland Hydrology Present? Yes X No _____

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

Remarks: Wetland hydrology present within the Ottawa. Crayfish observed. Watermarks located on bridge footings.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: El Casco System Project City/County: Riverside County Sampling Date: 9/4/07

Applicant/Owner: SCE State: CA Sampling Point: 4

Investigator(s): AD, JW Section, Township, Range: _____

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

Subregion (LRR): C Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Riverwash NWI classification: _____

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

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

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

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

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

Remarks: Drought year.
Plot lacks wetland hydrology therefore plot is not located within a wetland.
Refer to Impact Area 3 in the text and Figure 6.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	70	Y	FACW
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: Understory unvegetated.

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2							Sandy loam	
2-18							sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks: Hydric soil present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes X No ____ Depth (inches): 18"

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 18"

Wetland Hydrology Present? Yes ____ No X

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

Remarks: Plot located w/ bed of channel outside OHWM. No evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: El Casco System Project City/County: _____ Sampling Date: 9/4/07

Applicant/Owner: SCE State: CA Sampling Point: 5

Investigator(s): AD, JW Section, Township, Range: _____

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

Subregion (LRR): C Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: San Timoteo loam NWI classification: _____

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

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

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

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

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

Remarks: Drought year
Plot located within a wetland. Refer to Impact Area 4 in the text and Figure 7.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix leavigata	90	Y	FACW
2. Salix lasiolepis	5	N	FACW
3.			
4.			
Total Cover:	95		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Cyprus sp	10	Y	OBL
2. Rorippa nasturtium aquaticum	5	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: Emergent hydrophytic vegetation present.

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks: Hydric soil present. Soil inundated for a long or very long duration during the growing season.

– no soil pit dug b/c of clear UPL/Wetland boundary evidenced by veg + hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 24"

Water Table Present? Yes X No ____ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks: Wetland hydrology present w/in the oxbow only.